INCOME AND EXPENDITURE PATTERN OF FARMERS IN AMRITSAR DISTRICT OF PUNJAB

Thesis

Submitted to the Punjab Agricultural University
in partial fulfillment of the requirements
for the degree of

MASTER OF SCIENCE
in
AGRICULTURAL ECONOMICS
(Minor Subject: Statistics)

By

Simardeep Singh
(L-2017-BS-234-M)

Department of Economics and Sociology
College of Basic Sciences and Humanities
©PUNJAB AGRICULTURAL UNIVERSITY
LUDHIANA – 141 004

2019

CERTIFICATE – I

This is to certify that the thesis entitled, **"Income and expenditure pattern of farmers in Amritsar district of Punjab"** submitted for the degree of Master of Science in the subject of **Agricultural Economics (Minor subject: Statistics)** to the Punjab Agricultural University, Ludhiana, is a bonafide research work carried out by **Simardeep Singh (L-2017-BS-234-M)** under my supervision and that no part of this thesis has been submitted for any other degree.

The assistance and help received during the course of investigation have been fully acknowledged.

_____

(Dr. H.S. Kingra)
Major Advisor
Farm Economist
Dept. of Economics and Sociology
Punjab Agricultural University
Ludhiana-141004 (India)

CERTIFICATE – II

This is to certify that the thesis entitled, **"Income and expenditure pattern of farmers in Amritsar district of Punjab"** submitted by **Simardeep Singh (L-2017-BS-234-M)** to the Punjab Agricultural University, Ludhiana, in partial fulfillment of the requirements for the degree of **M.Sc.**, in the subject of **Agricultural Economics (Minor subject: Statistics)** has been approved by the Student's Advisory Committee along with External Examiner after an oral examination on the same.

.

_____

(Dr. H.S. Kingra)
Major Advisor

_____

Dr. (Mrs.) Paramjeet Kaur Dhindsa
External Examiner
Professor of Economics (Retired)
Punjab School of Economics,
Guru Nanak Dev University
Amritsar- 143005

_____

(Dr. Kamal Vatta)
Head of the Department

_____

(Dr. Gurinder Kaur Sangha)
Dean, Post-Graduate Studies

ACKNOWLEDGEMENT

As a prelude to my thanks giving, first I wish to thank the ***Almighty*** *for giving me strength, courage and confidence to accomplish my work with dedication and determination.*

Though, only my name appears on the cover of this thesis, a great many people have contributed to its production. I owe my gratitude to all those people who have made this thesis possible and because of whom my experience has been one that I will cherish forever.

I wish to express my deepest sense of gratitude and indebtedness to my major advisor ***Dr. H.S. Kingra,*** *Farm Economist, Department of Economics and Sociology, Punjab Agricultural University, Ludhiana and for his invaluable guidance, constant encouragement, untiring enthusiasm, affectionate behaviour, and peerless criticisms during the course of investigation and preparation of manuscript. His kindness and devotion left an indelible impression in my mind.*

It is great privilege for me to express my esteem and profound sense of gratitude to ***Dr. Mini Goyal*** *(Dean PGS Nominee), Professor of Economics, Department of Economics and Sociology,* ***Dr. Sukhpal Singh,*** *Senior Economist Marketing,Department of Economics and Sociology and* ***Dr.Inderjit Singh Grewal****, Professor of Statistics, Department of Math, Stat. & Physics, member of my Advisory Committee for their constructive and valuable suggestions. They were always there in all my needs and helped their best whenever I seek for it.*

Selfless love is the dearest commodity on this planet and only a few in this world are kind enough to extent their helping hands, I have been highly fortunate and lucky to express my heartfelt respect to my father ***S. Rakeshwinder Singh,*** *mother* ***Smt. Sukhjit Kaur*** *and sister* ***Navdeep Kaur*** *for their timely guidance and valuable support. No words are complementary to acknowledge the love and warmth rendered by my big brother* ***Gurinder Singh Sandhu.*** *Without their silent blessings and encouragement this study would never have seen this day.*

Words cannot really express the true friendship that I relished from my good friends specially ***Khush brar, Aksh Sandhu, Sharan Bhinder, Manreet Mand and Gagan Manes*** *for their heartfelt help and timely suggestions which gave me enough mental strength to get through all mind-numbing circumstances. I am indebted to my Senior* ***Rohit Saini*** *for always being there for me.*

I also convey my heartiest thanks to the technical workers of the department, especially ***Tarwinder Singh*** *for their timely help during the entire span of my study.*

Everyone must have not been mentioned but none is forgotten.

Date:

Place: Ludhiana **(Simardeep Singh)**

Title of the Thesis	**:**	Income and expenditure pattern of farmers in Amritsar district of Punjab
Name of the student and admission no.	**:**	Simardeep Singh (L-2017-BS-234-M)
Major Subject	**:**	Agricultural economics
Minor Subject	**:**	Statistics
Name and Designation of Major Advisor	**:**	Dr. H.S. Kingra Farm Economist
Degree to be awarded	**:**	M.Sc.
Year of Award of Degree	**:**	2019
Total pages in Thesis	**:**	58 + Vita
Name of the University	**:**	Punjab Agricultural University, Ludhiana, 141004, India

ABSTRACT

The present study was designed to examine the income and expenditure pattern of farmers in Amritsar district of Punjab during 2018-19. By using three stages random sampling technique, a total sample of 90 farmers covering, three blocks and six villages of Amritsar district of Punjab was taken for ultimate analysis. The overall family size of all categories of farmers was 5.20 persons per family. The study revealed that average operational area in case of marginal, small, semi-medium, medium and large farms was 1.91, 4.17, 8.52, 15.68 and 34.02 acres, respectively. Crop production and dairy farming were the main sources of income of the sampled farmers. The net income obtained from farm and non-farm sector was found to be ₹ 184318, ₹ 333588, ₹ 608021, ₹ 858989 and ₹ 1371378 for marginal, small, semi-medium, medium and large farmers, respectively. Income from non- farm source has not been a major contribution to the net income of farm households. The annual consumption expenditure was found to be ₹ 161890, ₹ 244265, ₹ 424938, ₹ 611822 and 808518 for marginal, small, semi-medium, medium and large farmers respectively. The total cost (fixed and variable) incurred on the farm was found to be was ₹ 106386, ₹ 199173, ₹ 398625, ₹ 730717 and ₹ 1720786 for marginal, small, semi-medium, medium and large farmers respectively. The savings of marginal, small, semi-medium, medium and large farmers was found to be ₹ 22428, ₹ 89322, ₹ 183083, ₹ 247166 and ₹ 562859 respectively. As the farm size increased the saving were also increased in same pattern. The study concluded that farmers need to initiate the farm allied activities and off farm projects to increase their income.

Keywords: Net income, Consumption expenditure, Farm expenditure, Savings.

_____ _____

Signature of Major Advisor Signature of the Student

ਖੋਜ ਦਾ ਸਿਰਲੇਖ	:	ਪੰਜਾਬ ਦੇ ਅੰਮ੍ਰਿਤਸਰ ਜ਼ਿਲੇ ਦੇ ਕਿਸਾਨਾਂ ਦੀ ਆਮਦਨ ਅਤੇ ਖਰਚੇ ਦਾ ਨਮੂਨਾ
ਵਿਦਿਆਰਥੀ ਦਾ ਨਾਮ ਅਤੇ ਦਾਖਲਾ ਨੰ.	:	ਸਿਮਰਦੀਪ ਸਿੰਘ (ਐਲ-2017-ਬੀ.ਐਸ.-234-ਐਮ.)
ਮੁੱਖ ਵਿਸ਼ਾ	:	ਖੇਤੀਬਾੜੀ ਅਰਥ ਸ਼ਾਸਤਰ
ਸ਼ਹਿਯੋਗੀ ਵਿਸ਼ਾ	:	ਅੰਕੜਾ ਵਿਗਿਆਨ
ਮੁੱਖ ਸਲਾਹਕਾਰ ਦਾ ਨਾਮ ਅਤੇ ਅਹੁਦਾ	:	ਡਾ. ਐਚ. ਐਸ.ਕਿੰਗਰਾ ਫਾਰਮ ਅਰਥਸ਼ਾਸਤਰੀ
ਮਿਲਣ ਵਾਲੀ ਡਿਗਰੀ	:	ਐੱਮ.ਐੱਸ.ਸੀ
ਡਿਗਰੀ ਨਾਲ ਸਨਮਾਨਿਤ ਕਰਨ ਦਾਸਾਲ	:	2019
ਖੋਜ ਪੱਤਰ ਵਿਚ ਕੁੱਲ ਪੰਨੇ	:	58 + ਵੀਟਾ
ਯੂਨੀਵਰਸਿਟੀ ਦਾ ਨਾਮ	:	ਪੰਜਾਬ ਐਗਰੀਕਲਚਰਲ ਯੂਨੀਵਰਸਿਟੀ, ਲੁਧਿਆਣਾ, 141004, ਭਾਰਤ

ਸਾਰ-ਅੰਸ਼

ਵਰਤਮਾਨ ਅਧਿਐਨ 2018-19 ਦੌਰਾਨ ਪੰਜਾਬ ਦੇ ਅੰਮ੍ਰਿਤਸਰ ਜ਼ਿਲੇ ਦੇ ਕਿਸਾਨਾਂ ਦੀ ਆਮਦਨ ਅਤੇ ਖਰਚੇ ਦੇ ਨਮੂਨੇ ਦੀ ਜਾਂਚ ਕਰਨ ਲਈ ਤਿਆਰ ਕੀਤਾ ਗਿਆ ਸੀ। ਤਿੰਨ ਪੜਾਵਾਂ ਲਗਾਤਾਰ ਨਮੂਨੇ ਦੀ ਤਕਨੀਕ ਦਾ ਇਸਤੇਮਾਲ ਕਰਨ ਨਾਲ, ਪੰਜਾਬ ਦੇ ਅੰਮ੍ਰਿਤਸਰ ਜ਼ਿਲੇ ਦੇ 3 ਬਲਾਕ ਦੇ 6 ਪਿੰਡਾਂ ਵਿੱਚੋਂ ਕੁੱਲ 90 ਕਿਸਾਨਾਂ ਦੇ ਆਧਾਰ ਤੇ ਅੰਤਿਮ ਵਿਸ਼ਲੇਸ਼ਣ ਲਿਆ ਗਿਆ। ਜਿਸ ਵਿੱਚ ਇੱਕ ਪਰਿਵਾਰ ਵਿੱਚ ਔਸਤਨ 5.20 ਵਿਅਕਤੀ ਪ੍ਰਤੀ ਪਰਿਵਾਰ ਦੀ ਦਰ ਨਾਲ ਰਹਿ ਰਹੇ ਸਨ। ਅਧਿਐਨ ਤੋਂ ਪਤਾ ਲੱਗਿਆ ਕਿ ਸੀਮਾਂਤ, ਛੋਟੇ, ਅਰਥ-ਮੱਧਮ, ਮੱਧਮ ਅਤੇ ਵੱਡੇ ਕਿਸਾਨਾ ਦੇ ਪਰਿਵਾਰਾਂ ਕੋਲ ਕ੍ਰਮਵਾਰ 1.91, 4.17, 8.52, 15.68 ਅਤੇ 34.02 ਏਕੜ ਔਸਤ ਜਮੀਨ ਸੀ ਅਤੇ ਉਹਨਾਂ ਦੀ ਆਮਦਨ ਦਾ ਮੁੱਖ ਸ੍ਰੋਤ ਫਸਲ ਉਤਪਾਦਨ ਅਤੇ ਡੇਅਰੀ ਫਾਰਮਿੰਗ ਤੋਂ ਸੀ। ਖੇਤੀਬਾੜੀ ਅਤੇ ਗ਼ੈਰ-ਖੇਤੀ ਸੈਕਟਰ ਤੋਂ ਪ੍ਰਾਪਤ ਕੀਤੀ ਕੁੱਲ ਸ਼ੁੱਧ ਆਮਦਨ ਸੀਮਾਂਤ , ਛੋਟੇ, ਅਰਧ-ਮੱਧਮ, ਮੱਧਮ ਅਤੇ ਵੱਡੇ ਕਿਸਾਨਾਂ ਲਈ ਕ੍ਰਮਵਾਰ ₹ 184318, ₹ 333588, ₹ 608021, ₹ 858989 ਅਤੇ ₹ 1371378 ਸੀ। ਗੈਰ-ਫਾਰਮ ਸਰੋਤ ਤੋਂ ਆਮਦਨੀ ਦਾ ਕਿਸਾਨਾਂ ਦੇ ਘਰਾਂ ਦੇ ਕੁੱਲ ਆਮਦਨ ਵਿੱਚ ਵੱਡਾ ਯੋਗਦਾਨ ਨਹੀਂ ਰਿਹਾ। ਸਾਲਾਨਾ ਖਪਤ ਖਰਚ ਸੀਮਾਂਤ, ਛੋਟੇ, ਅਰਧ-ਮੱਧਮ, ਮੱਧਮ ਅਤੇ ਵੱਡੇ ਕਿਸਾਨਾਂ ਲਈ ਕ੍ਰਮਵਾਰ ₹161890, ₹ 244265, ₹ 424938, ₹ 611822 ਅਤੇ ₹ 808518 ਮਿਥਿਆ ਗਿਆ। ਫਾਰਮ 'ਤੇ ਕੀਤੇ ਗਏ ਕੁੱਲ ਖਰਚੇ (ਨਿਸ਼ਚਿਤ ਅਤੇ ਅਸਥਿਰ) ਸੀਮਾਂਤ, ਛੋਟੇ, ਅਰਧ-ਮੱਧਮ, ਮੱਧਮ ਅਤੇ ਵੱਡੇ ਕਿਸਾਨਾਂ ਲਈ ਕ੍ਰਮਵਾਰ ₹ 106386, ₹ 199173, ₹ 398625, ₹ 730717 ਅਤੇ ₹ 1720786 ਸਨ। ਸੀਮਾਂਤ, ਛੋਟੇ, ਅਰਧ-ਮੱਧਮ, ਮੱਧਮ ਅਤੇ ਵੱਡੇ ਕਿਸਾਨਾਂ ਦੀ ਸਾਰੇ ਖਰਚੇ ਕੱਢਣ ਉਪਰੰਤ ਬੱਚਤ ਕ੍ਰਮਵਾਰ ₹ 22428, ₹ 89322, ₹ 183083, ₹ 247166 ਅਤੇ ₹ 562859 ਸੀ। ਜਿਵੇਂ ਖੇਤੀ ਦਾ ਆਕਾਰ ਵਧਿਆ, ਉਸੇ ਤਰਤੀਬ ਵਿਚ ਬੱਚਤ ਵਿੱਚ ਵਾਧਾ ਹੋ ਗਿਆ। ਅਧਿਐਨ ਨੇ ਸਿੱਟਾ ਕੱਢਿਆ ਕਿ ਕਿਸਾਨਾਂ ਨੂੰ ਖੇਤੀਬਾੜੀ ਦੇ ਸਹਾਇਕ ਧੰਦਿਆਂ ਅਤੇ ਗੈਰ ਖੇਤੀ ਪ੍ਰੋਜੈਕਟਾਂ ਤੋਂ ਆਪਣੀ ਆਮਦਨ ਵਧਾਉਣ ਦੀ ਲੋੜ ਹੈ।

ਮੁੱਖ ਸ਼ਬਦ: ਸ਼ੁੱਧ ਆਮਦਨ, ਖਪਤ ਖਰਚੇ, ਫਾਰਮ ਖਰਚੇ, ਬੱਚਤ

ਪ੍ਰਮੁੱਖ ਸਲਾਹਕਾਰ ਦੇ ਹਸਤਾਖਰ

ਵਿਦਿਆਰਥੀ ਦੇ ਹਸਤਾਖਰ

CONTENTS

CHAPTER	TITLE	PAGE NO.
I	INTRODUCTION	1
II	REVIEW OF LITERATURE	5
III	MATERIAL AND METHODS	16
IV	RESULTS AND DISCUSSION	21
V	SUMMARY	52
	REFERENCES	55
	VITA	

LIST OF TABLES

Table	Title	Page no.
4.1.1	Distribution of selected farmers according to age in Amritsar district of Punjab, 2018-19	22
4.1.2	Family composition of selected farmers in Amritsar district of Punjab, 2018-19	23
4.1.3	Distribution of farmers according to the type of family in Amritsar district of Punjab, 2018-19	24
4.1.4	Distribution of farmers according to their education level in Amritsar district of Punjab, 2018-19	25
4.1.5	Number of earners in farm and non-farm sector among farmers in Amritsar district of Punjab, 2018-19	26
4.1.6	Operational area of farmers in Amritsar district of Punjab, 2018-19	28
4.1.7	Household durable assets of farmers in Amritsar district of Punjab, 2018-19	29
4.1.8	Farm assets of farmers in Amritsar district of Punjab, 2018-19	30
4.2.1	Levels of income of farmers in Amritsar district of Punjab, 2018-19	32
4.2.2	Income pattern of farmers in Amritsar district of Punjab, 2018-19	33
4.2.3	Per capita income of farmer in Amritsar district of Punjab, 2018-19	35
4.2.4	Distribution of household's income among farmers in Amritsar district of Punjab, 2018-19	36
4.2.5	Distribution of per capita income among farmers in Amritsar district of Punjab, 2018-19	37
4.3.1	Levels of consumption of farmers in Amritsar district of Punjab, 2018-19	38
4.3.2	Consumption pattern of farmers in Amritsar district of Punjab, 2018-19	41
4.3.3	Per capita consumption of farmers in Amritsar district of Punjab, 2018-19	44
4.3.4	Distribution of household consumption expenditure of farmers in Amritsar district of Punjab, 2018-19	46

Table	Title	Page no.
4.3.5	Distribution of per capita consumption of farmers in Amritsar district of Punjab, 2018-19	47
4.3.6	Farm expenditure of farmers in Amritsar district of Punjab (per farm), 2018-19	48
4.3.7	Farm expenditure of farmers in Amritsar district of Punjab (per acre), 2018-19	49
4.3.8	Savings of farmers in Amritsar district of Punjab, 2018-19	51
4.3.9	Average propensity to consume in respect of farmers in Amritsar district of Punjab, 2018-19	51

LIST OF FIGURES

Figure	Title	Page no.
4.1.1	Number of total earners, non-earners, family size and dependency ratio among farmers in Amritsar district of Punjab, 2018-19	27
4.2.1	Distribution of income of farmers of different farm size categories in Amritsar district of Punjab	32
4.2.2	Income pattern of all categories of farmers in Amritsar district of Punjab, 2018-19	34
4.3.1	Consumption pattern of farmers in Amritsar district of Punjab, 2018-19	43
4.3.2	Farm expenditure of farmers in Amritsar district of Punjab (per farm), 2018-19	50
4.3.3	Farm expenditure of farmers in Amritsar district of Punjab (per acre), 2018-19	50

CHAPTER I

INTRODUCTION

Indian economy continues to be predominantly an agricultural economy in terms of employment of labour force and livelihood dependency of population. India out ranks USA and China with the highest irrigated crop area (82.6 million hectares) and ranks second in the agricultural production. The major goal of agriculture sector has been laid to increase the food production substantially to cope up with the population growth. Although the primary sector along with allied activities contributes nearly 53 per cent of total employment but the share of agriculture in GDP has been constantly declining which is about 15.3 per cent (Anonymous 2018). But still agriculture sector is backbone of socio-economic growth of the Indian economy. Quality and size of the land are major determinants of productivity and profitability of agriculture. But majorities (83 per cent) of Indian farmers are small ones who cultivate less than two hectares of land.

In India, land holding size has declined due to the rapid growth in population, fragmentation of land holdings and changing trends to nuclear families. The small and marginal farmers accounted for 86.2 per cent of the total operational holdings in the country, cultivating about 47.3 per cent of the total area (Anonymous 2016). This numerically strong but economically weaker section of the rural community is having an average operational holding of about 1.41 hectares. These small farmers are facing the problems of low income, low investments and low returns. Besides this, the major difficulties of these farmers are both under-nutrition and malnutrition, surplus family labour and the tenure of un-economic size of land, which keep them below the poverty line (Pandey and Kaushal 1980).

Agriculture is a life line of developing countries, like India. Such an important sector of the economy was dismal at the time of independence due to low investment and traditional methods of production, as a result, our country had to import the food grains to meet its requirements. To be self-sufficient in food grain production, the green revolution was introduced during mid-1960's, but only in selected regions like Punjab, Haryana and Western UP. In case of Punjab, this revolution, by and large, was success and brought phenomenal changes in social and economic structure of the Punjab economy. The new methods of production like high yielding varieties, modern farm technology, fertilizers, pesticides and proper irrigation were introduced during green revolution. Punjab state with merely 1.5 per cent of India's geographical area bagged the title of granary of India. The state contributed 32.4 per cent of rice and 35.7 per cent of wheat to the central pool during 2017-18 (Anonymous 2018). The state presented a showcase model of agricultural reforms, with the advent of green revolution. The quick adoption of green revolution was not accidental, it was made possible by the heaving mix of

technological, mechanical, infrastructural and institutional instruments. As a result, the agricultural production process turned out to be more capital intensive.

Punjab agriculture is highly mechanized and capital intensive. The cropping intensity of the state has increased from 140 per cent in 1970 to 191 per cent in 2016-17. There are about 14.76 lakhs tubewells to pump out the depleting ground water, almost 100 per cent area is under high yielding varieties and the fertilizer consumption has reached to 232 kg /ha. All the farm operations are highly mechanized. There are 4.52 lakhs tractors, 2.50 lakhs disk harrows, 1.34 lakh seed-cum-fertilizer drills, 4.0 thousand tractor operated combines, 7.6 thousand self propelled combines, 39.0 thousand straw reapers and 2.0 thousand maize shellers. Moreover, there are 7.8 thousand potato planters, 40.0 thousand zero till drills, 8.6 thousand laser land levelers and 38.5 thousand rotavators in the state. As a result, the state with 1.53 per cent cultivable areas of the country produces about 18 per cent wheat, 12 per cent rice and 4 per cent cotton in country. Even the significance of highly agriculturally developed area can be seen from the fact that Punjab state produces 3 per cent rice, 2 per cent wheat and 1 per cent cotton of the world. This is remarkable contribution of the tiny state of Indian union (Anonymous 2018).

In spite of heavy investment in new farm technology and rural development, debt burden continuously increase in rural areas. Although green revolution sustained till 1980's, but presently, the Punjab agriculture is suffering from some serious issues. Rising costs along with capital intensive technology and a near freeze in the minimum support price of wheat and paddy, has turned the already adverse terms of trade from bad to worse and reduced returns on food grain production (Sajjad and Chauhan 2012). The tremendous changes in technology and mode of farming have led to increasing costs and declining farm income, and the farmers have been facing difficulties in meeting both farm and domestic expenditure (Sharma *et al* 2015). Since 1990's, the farmers have been experiencing a squeeze in their agricultural returns due to increase in cost of production. As most of the inputs used by farmers are now purchased from the market, the farmers have to spend enormous amounts of cash on purchasing market-supplied farm inputs to carry out their production operations (Kaur 2011). The rapid productivity gains of the green revolution reduced work opportunities and increased wage rates in the economy. In addition to this, the dominating cropping pattern of rice-wheat has put a severe stress on the natural resources particularly on soil and water resource.

As a result, the Punjab agriculture is facing a serious economic and ecological crisis. The agricultural productivity has nearly stagnated and the consistent rise in cost of production is resulting into the squeeze in the profit margins (Singh and Kolar 2001). Consequently, the growth rate of state's agriculture sector, which was recorded to be 6.63 per cent per annum in the first decade of green revolution, decelerated to 4.74 per cent per annum during mid-1970's to mid-1980's and further came down to 3.78 per cent during mid-1980's to mid-1990's (Sidhu 2002). During the period of 2008-09 to

2012-13, the Punjab agriculture has grown at a rate of just 1.50 per cent per annum which was less than the overall average (5.92 %) of Punjab economy (Anonymous 2012).

This capital intensive farming system has also increased the dependence of farmers on the market. Even the commodities, which can be produced at the farm for self-consumption at low cost, are being purchased at a higher rate. So, on the whole the farming profession is neither profitable nor sustainable in the existing dominance of wheat-paddy crop rotation. Though the agriculture sector is mechanically and technically well equipped under the present situation but it appears to be difficult to sustain the existing cereal oriented farming system in the long run. To ameliorate the problems of Punjab agriculture, various options are being suggested which include the diversification, corporatization of farming, contract farming and new generation cooperatives etc. (Singh 2000).

In the wake of globalization, the agriculture sector of surplus producing states, like Punjab, has been adversely affected by the liberalization policies. Under the World Trade Organization (WTO) regime, the farm subsidies and the state support in the form of Minimum Support Price (MSP) and assured procurement are being reduced. The increased role of private sector in the input industries, reduction of tariff levels as per the WTO agreements, withdrawal of subsidies to power and fertilizer, removal of quantitative restrictions, privatization of commercial banks, etc. would make the survival of small farmers tremendously difficult (Asokan and Singh 2001).

The specific characteristic of agriculture sector is proprietorship. As per 2011 census, there are 10.53 lakh holdings in Punjab out of which 25.94 per cent are owned by 6.65 per cent farmers (large farmers) (Anonymous 2011). It is worth mentioning that over time, the proportion of holdings among other categories of farmers has declined. The average size of holdings in the state is 3.77 hectare. Amritsar district falls in central plain agro-climatic zone of Punjab with 218000 hectare net cropped area. Along with rice-wheat rotation, the district has maximum area under basmati in the state.

As a result of the development of agriculture, the socio-economic conditions of the rural community have significantly changed. The levels of income and expenditure of the farmers have undergone a substantial change. During 1970's and 1980's, the income and consumption level of farming community was improved. Thus, the level of poverty among these people declined considerably. During 1973-74, about 28 per cent of farmers were living below the poverty line, which reduced to 11.17 per cent in 1993-94 and 6.16 per cent in 1999-2000. Unfortunately, due to liberalization policies, the poverty level of the farmers increased to 8.4 per cent in 2004-05 and further to 10.94 per cent in 2010-11.

In the context of growth performance of agricultural sector during the past decades, various disparities have emerged. It is argued that the gains from the development are not equitable across various size classes of the farms. For an agricultural economy like Punjab, it has ramification for the continuation of reform process. Hence, it is of utmost importance to understand the changing pattern of income and

expenditure among different categories of farmers. Keeping this in view, the present study has been conducted to assess the income and expenditure pattern of farmers in Amritsar district of Punjab.

Objectives

The present study has been conducted with the particular objectives as follow:

i. To study the socio-economic characteristics of different categories of sampled farmers.
ii. To assess the levels and patterns of income of different categories of farmers.
iii. To examine the domestic and farm expenditure of different categories of farmers.

CHAPTER II

REVIEW OF LITERATURE

This chapter deals with review of the relevant studies conducted by the researchers on income, consumption, expenditure pattern, poverty, indebtedness, investment pattern, per capita income, livestock, employment, wealth, land holding, credit taken, economic viability and other related issues of all categories of farmers. A brief review of the studies relevant to the present investigation is as following:

Aggarwal (1971) examined the impact of green revolution on landless labourers. The author found that with the advent of green revolution, large farmers became prosperous with the help of government agencies, banks and cooperative societies. They invested in capital-intensive equipment in order to enhance their direct control over agriculture. The small cultivators and the landless labourers, on the other hand, lost out in several ways because demand for their traditional services decreased, availability of land on crop sharing basis reduced and alternate employment opportunities lagged behind the requirements. Consequently, the two classes became polarized and increasingly antagonistic to each other.

Nandal (1972) reported pattern of income, investment, expenditure and savings of selected demonstration farms in Haryana. From the analysis it was concluded that the increase due to the green revolution were distributed among farmers of all categories irrespective of different demographic and socio-economic characteristics. Contrary to what is often believed, this new prosperity in agriculture had a salutary effect on the propensity to save and invest among the progressive farmers of the state. However, both the absolute and the relative income gains tended to increase with increase in the size of holding, level of mechanization, formal education of the head of the family and the number of earners in the family. This variation in socio-economic factors seemed to accentuate inter and intra-regional income imbalances which might involve serious socio-political implications.

Luxminarayan's (1979) analysis, based on the NSS (National Service Scheme) data classified that even though livestock is the most important asset for all groups of farming society, it is more important to small holdings than other holdings because small farmers try to keep their own draught animals for cultivation. Therefore, importance of livestock decreases with increase in the size of holdings. The author concluded this only in the case of medium farmers (10 to 25 acres) while it is unevenly distributed in the case of small (upto 5 acres) and large (25 acres and above) sized holdings.

Aggarwal (1980) conducted a study in terms of per family and per capita income, all categories of farmers as well as functionaries and agricultural labourers in the highly developed areas gained more than their counterparts in the less developed areas. However, the income gap between the rich and the poor in rural society was more in the more developed area than in the less developed area. According to

the author, this gave an indication that higher rate of agricultural development has led to more inequality in per capita income. The author also found that the consumption expenditure of marginal farmers and agricultural labourers was more than their income even though they had lower per capita total consumption expenditure than the small, medium and large farmers. It indicated their poor economic condition. They were probably living under constant debt to make both ends meet.

Singh (1993) in his study estimated that the small and marginal farmers of Punjab state continued to consume more than what they earned. Consequently, in 1990-91 more than one-third of marginal farmers and about 10 percent small farmers were below the poverty line. The study further found that the conditions of marginal farmers were worse than that of agriculture labourers in the Punjab state, both in terms of per capita income as well as the consumption.

Gill (1994) conducted a study on economic development and structural changes in Punjab. The study indicated the growing propensity towards the capitalistic agriculture in Punjab. There was fall in number of marginal and small holdings and raise in the number of medium and large holdings during 1970-71. There was a reversal of this occurrence during 1980-90. However, afterwards there was an indication of reverse tenancy where small and marginal owners of land were leasing out land to medium and large farmers. The small and marginal farmers were getting intent in other sectors due to unfavorable nature and structure of these sectors.

Singh *et al* (1997) studied the impact of diversification on income, employment and credit needs on marginal farms in Meerut district of Uttar Pradesh. They concluded that diversification of crop farming along with dairy enterprise could play more important role in increasing income and employment on marginal farms because the crop cultivation alone in India was subjected to a high degree of risk and uncertainty and had provided only seasonal, uncertain and irregular income to the farmers. Dairying, being a self income generating enterprise, had reduced the short term credit requirement by supplying regular income to the farmers. However, the available medium term credit to the farmers being inadequate, a substantial amount of its requirement for medium-term loan had enlarged manifold with the introduction of high yielding milch animals of improved breeds. Thus, the study suggested that the financial agencies should come forward rapidly to provide medium-term credit on easy terms to the marginal farmers to diversify their farming with dairy enterprise which would decrease the income variability and realized full potential of income generation.

Brithal and Singh (1997) estimated the demand parameters for each of the commodity, separately for all the income classes in Uttar Pradesh. The marginal propensity to consume different food items was low however, the overall MPC (Marginal Propensity to Consume) foremost of the livestock products (milk, milk products, mutton and chicken), fruits and vegetables was found to be higher than other food item which was 17 per cent and 5 per cent respectively. The marginal expenditure shares of different food

items indicated that, if the consumption expenditures of the households were to increase by one rupee, they would allocate about 33 per cent of it to food items. However across different income groups, marginal budget share of food varied from 26 per cent to 43 per cent. The marginal budget share of cereals was low and even negative for wheat and coarse millets. It implied that, the per capita cereal consumption would decline with increase in income.

Asokan and Singh (2001) made an effort to examine the problem of small farmers in India. The study discovered that there was greater than ever division of holding, making it lesser and lesser. The income from such small holdings was found to be very low. The cropping pattern of small farmers was overcome by small food needs and the food crops taken more than 83 per cent of the cropped area. This restricted the scope for increasing income through high valued non-food crops. Even if one assumed the farmers could cultivate the best possible crops or combination of crops in different states the returns remained deficient. The major bottlenecks in increasing the income of small and marginal farmers were absence of institutions to facilitate flow of credit, lack of credit and poor marketing facilities for inputs. The study further indicated that the increased role of private sector in the input industries, removal of quantitative restrictions, reduction of tariff level as per the World Trade Organization (WTO) agreements, privatization of commercial banks, withdrawal of subsidies to power and fertilizer, etc. would make the survival of the small farmers very difficult.

Chowdary *et al.* (2002) in his study on reasons behind suicides revealed that major reasons to agriculture difficulties were negligence of agriculture sector by state and central government, non-remunerative nature of farming, indebtedness of farmers, low quality seeds, over use of fertilizer and pesticides, declining productivity, lack of efficient irrigation, power supply shortage, absence of agriculture insurance, falling agriculture prices and problems related to tenant farming.

Mishra *et al* (2002) studied the Income, Wealth and the Economic Well-Being of Farm Households. This report showed that changes in income for the farm sector or for any particular group of farm businesses did not necessarily reflect changes confronting farm households. Farm households drew income from various sources, including off-farm work, other businesses operated and increasingly non-farm investments. Likewise, focus on a single indicator of well-being, like income, overlooked other indicators such as the wealth held by the household and the level of consumption expenditures for health care, food, housing, and other items. Using an expanded definition of economic well-being, they showed that farm households as a whole were relatively better off than the average U.S. household, but about 6 percent remained economically disadvantaged relative to the rest of the population.

Hazarika *et al* (2002) studied the prospects of increasing farm income and employment through diversification in Nagaon district of Assam. Four existing and four optimal plans for different categories of farmers were developed. In the existing plans, the major part of the income and employment was

occupied by field crops followed by livestock and plantation crops. Comparison of existing plan with optimum plan showed increase in cropping intensity by 6.30 per cent to 76.07 per cent on various farm size categories. The labour employment increased by 26.98 per cent to 64.02 per cent and net returns increased by 17.30 per cent to 127.29 per cent over the existing plans. It was found that vegetables, potato and oilseeds were the most remunerative crops in the optimum plans.

Singh *et al* (2004) studied the socio economic status of small and marginal farmers in Punjab. It was evident from the study that majority of small and marginal farmers possessed the necessity items like radio, television and sewing machine etc. More than half of farmers had tractors. The authors were of the view that over-expenditure on machinery lead to the indebtedness which was serious matter and needed attention of the policy planners. Small and marginal farmers should be motivated and technically trained to adopt subsidiary occupations for increasing their income and improving living standard. It could also help in generating employment among rural youth.

Singh (2006) studied the economic viability of small and marginal farmers and explored alternatives for promoting their sustenance in three districts of Punjab viz. Ropar, Ludhiana and Bathinda. The study revealed that the marginal and small farmers followed same production pattern and showed negative returns from farming. The analysis brought out that the farm business income of marginal and small farmers were equal to the sum of the rental value of their land and labour contribution imputed at the prevailing wage rate. The study further highlighted that marginal farms in all zones and small farms depending upon crops and dairying in the kandi zones were not economically viable. Income from off-farm sources was the only factor, which helped them to be viable.

Singh and Joshi (2008) studied indebtedness among farmers of Punjab and estimated that average gross income was ₹ 2,80,694 per sampled farm household, share of livestock being 20.60 per cent. The marginal land holding constituted 40.80 per cent of total and percentage of large holding to total land holding declined which was 16.40 per cent. The non-farm income of small and marginal holdings had 28.50 per cent and 22 per cent contribution to total family income. It was found that there were about 88.83 per cent indebted farmer households in Punjab with highest 93.23 per cent for large farmers and lowest 80.37 per cent for small farmers. An average farm household incurred ₹ 1,33,858 and ₹ 45,076 on productive and non-productive purposes, respectively.

Vatta and Garg (2008) studied pattern and access to employment and income in Punjab based on primary data collected from 315 rural households. The results of the study revealed that community, social and personal (CSP) services followed by transport and manufacturing were the three most prominent non-farm sources of employment and income for almost 70 per cent of the rural households. Falling profitability in agriculture and almost exhausted capacity of the farm sector to further absorb the labour force appeared to be major reasons for such livelihood diversification. Gender, age, education,

caste, family size, operational area, workforce participation rate and nearness to the urban settlements had significant influence on the incidence of rural non-farm employment and income .The per capita expenditure on education in Punjab had been even less than the all India average. There was a need to ensure the vocational training of rural youth immediately after leaving school.

Vatta *et al* (2008) studied Rural Employment and Income: The Inter-household Variations in Punjab and revealed that the employment diversification declined and dependence on farming increased significantly with increase in the landholding status of the workers, representing the distress nature of employment activities in the rural areas of Punjab. Further, ownership of land was found directly related to the occurrence of self employment and inversely to casual employment. A majority of the households depended on multiple sources of income, further confirming the distress nature of these income sources. The dependence on non-farm sector as a main source of income revealed a negative relationship with the land-size. More than two-thirds (66.9 per cent) of the non-cultivating households had non-farm sector as the chief source of their income. The average non-cultivating, and marginal as well as small cultivating households were not able to attain the overall income of an average rural household. The overall income was found to follow a highly skewed distribution towards medium and large cultivators. The income from crops and dairying was observed very unequally distributed, perhaps due to their strong organization with the size of landholding. On the other hand, rural non-farm income distribution seemed to be least skewed.

Sekhon *et al* (2009) analyzed the technical efficiency and viability of different size categories of farms in Punjab state. The study was based on the primary data collected from 300 farmers consisting of 100 marginal, 100 small and 100 other category of farmers for the year 2005-2006. In the analysis, inefficiency among farmers was deserved to the tune of 26 per cent having inverse relationship with farm size indicating considerable scope to improve the output of the crops in the existing conditions of input use and technology among farmers in general and marginal farmers in particular. The study showed that farm size turned out to be powerful driver of inefficiency at the farm level. Per capita income of marginal farmers in Punjab was about two and half times less than that of small farmers. Viability analysis showed that 20 per cent marginal farm families were below poverty line in Punjab during theyear 2005-06. Marginal and small farmers seemed unable to enter into contract farming, farm cooperatives, take up any agri-business and make value additions. Although the green revolution had made impressive strides in Punjab agriculture and achieved many landmarks to enhance the income of farmers, however success eluded marginal and small farmers.

Singh (2010) examined different purposes of credit taken by the farmers in selected villages of Amritsar and Gurdaspur districts of Punjab in 2008-09. The study examined that total income was estimated to be around ₹ 56,458 and 105680 for small and marginal farmers, respectively. The study revealed that per household debt was more in case of small farm size category at ₹ 70,502 as against ₹

44,635 for marginal farm size. It was also observed that 46.40 per cent and 40.90 per cent of total credit for small and marginal farmers was acquired for purchase of agricultural inputs followed by healthcare comprising 20 per cent and 23.20 per cent for small and marginal farmers, respectively.

Penda and Asogwa (2011) conducted a study on efficiency and income among the rural farmers in Nigeria and the study showed that technical inefficiency was worse than allocative inefficiency, implying that the low level of overall economic efficiency was the result of higher technical inefficiency. Thestudy also showed that the top most group (the richest households) in the area received not less than 50 percent of the total income of the area because the group probably owned and controled larger proportion of the productive and financial resources in the area. Furthermore, improvement in both farm and non-farm income resulted relatively more from decrease in the cost of technical efficiency, which in turn increased the overall economic efficiency and hence increased per capita income. Decrease in the cost of technical efficiency among the respondents brought about relatively more improvement in the welfare of the entire household members of the respondents and hence poverty reduction.

Mahendra (2011) studied farm-wise (marginal and small, semi-medium and medium and large) determinants of investment for all three sampled states (Andhra Pradesh, Punjab and Orissa) together and individually. In case of marginal and small farms, the coefficients of land, credit availability, and literacy was positive as well as statistically significant. With regard to semi–medium and medium farms, the coefficient of land alone was both positive and significant, the coefficient of credit availability was positive, but insignificant and that of literacy negative but insignificant. In case of large farms, credit availability alone was found both positive and significant. The State-wise disaggregative analysis revealed that land, credit availability and literacy were found to have statistically significant positive impact on capital formation in Punjab, whereas in Andhra Pradesh only the coefficient of land was both positive and statistically significant, andcoefficient of credit availability even though positive, but not statistically significant.

Terano and Mohamed (2012) conducted a study on expenditure analysis of the farm household economy in Malay paddy growing villages and concluded that total average expenditures were RM1 (Malaysian Ringgit) 248.1 in Kelantan, RM1 854.4 in Terengganu, RM1 988.9 in Kedah and RM1 306.8 in Penang. Among four areas item of food had large tenancy in monthly household expenditure followed by education, bill payment and fuel and loan. It is clear that food expense, medical care, and bill payment including electricity and water had significant difference between the East and West Coast areas. Especially, food expense had the largest difference between both coastal areas. The theory of Engel's law stated that household with higher income supposed to have lower percentage of food consumption in household expenditure. In the case of both coastal areas, household income level in the West Coast was higher than East Coast areas. Hypothetically, households in the West Coast should have lower percentage

of food expenditure. However, in the reality, the share of food expenditure was higher in the West Coast at 43.3% than the East Coast areas at 33.6% as shown in Engel's coefficient. This study could reveal that age of household, family size, income and location characterized rural economy concerning expenditure at household level. Similarly because living cost in the West coast area had been higher than the East coast area, it was assumable that they needed to struggle for sustaining their lives.

Chahal *et al* (2013) reported that marginal and small land holders constituted 44.76 percent of the total holding in 1990-91 which declined to 31.25 percent in 2005-06 in Punjab. Some of the problems being faced by them compromised of small size of holdings, low income, small marketable surplus, poor accessibility to credit and costly farm machinery etc. This study suggested that cropping intensity of marginal and small land holders could be increased by choosing crops such as vegetables, oilseeds, pulses and fodder which could help them to supplement their income. The cost of production of different cropping systems could be reduced by employment of family labour as its marginal efficiency was observed to be higher than the hired labour. The contract farming and group marketing arrangements had to be strengthened in order to help the marginal and small land holders. On the whole, it seemed that it would be possible to ameliorate the conditions of marginal and small land holders, if they became proactive to adopt the cropping system which would provide them with additional income.

Singh *et al* (2013) observed that rising costs and declining farm income of farming community in Punjab was not enough to provide to their farm and domestic expenditure, and hence they had to shift towards non-farm income for living. The study examined the income, expenditure pattern and its distribution among different farm size categories in Punjab. A significant variation in the income and expenditure level of different farm size categories was observed. The larger farmers incurred more expenditure for domestic consumption compared to the smaller farmers. The smaller farmers were left with insufficient amount of surplus compared to the larger farmers. It was a shame that about 35 per cent of the marginal farmers and 20 per cent of the small farmers were below the poverty line in contrast to none of the semi-medium, medium and large farmers during 2010-11. Ensuring effective distribution, allocation and execution of various welfare schemes in order to support the smaller farmers is a matter of prime concern and if left unattended could drag the economy of Punjab towards ambiguous development.

Odoemenem *et al* (2013) studied saving and investment pattern of small-scale farmers of Benue State, Nigeria and concluded that there were factors that had positive influence on saving and investment behavior of households surveyed such as level of income and sex. The number of dependents, age composition, nature of work and education level of the small scale farmers in the study area did not have a significant effect on saving. The factors that drove household investment were occupation, expenditure, assets and saving. Given the significance of the income factor in terms of both saving and investment, incentives such as improved technology, appropriate farm support services, medium and long term loans

should be provided by the government to farmers in order to boost their income level. Only then could the savings accumulated in the rural economy be transformed into productive investment that would enhance or uplift their present standard of living.

Singh and Bhogal (2014) informed that Punjab faced a serious crisis in the form of rising cost of production, stagnating productivity, shrinking employment, decelerating income, mounting indebtedness and ecological imbalance. On the whole 14.39 per cent of the farmers had left farming since 1991 and the proportion was very high in case of marginal (26.49) and small (18.27) farmers. In Punjab, the number of smaller land holdings declined unlike the large ones whose number was increasing. A considerable proportion of marginal and small farmers were pushed out of agriculture because it was non-viable and majority of them joined other sectors like wage labour.

Kaur and Singh (2014) conducted a study on income distribution among marginal and small farmers in rural Punjab and concluded that an average farm household earned annually ₹ 63,372.87 in the rural Punjab. The most important component of household income is farm business income. An average sampled farm household earned per capita income of ₹ 11,695.75 annually. The study discovered a positive relationship between farm size and income levels, i.e., as the farm size increased, the average income of the sampled farm households also increased. The field level survey discovered the fact that the marginal and small farmers of rural areas of Punjab tried to maintain a minimum level of consumption whether they could afford it or not. To overcome this problem, income of marginal and small farmers needed to be increased through different measures. Since there is positive relationship between farm size and farm business income, this made a powerful case in favour of the marginal and small farmers apart from other measures helpful in increasing their income. Educating the marginal and small farmers about the subsidiary occupations, fixation of prices of agricultural commodities, providing loans either interest free or at low rates of interest, assured purchase of agricultural produce in proper perspective taken on priority basis could help in enhancing the income of marginal and small farmers.

Gaur (2014) examined the development story of state and discovered that rural economy of Punjab is agrarian based and allied activities, mainly livestock. The increasing costs of production had increased the costs and risks prone to crop failure had resulted in increase in state of distress. The increasing expenditure on unproductive purposes had lead to increase in debts leading to suicides.

Singh *et al* (2015) concluded that out of the total net family income of marginal and small farmers, a major share was earned from crop and dairying, followed by income from non-farm activities. The net per capita annual income of marginal and small farmers was found to be about ₹ 35190 and 52999. Corresponding to this, the annual per capita household consumption expenditure was ₹ 20247 and 21268. This situation clearly described the exposure of these farmers to indebtedness in case of unexpected expenditure. The harsh economic situation of these farmers could be judged from the fact that

on an average about 31% and 16% of the total marginal and small farmers in the state, respectively, were living below poverty line. There is a need to address the problems of this section with special attention as this resource poor section was observed to be more inclined to economic wretchedness.

Singh (2016) conducted a study on income and employment of marginal and small farmers in south–western Punjab. The study revealed that crop production and dairy farming were the main sources of income of the sampled farmers. The net income obtained from crop farming and dairy farming contributed about 33 and 18 per cent to the total annual net income. Income from off-farm sources had been identified as another important factor contributing significantly to the net income of farm households. The share of income earned from non-farming sector was higher among marginal farms (58.36%) as compared to small farms (40.70%). The study brought out that farm size, net income from dairy, crop value productivity and off-farm income had significant positive impact on the income level**.**

Zainab (2016) studied income and expenditure pattern of farm households in Sira Taluk Karnataka. Analysis of data revealed that the impact of irrigation on the income of farm household was higher than that of size of land holdings. Farmers with irrigated land earned on an average 300 per cent more income than that with rainfed with same area under cultivation irrespective of crops grown. On an average, 43 per cent of total household expenditure was on food. Farmers with irrigated land had major share of investment towards irrigation equipments (44.5 %), whereas that with rainfed invested more on livestock (64.7 %). Farmers with rainfed conditions showed higher tendencies to migrate (31.66%) than irrigated farmers (21.66 %).

Singh and Burark (2016) studied income and employment generation under existing farming systems in tribal dominated Banswara district of Southern Rajasthanto work out the income and employment under existing farming systems during 2012-13. Four farming systems existed in both the rainfed and irrigated situations of Banswara district viz. FS-I: Crop+ Vegetables, FS-II: Crop + Dairy, FS-III: Crop + Dairy +Goat and FS-IV: Crop + Goat +Poultry +Orchard. The total cost in rainfed farming system was the lowest in FS-I (59707.15) and the highest in FS-III (166716.75). The total costs in irrigated farming system were the lowest in FS-I (232289.97) and highest in FS-III (292409.27). On the basis of net return per household, the most profitable farming system adopted under the rainfed situation was FS-III with ₹ 57600.95 per farm, while on the basis of returns per rupee investment; it was FS-IV which was ₹ 1.57. While under irrigated situation, FS-I was the most profitable farming system on net return basis (₹ 147287) and returns per rupee investment i.e. ₹ 1.63. In irrigated conditions the employment generation was more as crop, poultry and orchard activities were included in FS-IV which utilized more of family labour resulting in maximum employment.

UNIDO (2018) industrial development report on household consumption patterns and the sectoral composition of growing economies: A review of the interlinkages had concluded the significant changes

in expenditure patterns that occurred as household income rises might transform the industrial composition of the economy. As households became wealthier and began to diversify their spending beyond basic necessities, the growth rates of manufacturing and services industries began to rise. By affecting the growth rate of demand at the sectoral level, innovative activity within industries and the broader industrial composition of the economy were basically linked to the manner in which the composition of household spending evolved as income grew. This opened up the possibility of a positive feedback loop between the growth of the demand side and that of the supply side of the economy. As industries grew by serving the needs of consumers, these needs became satiated and households dedicated further increases in expenditure to other consumption priorities that stimulated growth in other industries. Structural change generated rising household income which created the conditions for further structural change.

Rajkumar (2018) conducted a study on employment, income and expenditure pattern of tribal farm families in Gadchiroli district of Maharashtra. The study brought out that per family income of tribal farm families at the overall level was estimated to ₹ 80483.16. The crop production, wage earning, service and sale of forest produce were major sources of family income. The factors such as gross cropped area, number of earners, expenditure on crop, livestock activities and annual employment had positive influence on the gross family income of the tribal farm families. The expenditure on crop production and food were the major items of total expenditure contributing 81.50 per cent together. Consumption expenditure of tribal was significantly influenced by the gross cropped area and annual family income.

Singh (2018) studied the economic viability of farming in Amritsar district of Punjab. The findings of the study brought out that around 80 per cent of the total household expenditure was incurred on non-food items, which is exceptionally high and need to be reduced in order to improve economic viability of the farm families. Education was the major cost component which constituted 24.21 per cent of the total non-food expenditure. The expenses incurred on household utility bills (electricity, telephone and LPG gas) and social ceremonies accounted for 19.85 and 17.15, which were also observed to be on higher side. Among the food expenditure, the sampled farm households were found to make over expenditure on intoxicant consumption (25.38%) and dairy products (21.61%), which needed to be reduced. The cultivation of vegetables along with paddy-wheat-vegetable rotation generated higher returns than that of traditional paddy-wheat rotation in the study area. The income earned from crop cultivation was the major source of income as it generated 72.74 per cent of the total income. The results of regression analysis brought out that the economic viability of the farm households could be significantly enhanced with increase in farm size, non-farm income and dairy income, however, it would be significantly decreased with over expenditure incurred on rent paid for leased-in land, crop grown, dairy, education and total household expenditure.

Srinatha (2018) conducted a study on income and expenditure pattern of different categories of rural households in Southern Karnataka. The results revealed that the average annual income of large farmers was more compared to other categories of rural households. The average annual income of large, medium, small and marginal farmers, and non-cultivators was ₹ 372782.18, ₹ 198751.22, ₹ 143867.57 and ₹ 123959.99, respectively. The major sources of income for farm households were crop production and sericulture followed by livestock and for non-cultivators, wages (43.94 %) were the major source of income followed by non-farm business (35.92 %). Average annual expenditure of non-cultivators, small, marginal, medium and large farmers was ₹ 114511.92, ₹ 118674.96, ₹ 141162 and ₹ 164438 respectively. The consumption pattern of the rural households showed that monthly per household expenditure on food items was 51.29 per cent and on non-food items was 48.71 per cent. Share of food items in total monthly expenditure decreased with increase in income and vice-versa. Agriculture income- consumption ratio of farm households was 1.34 and farmer category wise analysis revealed that the income-consumption ratio of small and marginal farmers was 0.69, which indicated that the agricultural income alone was not adequate to meet the expenditure.

Demandante (2019) examined the rural household economy and observed rural households in the working age (15-64 years) with minimal old dependents from the household heads and spouses. One-third of the children were young dependents. Majority of the household heads, spouses and children had formal education as vocational/college graduates, which revealed the importance of human capital investment for social mobility. Generally, the household size was small. The sources of income of three-fourths of the households were from two to five jobs. The bulk came from the salaries and wages, while farming ranked second and the least from lotteries. Less than half of the expenditure of the household went to food or survival needs. The second expenditure-item was on farming and the least was on cell phone load and social obligations both of which had a slice of only three percent each. Investment of the households was in the form of short term savings. Although farming is a vulnerable occupation, the households gave importance to agri-investments as a second option with education of their children as the third priority. This led to the conceptualization of a model that illustrated the importance of income, expenditure and investments on the gamut of economic progress in the rural areas. When income was limiting, savings were minimal, hence, expenditure was more for survival needs and therefore a small amount was left for investment. If this continually existed, the last stage of the growth theory could not become a reality.

CHAPTER III

MATERIAL AND METHODS

The sampling design and procedure of study has been discussed in this chapter. It explains the area of study by selecting blocks, villages and the selection of sampled farmers; collection of data and statistical/analytical methods used for accomplishing the objectives of the study under taken.

3.1 Sampling design

The study was conducted in Amritsar district of Punjab state during 2018-19. The ultimate sample of study was obtained by using three-stage random sampling technique.

3.2 Selection of blocks

The list of all blocks falling in Amritsar district was prepared. Three blocks were selected randomly. The blocks namely Ajnala, Chogawan and Harsha-Chhina were selected for study at the first stage of sampling.

3.3 Selection of villages

The list of all the villages falling in the three selected blocks was prepared and from this list, two villages from each block were chosen randomly. Hence two selected villages from each block were Urdhan and Awan from Ajnala block, Kohali and Brar from Chogawan block and Malu-nangal and Adliwal from Harsha-Chhina block.

3.4 Selection of respondents

The list of all farmers was prepared for selected villages. From each village, 15 farmers were selected randomly. Thus, 90 farmers were selected 30 from each block, which were further divided into five categories named as marginal (< 2.5 acres), small (2.5- 5 acres), semi-medium (5-10 acres), medium (10-25 acres) and large (>25 acres). The detailed procedure of sampling design is presented in Table 3.4.1.

3.4.1 Name of the selected blocks, villages and the number of farmers in Amritsar district of Punjab, 2018-19

District	Block	Name of villages	No. of farmers					Sample (no.)
			Marginal	Small	Semi medium	Medium	Large	
Amritsar	Ajnala	Urdhan	2	3	5	4	1	**15**
		Awan	3	3	4	4	1	**15**
	Chogawan	Kohali	2	3	5	4	1	**15**
		Brar	3	3	4	4	1	**15**
	Harsha Chhina	Malu Nangal	2	2	5	5	1	**15**
		Adliwal	2	3	5	4	1	**15**
Total	**3**	**6**	**14**	**17**	**28**	**25**	**6**	**90**

3.5 Construction of interview schedule

According to the objectives of the study the interview schedule was prepared to collect data from the sampled farmers. Pre-testing was conducted with the sampled farmers in the same area, prior to data collection. On the basis of pre testing, revised and simplified questionnaire was finalized.

3.6 Collection of data

The data on required information was collected from selected 90 farmers for the agricultural year 2018-19 through personal interview method. The data regarding socio-economic profile relating to age, educational level, family structure, composition of family, earner and non-earner farmers, farm size etc, were collected from the farmer households. The information regarding the income from different sources was also collected. The consumption and expenditure pattern were also recorded from the sample households. The information relating to their agricultural expenditures was also recorded along with present value of all domestic household and farm assets.

3.7 Concept and definitions

Although we have used the standard concepts and definitions, a brief account of some of these is given below:

Marginal farmer

Marginal farmer is a farmer who has up to 2.5 acres of operational land.

Small farmer

Small farmer is one who has between 2.5 to 5 acres of operational land.

Semi-medium farmer

Semi-medium farmer is a farmer having 5 to 10 acres of operational land.

Medium farmer

Medium farmer is one who has 10 to 25 acres of operational land.

Large farmer

Large farmer is a farmer having more than 25 acres operational land to cultivate.

Gross farm income

Gross farm income includes all the returns from crop production and other agricultural allied activities such as dairy and poultry enterprises on the farm.

Net farm income

It is calculated by deducting the variable costs and fixed costs from the gross farm income.

Non-farm income

It includes the total revenue earned by the farm families from non-farm activities like services, shopping, foreign remittances, transport, business, pension, hiring out labour, etc.

Gross family income

It is obtained by the addition of gross farm income to non-farm income of the farm family.

Expenditure

Expenditure refers to a payment with either cash or credit to purchase goods or services. The domestic expenditure of different farm categories on various items and services is calculated such as non-durable food items, non-durable non-food items, durable items, services and ceremonies etc.

Farm expenditure

It represents the cost incurred by farm businesses for goods and services used in production of agricultural commodities. It includes property taxes, livestock purchases, rent, fertilizers and lime, pesticides, machinery and building repair, fuel, wages, interest and business share of insurance premium etc.

Household consumption expenditure

The expenditure on durable items, non-durable food items, services and ceremonies bya household is known as household consumption expenditure such as expenditure on cereals, pulses, clothing, furniture, education, health care, marriages and religious ceremonies etc.

Economic Surplus

Economic surplus is calculated by subtracting annual expenditure from annual income during the year.

Average propensity to consume

It is the proportion of income used to purchase goods and services. APC is the ratio of the average consumption expenditure to the average income of household

$$\mathbf{APC} = \bar{C} / \bar{Y}$$

Here,

APC = Average propensity to consume

$\bar{C}$ = Average consumption

$\bar{Y}$ = Average income

3.8 Statistical analysis of data

To achieve objectives of the study, simple tabular averages and percentages were used to draw conclusion from analysis. Gini coefficient was worked out to examine the inequalities in income and consumption pattern of different categories of farmers.

3.8.1 Gini coefficient

The Gini coefficient or Gini index is a measure of statistical distribution developed by the Italian statistician Corrado Gini (1912) which estimates the degree of concentration of an income distribution. Higher the Gini ratio, higher is the income inequality and vice-versa. The ratio is expressed as a percentage or as the numerical equivalent of that percentage, which is always a number between 0 and 1. In this study, Gini coefficient had been used to measure the disparities in the income level of sampled farmers as following.

$$\mathbf{G = 1 - \sum_{k-1}^{n} (X_k - X_{k-1})\,(Y_k + Y_{k-1})}$$

Where,

G = Gini coefficient

X_k = Cumulated proportion of the population variables,

For k = 0,…,n, with $X_0 = 0$, $X_n = 1$

Y_k = Cumulated proportion of the income variable,

For k = 0,…,n, with $Y_0 = 0$, $Y_n = 1$

3.8.2 Gini ratio

Gini ratio is defined as the ratio of the area that lies between the equi-distribution line and Lorenz curve to the area that lies under the equi-distribution line. If these two areas are equal to each other, Gini ratio would be equal to unity. On the other hand, if the Lorenz curve coincides with equi-distribution line, Gini ratio would be equal to zero. Thus, the concentration ratio may vary from zero to one. The coefficient of concentration is used to estimate the degree of inequality. The inequality increases with the value of coefficient of concentration.

CHAPTER IV

RESULTS AND DISCUSSION

The present investigation on 'Income and Expenditure Pattern of Farmers in Amritsar District of Punjab' was focused to examine the income and expenditure pattern of all categories of farmers in Amritsar district of Punjab. The results have been discussed as below:

4.1 Socio-economic characteristics of different categories of farmers

4.2 The levels and patterns of income of different categories of farmers

4.3 The domestic and farm expenditure of different categories of farmers

4.1 Socio-economic characteristics of different categories of farmers.

The influence of an individual can be evaluated from different socio-economic characteristics such as age, family composition, education, household assets, farm assets, and operational land etc. In addition, the socio-economic profile of farmers also influences the decision-making power. Thus, the socio-economic characteristics of farmers are addressed as below mentioned headings:

4.1.1 Age

Most of the respondent farmers (58.89 %) belonged to 45 to 60 years of age. Almost 23.34 per cent farmers were of 30 to 45 years. Nearly 15 per cent of the sampled farmers were under the age group of 60 to 75 years, while only 3 sampled farmers with 18 to 30 years which accounted for 3.33 per cent of the total sampled farmers. (Table 4.1.1)

Proportion of farmers from 45 to 60 years was higher among marginal farmers (85.71%) than semi-medium (60.71%), medium (56.00%), small (52.94%) and large farmers (16.67%). The farmers corresponding to 60 to 75 years were found to be higher on large farmers (33.34%) than semi-medium (17.86%), medium (16.00%) and small farmers (11.77%). Farmers from 18 to 30 years came out 16.67 per cent, 4.00 per cent and 3.58 per cent in large, medium and semi-medium farmers, respectively. The percentage of marginal and small farmers under the younger age group i.e. 18 to 30 years was negligible.

Table 4.1.1: Distribution of selected farmers according to age in Amritsar district of Punjab, 2018-19 (numbers)

Farm-size Categories	Age (years)				Total
	18-30	30-45	45-60	60-75	
Marginal	0	2 (14.29)	12 (85.71)	0	14 (100.00)
Small	0	6 (35.29)	9 (52.94)	2 (11.77)	17 (100.00)
Semi medium	1 (3.58)	5 (17.85)	17 (60.71)	5 (17.86)	28 (100.00)
Medium	1 (4.00)	6 (24.00)	14 (56.00)	4 (16.00)	25 (100.00)
Large	1 (16.67)	2 (33.34)	1 (16.67)	2 (33.34)	6 (100.00)
Total	3 (3.33)	21 (23.34)	53 (58.89)	13 (14.44)	90 (100.00)

Figures in parentheses indicate percentage to total respondents.

4.1.2 Family composition

The proportion of male as compared to female was greater in all categories of farmers. The overall family size of all categories of farmers was 5.20 persons per family. The family size of large farmers was 6.33 persons which was found to be greater than other categories such as small (5.58 persons), semi-medium (5.21 persons), medium (5.12 persons) and marginal (4.36 persons) (Table 4.1.2). An average family size constituted 2.14, 2.64, 2.56, 2.52, and 2.83adult males on marginal, small, semi-medium, medium and large farms, whereas, adult females came out to be 1.79, 2.35, 2.31, 2.16 and 2.49on the above said farmer categories, respectively. Similarly there were about 0.29, 0.35, 0.10, 0.20 and 0.83 average male children and 0.14, 0.23, 0.21, 0.24 and 0.17 average female children on marginal to large farmers, respectively. The proportion of male to female was greater in large farmers 3.66 to 2.66, as compared to marginal 2.43 to 1.93, small 2.99 to 2.58, medium 2.72 to 2.40, semi-medium 2.66 to

2.52. Overall, it is concluded that adult males were prevail over adult females in terms of number in the sampled farm families in the study area.

Table 4.1.2: Family composition of selected farmers in Amritsar district of Punjab, 2018-19

(Numbers)

Farm-size Categories	Adult		Children		Total		Family size
	M	F	M	F	M	F	
Marginal	2.14	1.79	0.29	0.14	2.43	1.93	4.36
Small	2.64	2.35	0.35	0.23	2.99	2.58	5.58
Semi medium	2.56	2.31	0.10	0.21	2.66	2.52	5.21
Medium	2.52	2.16	0.20	0.24	2.72	2.40	5.12
Large	2.83	2.49	0.83	0.17	3.66	2.66	6.33
All categories	2.52	2.21	0.26	0.21	2.78	2.42	5.20

M and F stand for male and female, respectively.

4.1.3 Type of family

The distribution of all categories of farmers by type of family in Amritsar district of Punjab has been presented in Table 4.1.3. The number of nuclear families was higher than joint families under all the categories of farmers. In Amritsar district of Punjab nuclear families accounted for 81.11 per cent which was much higher than joint families which was accounted only 18.89 per cent of total families. Category-wise more number of semi-medium farm families (85.72 %) were of nuclear type as compared to other farm size categories *viz.*, marginal (85.71 %), medium (80 %), small (76.47 %) and large farmers (66.67 %). The proportion of large farmers living in joint type of family was higher (33.33 %) as compared to other categories of farmers.

Table 4.1.3: Distribution of farmers according to the type of family in Amritsar district of Punjab, 2018-19

(Numbers)

Farm-size Categories	Type of family		Total
	Nuclear	Joint	
Marginal	12 (85.71)	2 (14.29)	14 (100.00)
Small	13 (76.47)	4 (23.53)	17 (100.00)
Semi medium	24 (85.72)	4 (14.28)	28 (100.00)
Medium	20 (80.00)	5 (20.00)	25 (100.00)
Large	4 (66.67)	2 (33.33)	6 (100.00)
Total	**73 (81.11)**	**17 (18.89)**	**90 (100.00)**

Figures in parentheses indicate percentage to total respondents.

4.1.4 Education level

Education plays a significant role in decision making and gives a boost for the adoption of new agricultural technologies. The education level of farmers has been shown in Table 4.1.5. Table shows that 28.89 per cent of farmers were illiterate in Amritsar district of Punjab. About 42 per cent farmers out of total sampled farmers had matriculation level education. Only negligible proportion of total sampled farmers had graduation and post-graduation level of education accounting for only 2.22 and 1.11 per cent respectively. Among sampled farmers, there were 15 and 10 percent farmers whom studied at senior secondary/diploma and middle level education respectively. .

The large farmers were better educated compared to other categories of farmers in Amritsar district of Punjab. Among them 16.67 per cent to graduation as compared to medium farmers which was only 4.00 per cent graduated. None of the marginal, small and semi-medium farmers were graduated. The per cent share of the farmers with education up to middle was the highest on small farms (17.65%). However, the per cent share of farmers having education up to matriculation and senior secondary level

turned out to be the highest in case of medium (48.00%) and semi-medium farms (21.42%), respectively. It is evident from the analysis that the percent share of illiterate farmers was the highest on marginal, small and semi-medium farmers.

Table 4.1.4: Distribution of farmers according to their education level in Amritsar district of Punjab, 2018-19

(Numbers)

Farm-size Categories	Education level						Total
	Illiterate	Middle	Matric	Senior Secondary / diploma	Graduation	Post Graduation	
Marginal	5 (35.71)	2 (14.28)	6 (42.85)	1 (7.14)	-	-	14 (100.00)
Small	6 (35.29)	3 (17.65)	6 (35.29)	2 (11.76)	-	-	17 (100.00)
Semi medium	9 (32.14)	1 (3.57)	12 (42.85)	6 (21.42)	-	-	28 (100.00)
Medium	5 (20.00)	2 (8.00)	12 (48.00)	4 (16.00)	1 (4.00)	1 (4.00)	25 (100.00)
Large	1 (16.67)	1 (16.67)	2 (33.33)	1 (16.67)	1 (16.67)	-	6 (100.00)
Total	**26 (28.89)**	**9 (10.00)**	**38 (42.22)**	**14 (15.56)**	**2 (2.22)**	**1 (1.11)**	**90 (100.00)**

Figures in parentheses indicate percentage to total respondents.

4.1.5 Farm earners and non-farm earners

The number of working members reflected the income earnings level of the family. Table 4.1.5 reveals that on average working members' were 2.28 out of total 5.20 members which account for 43.84 per cent of total 100 per cent sampled farmers. Out of these 2.28 persons 1.62 was the farm earners and 0.66 were non-farm earners. An average number of working members came out to be the lowest in case of

marginal farmers 1.85 members as in case of medium farmers was observed to be the highest as 2.52 members. Except above small, semi-medium and large farmers were found to be 2.28, 2.21, and 2.33, respectively. Out of the total working members, the share of farm earners varied with farm size. It was 1.28, 1.64, 1.57, 1.68 and 2.16 per cent on marginal, small, semi-medium, medium and large farmers, respectively. On the contrary, the share of non-farm earners as 0.57, 0.64, 0.64, 0.84 and 0.17 to the above said farm categories respectively. The dependency ratio of the non-working members was 1.35, 1.44, 1.36, 1.03 and 1.71 in case of marginal, small, semi-medium, medium and large farmers respectively. The per cent share of farm earners (31.15%) was double to the non-farm earners (12.69%).

Table 4.1.5: Number of earners in farm and non-farm sector among farmers in Amritsar district of Punjab, 2018-19

(Numbers)

Farm size Categories	Family size	Farm earners	Non-farm earners	Total earners	Dependency ratio
Marginal	4.36 (100.00)	1.28 (29.36)	0.57 (13.07)	1.85 (42.43)	1.35
Small	5.58 (100.00)	1.64 (29.39)	0.64 (11.47)	2.28 (40.86)	1.44
Semi medium	5.21 (100.00)	1.57 (30.13)	0.64 (12.28)	2.21 (42.41)	1.36
Medium	5.12 (100.00)	1.68 (32.81)	0.84 (16.40)	2.52 (49.21)	1.03
Large	6.33 (100.00)	2.16 (34.12)	0.17 (2.68)	2.33 (36.80)	1.71
All categories	5.20 (100.00)	1.62 (31.15)	0.66 (12.69)	2.28 (43.84)	1.28

Figures in parentheses indicate percentage to total respondents.

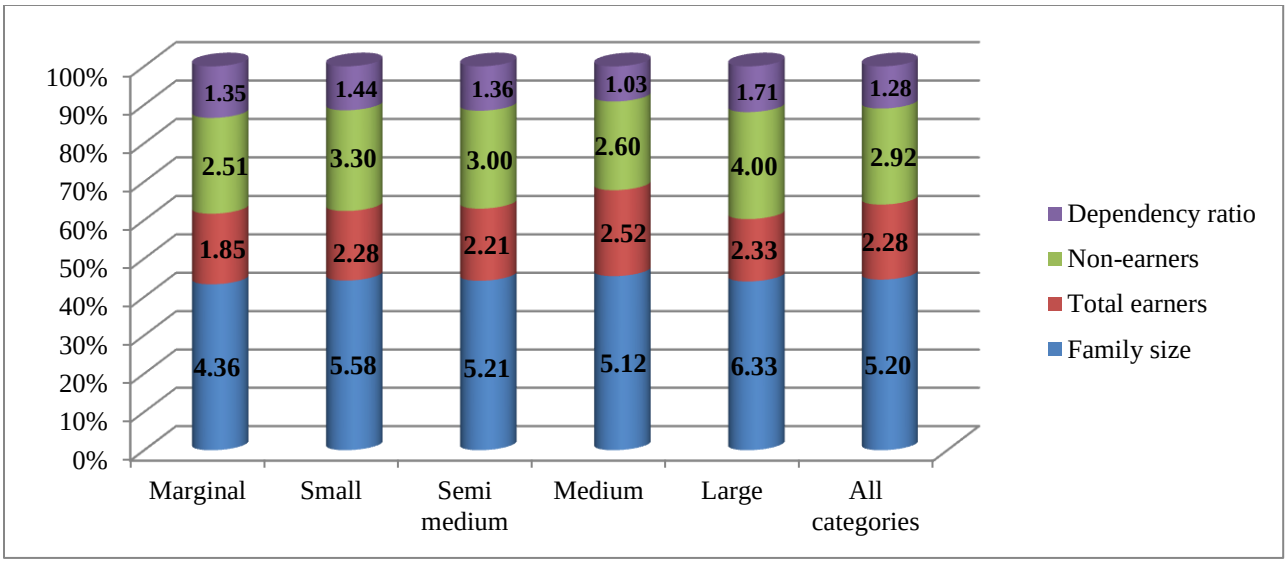

Figure 4.1.1: Number of total earners, non-earners, family size and dependency ratio among farmers in Amritsar district of Punjab, 2018-19

4.1.6 Operational land holding

Operational land holding refers to the availability of net land for cultivation of crops. On an overall basis, average operational area of sampled farmers' was 10.94 acres (Table 4.1.6).Out of the total operational area, owned operational land and leased-in land was 8.74 acres and 2.20 acres which accounted for 79.90 per cent and 20.10 per cent, respectively. The average land owned found to be 8.80 acres. Out of average land owned, the leased-out land was 0.06 acres which accounted for 0.68 per cent of total owned land of the farmers. The average operational area in the case of marginal, small, semi-medium, medium and large farms observed out to be 1.91 acres, 4.17 acres, 8.52 acres, 15.68 acres and 34.02 acres, respectively. It is evident that 3.95 per cent of the owned land in case of marginal farmers, 1.23 per cent of the owned land in case small farmer and 1.02 per cent of the owned land in case of semi-medium farmers was found to be leased-out due to limited farm resources. On the contrary, the leased-out land as a percentage of owned land was negligible on medium farmers. Large farmers leased out negligible part (0.67 %) of their total owned land. The area of leased-in land observed to be varied with farm size. It increased with increased in the farm size. An average area leased-in by marginal (0.21 acres), small (0.18 acres), semi-medium (0.78 acres), medium (4.02 acres) and large farmers (11.67 acres) which accounted for 10.99, 4.32, 9.16, 25.64 and 34.30 per cent of the operational area, respectively.

The analysis revealed that the operational land holding was observed to be strengthening more towards the medium and large farms. On contrary, small and marginal farmers leased-out their owned

land due to non-availability of sufficient farm resources and holding of uneconomical farm size, respectively.

Table 4.1.6 Operational area of farmers in Amritsar district of Punjab, 2018-19

(Acres)

Type of land	Farm size Categories										All Categories	
	Marginal		Small		Semi medium		Medium		Large			
	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%
Owned	1.77	100.0	4.04	100.0	7.82	100.0	11.66	100.0	22.5	100.0	8.80	100.0
Leased-out	0.07	3.95	0.05	1.23	0.08	1.02	-	-	0.15	0.67	0.06	0.68
Owned operational	1.70	89.01	3.99	95.68	7.74	90.84	11.66	74.36	22.35	65.70	8.74	79.90
Leased-in	0.21	10.99	0.18	4.32	0.78	9.16	4.02	25.64	11.67	34.30	2.20	20.10
Operational area	1.91	100.0	4.17	100.0	8.52	100.0	15.68	100.0	34.02	100.0	10.94	100.0

*Percentages of leased-out land are out of owned land.

4.1.7 Household durable assets

Household durable asset was the property of the farmers. The average household durable assets of sampled farmers was ₹1384644 which include the house, computer, clocks, fan, refrigerator, A.C, television, furniture, car, bike, cycle, mobile phone and generator etc. The value of household durable assets was increased with increased in farm size of sampled farm categories. The total value of household assets was worked out to be ₹ 492933, ₹ 802940, ₹ 1381622, ₹ 1991392 and ₹ 2598885 of marginal, small, semi-medium, medium and large farmers, respectively. The value of house occupied a major share of the total household assets. Out of total household assets the average value of house was found to be ₹ 449285, ₹ 688235, ₹1114285, ₹1440000 and ₹1841666 of marginal, small, semi-medium, medium and large farmers respectively. Apart from house, the item-wise average household assets of sampled farmers ₹167222, ₹ 31867, ₹ 29282, ₹ 19834, ₹13181 and ₹ 9807 on car/jeep, bike, furniture, television/computer, generator/inverter and mobile phones, respectively formed the major part of the total assets in Amritsar district of Punjab.

Table 4.1.7: Household durable assets of farmers in Amritsar district of Punjab, 2018-19

(₹/family)

Items	Farm size categories					All categories
	Marginal	Small	Semi medium	Medium	Large	
House	449285	688235	1114285	1440000	1841666	1069333
T.V./ Computer / Stereo	3693	8459	25356	26500	36167	19834
Watches / Clocks	905	1653	3993	5672	8000	3811
Electric fan / Cooler	1761	2700	6000	6820	10167	5223
Refrigerator	2104	3547	5500	12260	17334	7269
A.C	-	2059	8232	12600	26833	8239
Furniture	6893	12200	29875	47120	52884	29282
Utensils	1605	4197	7971	10420	11916	7245
Car / Jeep	-	34117	111607	339800	475000	167222
Bike	16786	26000	39143	48680	48667	31867
Cycle	1212	1650	650	728	2667	5682
Phone/Mobile	4211	6841	8771.43	11212	30250	9807
Generator/ Inverter	2464	7429	12857	20120	27084	13181
Others*	2014	3853	7382	9460	10250	6649
Total	**492933**	**802940**	**1381622**	**1991392**	**2598885**	**1384644**

*****Others include microwave, water purifier, and sewing machine etc.

Table 4.1.8 Farm assets of farmers

Farm asset are considered as the major property of the farmers. The average farm assets of sampled farmers was ₹620390.9which include the cattle shed, tractor, machinery, sheds, livestock, tube wells, diesel engines etc. The value of farm assets increased with increased in farm size of sampled farm categories. The total value of farm assets was worked out to be ₹ 249251, ₹ 450354.9, ₹ 748231.57,

₹ 971440.0 and ₹ 1696950.0 of marginal, small, semi-medium, medium and large farmers, respectively. The value of tractor occupied the major share of the farm assets. Out of total farm assets the average value of tractor was found to be ₹ 35000, ₹ 135294, ₹ 248571, ₹ 310000 and ₹ 605000 of marginal, small, semi-medium, medium and large farmers, respectively. The item-wise average farm assets of sampled farmers was ₹ 234777.8, ₹ 128900, ₹ 119205, ₹ 82189 and ₹ 74611 of tractor, tubewells, machinery & implements, livestock, and cattle shed, respectively.

Table 4.1.8: Farm assets of farmers in Amritsar district of Punjab, 2018-19

(₹/farm)

Items	Farm Size categories					All categories
	Marginal	Small	Semi medium	Medium	Large	
Cattle shed	50357.14	57941.18	90357.14	72600.0	113333.34	74611.11
Tractor	35000.00	135294.1	248571.43	310000.0	605000.00	234777.78
Store& chaff cutter shed	5357.14	18529.41	24660.71	59200.0	77500.0	33617.56
Fodder cutter	5071.43	5412.76	5678.57	6720.0	8166.67	5988.89
Electric motor shed	2571.43	2647.06	3321.43	5840.0	9166.67	4166.67
Machinery & implements	21429.57	65000.0	116500.0	187120.0	230583.33	119205.56
Livestock/Animals	63214.29	67765.71	94107.14	71480.0	156333.34	82188.89
Tubewell/ Bore	59642.86	87941.18	118071.43	161800.0	320000.00	128900.00
Diesel Engine/ Generator	3428.57	3911.76	5143.86	8920.0	12416.67	6177.78
Electric motor	821.43	617.65	768.86	600.0	2583.33	822.22
Underground pipeline	-	2352.94	35714.29	80800.00	153333.33	44222.22
Others*	2357.14	2941.18	5336.71	6360.0	8533.33	4917.78
Total	**249251.00**	**450354.9**	**748231.57**	**971440.0**	**1696950.0**	**620390.9**

*****Others include small tools and spray pumps etc.

4.2 The levels and patterns of income of different categories of farmers

An attempt has made to determine the levels and pattern of net income among all categories of the farmers in Amritsar district of Punjab. More specifically, the aim was to observe the distribution of income among the different sections of farmers.

4.2.1 Levels of income

The analysis deals with the levels of per household net income and per capita net income earned by different categories of farmers. The extent of inequality in the distribution of per household and per capita gross income has also been worked out. Majority of the income came from the crops followed by dairying (Table 4.2.1). The average values of net income from these two heads were found to be ₹ 389602 and ₹ 106026.9 respectively.Net income per household was maximum for large farmers. Net income per household was found to be ₹ 1371378, ₹ 858989, ₹ 608021.7, ₹ 333588 and ₹ 184318.6 of large, medium, semi-medium, small and marginal farmers, respectively.

For the marginal farmers, having land holding of less than 2.5 acres, net income from crops is the most important component of the total income. Against ₹ 62575.61 arising out of crops, ₹ 75678.68 was contributed by dairying, whereas private and Govt. services accounted for ₹ 8828.57 and ₹ 6428.57 respectively. Foreign remittances made up ₹ 8571.43 and income from pensions accounted for ₹ 8285.71. Almost equal share of different sources of income is revealed for the category of small farmers. Net income from crops as high as ₹ 153867.5, followed by dairying ₹ 75073.55. Per household income from foreign remittances and private services was account for ₹ 35294.12 and ₹ 25529.41 respectively. Net income generated from the pensions in small category of farmers was accounted for ₹ 9705.

In the same way the share of different sources of income is accounted for the category of semi-medium farmers. Per household income from crops, dairying, foreign remittances, Govt. services, pensions and private services was found to be ₹ 334046, ₹ 129225, ₹ 45714, ₹ 36214, ₹ 23571 and ₹ 18642 respectively. For the medium farmers having land holding of less than 25 acres, per household income generated mainly from the crops, dairying, Govt. services, private services and foreign remittance was found to be ₹ 594544, ₹ 116225, ₹ 61600, ₹ 26080 and ₹ 14400 respectively. For the large farmer having land holding of more than 25 acres, net income from crops was the main component of total income. Per household net income from crops and dairying was found to be ₹ 1215211 and ₹ 131416 respectively. For the large farmers, income generated from non-farm sector like shop, govt. service, private service, foreign remittance, custom hiring of farm machinery and pensions was found to be negligible.

Table 4.2.1 Levels of income of farmers in Amritsar district of Punjab, 2018-19

(Mean values, ₹/annum)

Source of income	Marginal	Small	Semi Medium	Medium	Large	All Categories
Crops	62575.61	153867.5	334046.7	594544	1215211	389602.5
Dairying	75678.68	75073.55	129225	116225	131416.6	106026.9
Shop	8571.43	12941.18	-	-	-	3777.78
Govt. service	6428.57	11764.71	36214.29	61600	-	31600.00
Private service	8828.57	25529.41	18642.86	26080	-	19240.00
Pensions	8285.71	9705.88	23571.43	25120	-	17433.33
Foreign remittance	8571.43	35294.12	45714.29	14400	-	26222.22
Custom hiring of farm machinery	4285.71	6176.47	5357.14	3400	-	4444.44
Others*	1092.86	3235.29	15250.0	17620	24750.33	12070.0
Total	**184318.6**	**333588.1**	**608021.7**	**858989**	**1371378**	**610417.2**

*Others include income from transport, sale of trees & animals etc.

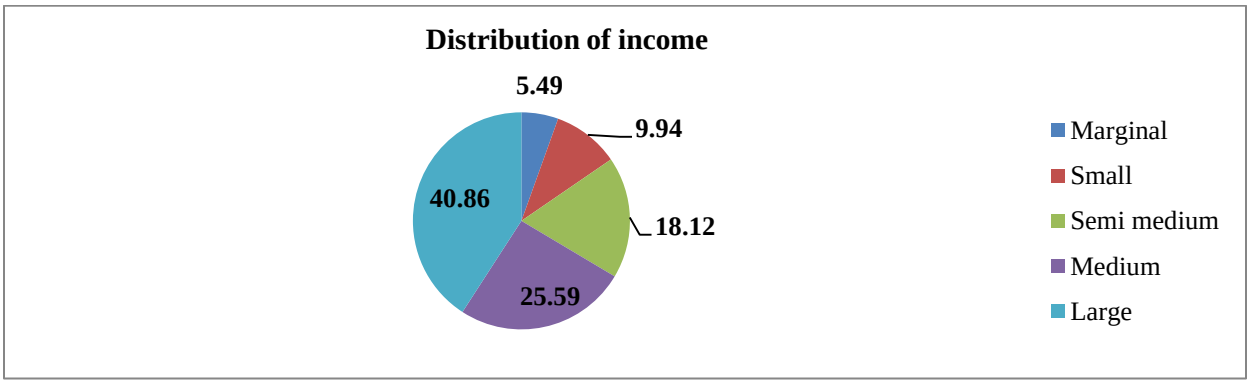

Figure 4.2.1 Distribution of income of farmers of different farm size categories in Amritsar district of Punjab

4.2.2 Pattern of income

The average farmers received about 63.83 per cent of their total income from crops (Table 4.2.2). This is so because agriculture is the main field of income of the farmers of the Punjab. The second major proportion of total income of the farmers was dairying 17.37 per cent followed by 5.18 per cent from Govt. services. Foreign remittance accounted for 4.30 per cent of the total income, indicating the existence of their family members and some of their relatives settled in foreign. Private services and pensions accounted for 3.15 per cent and 2.86 per cent, respectively. Only negligible proportion of 0.73 per cent and 0.62 per cent was received from custom hiring of farm machinery and shop, respectively.

Table 4.2.2 Income pattern of farmers in Amritsar district of Punjab, 2018-19

(Percentage of total income)

Source of income	Marginal	Small	Semi medium	Medium	Large	All categories
Crops	33.95	46.12	54.94	69.21	88.61	63.83
Dairying	41.06	22.50	21.25	13.53	9.58	17.37
Shop	4.65	3.88	-	-	-	0.62
Govt. service	3.49	3.53	5.96	7.17	-	5.18
Private service	4.79	7.65	3.07	3.04	-	3.15
Pensions	4.50	2.91	3.88	2.92	-	2.86
Foreign remittance	4.65	10.58	7.52	1.68	-	4.30
Custom hiring of farm machinery	2.33	1.85	0.88	0.40	-	0.73
Others*	0.59	0.97	2.51	2.05	1.80	1.98
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

*Others include income from transport, sale of trees & animals etc.

The highest proportion of total income of farmers from crops was observed to be 33.95, 46.12, 54.94, 69.21 and 88.61 per cent in order from low to high farm size categories, respectively. The proportion received from dairying was accounted for 41.06, 22.50, 21.25, 13.53 and 9.58 per cent of marginal, small, semi-medium, medium and large respectively. Govt. services constitute about 3.49, 3.53, 5.96 and 7.17 per cent and private services contribute 4.79, 7.65, 3.07 and 3.04 per cent where as foreign remittance contribute 4.65, 10.58, 7.52 and 1.68 per cent of marginal, small, semi-medium and medium, respectively. Large farmers had not received any proportion of income from govt. service, private services and foreign remittance.

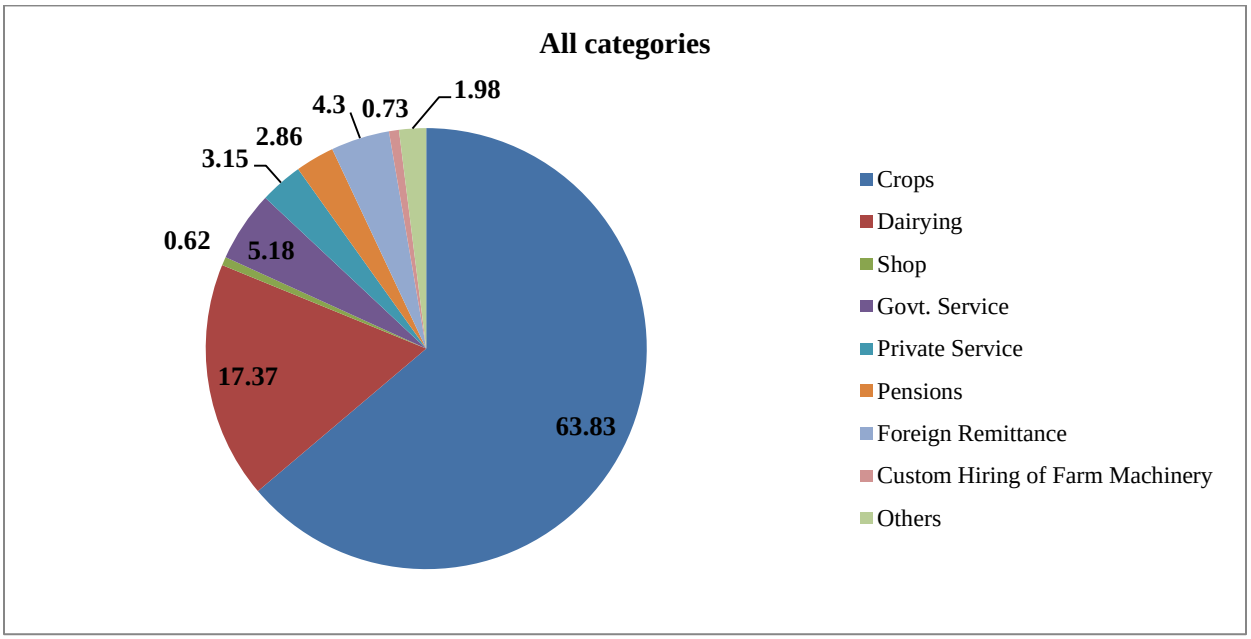

Figure 4.2.2 Income pattern of all categories of farmers in Amritsar district of Punjab, 2018-19

4.2.3 Per capita income

Per capita income is an indicator which depicts true economic picture of the family. The table 4.2.3 clearly shows that, on an average, ₹ 74923.56 net per capita income were accounted from crops, followed by ₹ 20389.79 per capita from dairying and ₹ 6076.92 per capita from Govt. services. Average net per capita foreign remittance and private service accounted for ₹ 5042.73 and ₹ 3700 respectively. For the all categories of farmers, farm business income is the main source of income. The per capita contribution stands at ₹ 14352, ₹ 27574, ₹ 64116, ₹ 116121 and ₹ 191976 for marginal, small, semi-medium, medium and large farmers respectively. Income from dairying is the next important component, accounting for ₹ 17357, ₹ 13454, ₹ 24803, ₹ 22700 and ₹ 20760 for these all categories of farmers respectively, whereas the Govt. service accounted for ₹ 1474, 2108, 6950.9, 12031.25, foreign remittance

accounted for ₹ 1965, ₹ 6325.11, ₹ 8774.34, 2812.5 and private service accounted for ₹ 2024, ₹ 4575, ₹ 3578.27, ₹ 5093.75 for marginal, small, semi-medium and medium farmers respectively. In terms of net per capita income of marginal and small was found to be ₹ 42274 and ₹ 59782 whereas net per capita income of semi-medium, medium and large farmers was accounted as ₹ 116702, ₹ 167771 and 216647, respectively.

Table 4.2.3 Per capita income of farmers in Amritsar district of Punjab, 2018-19

(₹/annum**)**

Source of income	**Marginal**	**Small**	**Semi medium**	**Medium**	**Large**	**All categories**
Crops	14352.20	27574.82	64116.45	116121.88	191976.46	74923.56
Dairying	17357.50	13454.04	24803.26	22700.20	20760.92	20389.79
Shop	1965.92	2319.21	-	-	-	726.50
Govt. service	1474.44	2108.37	6950.92	12031.25	-	6076.92
Private service	2024.90	4575.16	3578.28	5093.75	-	3700.00
Pensions	1900.39	1739.41	4524.27	4906.25	-	3352.56
Foreign remittance	1965.92	6325.11	8774.34	2812.50	-	5042.73
Custom hiring of farm machinery	982.96	1106.89	1028.24	664.06	-	854.70
Others*	250.66	579.80	2927.06	3441.41	3910.00	2321.15
Total	**42274.91**	**59782.81**	**116702.82**	**167771.29**	**216647.39**	**117387.92**

*Others include income from transport, sale of trees & animals etc.

4.2.4 Distribution of household income

Household income distributions among all the categories of farmers are shown in the Table 4.2.4. The bottom 10 per cent households shared only 1.47 per cent of total income, earned by all the weaker section farmer households. On the other hand, the top 10 per cent households appropriate 31.13 per cent of the total income. This is about 21 times the income shared by the bottom households.

A clear contrast is obvious from the fact that the bottom 50 per cent households account for about 20 per cent of total income, whereas the top 50 per cent account for 80 per cent of total income earned by the farmer households. Gini coefficient for all the categories of farmer household is of the order of 0.55, indicating inequality between the household income of farmers.

Table 4.2.4 Distribution of household income among farmers in Amritsar district of Punjab, 2018-19

Cumulative percentage of households	Cumulative percentage of households income of all categories
10	1.47
20	3.92
30	7.72
40	13.01
50	20.37
60	28.97
70	38.70
80	50.71
90	68.87
100	100.00
Gini coefficient	**0.55**

4.2.5 Distribution of per capita income.

Per capita income distributions among all the categories of farmers are shown in the Table 4.2.5. The bottom 10 per cent households shared only 1.82 per cent of total income, earned by all the weaker section households. On the other hand, the top 10 per cent farmer households appropriate 28.47 per cent of the total income. This is about 15 times the income shared by the bottom households.

A clear contrast is obvious from the fact that the bottom 50 per cent households account for about 21 per cent of total per capita income, whereas the top 50 per cent account for 79 per cent of total income earned by the households. Gini coefficient for all the categories of farmer household is of the order of 0.54, indicating inequality between the household income of farmers.

Table 4.2.5 Distribution of per capita income among farmers in Amritsar district of Punjab, 2018-19

Cumulative percentage of persons	Cumulative percentage of per capita income of all categories
10	1.82
20	4.43
30	8.20
40	13.50
50	21.10
60	30.05
70	40.10
80	52.73
90	71.53
100	100.00
Gini coefficient	**0.54**

4.3 The domestic and farm expenditure of different categories of farmers

Domestic and farm expenditure among all categories of the farmers in Amritsar district of Punjab was determined to observe the distribution of consumption prevailing among the different categories of farmers. The analysis is divided into two categories. Category I deals with the levels of per household consumption and per capita consumption expenditure among the different categories of farmers in Amritsar district of Punjab. Category II deals with the levels of per farm expenditure among the different categories of farmers in Amritsar district of Punjab.

Table 4.3.1 Levels of consumption of farmers in Amritsar district of Punjab, 2018-19

(Mean values, ₹/annum)

Items of consumption	Marginal	Small	Semi Medium	Medium	Large	All categories
A. Non-durables						
1. Cereals	11914.28	12662.36	14196.43	15639.40	20900.00	14288.28
2. Pulses	2967.86	3251.18	3771.43	4010.40	4920.00	3691.11
3. Milk and milk products	22571.43	30188.24	47378.57	61304.00	85206.67	46662.67
4. Sugar, sweet & gur	5712.86	6731.77	7658.43	8144.16	8673.33	7618.88
5. Edible oils	3910.0	4870.59	5009.29	5636.80	6120.00	5060.44
6. Vegetables	3628.57	4142.35	4808.93	5213.20	5650.00	4667.78
7. Fruits	1464.29	2120.59	3137.86	4372.00	4800.00	3139.00
8. Condiments and spices	1857.14	2250.00	2651.79	3150.00	3416.67	2641.67
9. Pickles	378.57	385.29	460.71	542.00	716.67	473.33
10. Tea leaves	1928.57	3247.06	3545.71	3820.00	3983.33	3343.11
11. Biscuit and bread	564.29	1100.00	1350.71	1396.00	1733.33	1219.11
12. Meat and eggs	464.29	1264.71	1485.71	2548.00	3300.00	1701.11
13. Tobacco, liquor and opium	1607.14	3411.76	4321.43	5840.00	11666.67	4718.89
14. Fuel and gas	7807.14	8812.94	10328.57	11232.00	12133.33	10021.33
15. Electricity	6128.57	11588.24	19550.00	27400.00	28333.33	18724.44
16. Clothing and footwear	7535.71	10558.82	30357.14	48776.00	56500.00	29926.67
17. Toiletries	5921.43	7126.47	7717.86	8238.40	8936.67	7552.56
18. Miscellaneous items*	1042.14	2261.76	3214.29	3744.00	4133.33	2904.89
Sub total	**87404.28**	**115974.1**	**170944.9**	**221006.4**	**271123.3**	**168355.3**
B. Durables						
1. House construction	2642.86	4117.65	9821.43	19320.00	35333.33	11966.67
2. Watches and clock	142.86	347.06	535.71	780.0	1416.67	565.56

3. Electric fans / cooler	1035.71	1264.71	1392.86	2140.00	2416.67	1588.89
4. T.V. / Computer / Stereo	1153.85	3823.53	5357.14	8040.00	13833.33	5044.44
5. Furniture	2714.28	3588.24	6053.57	11040.00	10333.33	6738.89
6. Utensils	857.14	1529.41	2214.29	2180.00	4250.00	2000.00
7. Bike and bicycles	4857.14	6352.94	7678.57	20240.00	9166.67	10577.78
8. Car / Jeep	-	8235.29	16071.43	28800.00	45833.33	17611.11
9. Phone/ mobile	5275.00	6482.35	8771.43	8348.00	12800.00	7946.11
10. Generator/ Inverter	2071.43	3941.18	2750.00	2920.00	3916.67	2994.44
11. Cosmetic	714.29	1235.29	3196.43	4320.00	8500.00	3105.56
12. AC	-	-	4678.57	8140.00	9666.67	5084.27
13. Refrigerator	857.14	1882.35	2125.00	4160.00	8000.00	2838.89
14. Miscellaneous items**	1932.14	2920.59	3035.71	3088.00	3911.67	2915.22
Sub Total	**24253.84**	**45720.59**	**73682.14**	**123516**	**169378.3**	**80977.83**
C. Services						
1. Education, Ielts & Coaching	8142.86	13705.88	40357.14	64800.00	86666.67	42611.12
2. Entertainment	1442.86	2726.47	3035.71	3756.00	7233.33	3209.44
3. Health care/Medical	5507.14	10805.88	30289.29	46540.00	66333.33	29671.11
4. Conveyance fuel	6285.71	18497.06	28665.00	53624.00	82750.00	33801.89
5. Lawyer	1785.71	2941.18	2535.71	2760.00	8333.33	2944.44
6. Tailor	2117.86	3470.59	7535.71	11340.00	21500.00	7912.78
7. Others***	1271.43	1617.65	2178.57	2280.00	4366.67	2105.56
Sub Total	**26553.57**	**53764.71**	**114597.1**	**185100**	**277183.3**	**122256.3**
D. Marriages and Other Socio-Religious Ceremonies	23678.57	28805.88	65714.29	82200.0	90833.34	58457.78
Total	**161890.3**	**244265.3**	**424938.4**	**611822.4**	**808518.3**	**430047.2**

***** Miscellaneous items include juice, cold-drinks, bedding etc.

**Miscellaneous items include water purifier, sewing and washing machine etc.

***Others include hair dresser, parlous and donation etc.

4.3.1 Levels of consumption

The analysis that follows, consumption basket is presumed to constitute consumer non-durables, consumer durables, services, marriages and other socio-religious ceremonies. Whereas the most important components of consumer non-durable was cereals, pulses, vegetables, milk, clothing, footwear, fuel or gas, electricity intoxicants and other items of daily use. The durable include house construction, watches or clock, electric fans, cooler, furniture, utensils, bike, bicycles, car, generator, inverter, refrigerator and services cover consumption expenditure education, entertainment, health care, conveyance fuel, lawyer, tailor and parlour etc.

Annual consumption expenditure of an average household of all categories is ₹ 430047.2 (Table 4.3.1). However, there are considerable differences in the levels of expenditure across the various categories of farmers. The annual consumption expenditure was found to be ₹ 161890.3, ₹ 244265, ₹ 424938, ₹ 611822 and 808518 of marginal, small, semi-medium, medium and large farmers respectively. Consumption expenditure on non-durables, durables and services bears a tendency to increase from marginal to large farmer size categories.

The non-durable items have consumption expenditure of about ₹ 87404.28, ₹ 115974.1, ₹ 170944.9, ₹ 221006.4 and ₹ 271123; durable items of about ₹ 24253.84, ₹ 45720.59, ₹ 73682.14, ₹ 123516 and 169378.3 and services have consumption expenditure of about ₹ 26553.57, ₹ 53764.71, ₹ 114597.1, ₹ 185100 and ₹ 277183.3 of marginal, small, semi-medium, medium and large farmers respectively. The annual expenditure on marriages and other socio-religious ceremonies is found to be ₹ 23678.57, ₹ 28805.88, ₹ 65714.29, ₹ 82200 and ₹ 90833.34 of marginal, small, semi-medium, medium and large farmers, respectively which is highest in semi-medium farmers among all categories of farmers.

A definite variation is observed in the expenditure of almost all the items in case of different categories of farmers in Amritsar district of Punjab. The highest expenditure on all the items in case of large farmers shows that ownership of means of production has its significant role in determining the level of living.

4.3.2 Consumption pattern

The percentage distribution of the different items of consumption expenditure leads to the following conclusions. Table 4.3.2 shows that 53.99 per cent of total expenditure of marginal farmers is accounted for by non-durables, the same for small, semi-medium, medium and large are 47.48, 40.23, 36.12 and 33.53 per cent respectively.

Table 4.3.2 Consumption pattern of farmers in Amritsar district of Punjab, 2018-19

(Percentage of total consumption)

Items of consumption	Marginal	Small	Semi medium	Medium	Large	All categories
A. Non-durables						
1. Cereals	7.36	5.18	3.34	2.56	2.58	3.32
2. Pulses	1.83	1.33	0.89	0.66	0.61	0.86
3. Milk and milk products	13.94	12.36	11.15	10.02	10.54	10.85
4. Sugar, sweet & gur	3.53	2.76	1.80	1.33	1.07	1.77
5. Edible oils	2.42	1.99	1.18	0.92	0.76	1.18
6. Vegetables	2.24	1.70	1.13	0.85	0.70	1.09
7. Fruits	0.90	0.87	0.74	0.71	0.59	0.73
8. Condiments & spices	1.15	0.92	0.62	0.51	0.42	0.61
9. Pickles	0.23	0.16	0.11	0.09	0.09	0.11
10. Tea leaves	1.19	1.33	0.83	0.62	0.49	0.78
11. Biscuit and bread	0.35	0.45	0.32	0.23	0.21	0.28
12. Meat and eggs	0.29	0.52	0.35	0.42	0.41	0.40
13. Tobacco, liquor and Opium	0.99	1.40	1.02	0.95	1.44	1.10
14. Fuel and gas	4.82	3.61	2.43	1.84	1.50	2.33
15. Electricity	3.79	4.74	4.60	4.48	3.50	4.35
16. Clothing and footwear	4.65	4.32	7.14	7.97	6.99	6.96
17. Toiletries	3.66	2.92	1.82	1.35	1.11	1.76
18. Miscellaneous items*	0.64	0.93	0.76	0.61	0.51	0.68
Sub total	**53.99**	**47.48**	**40.23**	**36.12**	**33.53**	**39.15**
B. Durables						
1. House construction	1.63	1.69	2.31	3.16	4.37	2.78
2. Watches and clock	0.09	0.14	0.13	0.13	0.18	0.13
3. Electric fans / cooler	0.64	0.52	0.33	0.35	0.30	0.37
4. T.V. / Computer / stereo	0.71	1.57	1.26	1.31	1.71	1.17

5. Furniture	1.68	1.47	1.42	1.80	1.28	1.57
6. Utensils	0.53	0.63	0.52	0.36	0.53	0.47
7. Bike and bicycles	3.00	2.60	1.81	3.31	1.13	2.46
8. Car / Jeep		3.37	3.78	4.71	5.67	4.10
9. Phone/Mobile	3.26	2.65	2.06	1.36	1.58	1.85
10. Generator/Inverter	1.28	1.61	0.65	0.48	0.48	0.70
11. Cosmetic	0.44	0.51	0.75	0.71	1.05	0.72
12. AC			1.10	1.33	1.20	1.18
13. Refrigerator	0.53	0.77	0.50	0.68	0.99	0.66
14. Miscellaneous items**	1.19	1.20	0.71	0.50	0.48	0.68
Sub Total	**14.98**	**18.72**	**17.34**	**20.19**	**20.95**	**18.83**
C. Services						
1. Education, Ielts / Coaching	5.03	5.61	9.50	10.59	10.72	9.91
2. Entertainment	0.89	1.12	0.71	0.61	0.89	0.75
3. Health care/Medical	3.40	4.42	7.13	7.61	8.20	6.90
4. Conveyance fuel	3.88	7.57	6.75	8.76	10.23	7.86
5. Lawyer	1.10	1.20	0.60	0.45	1.03	0.68
6. Tailor	1.31	1.42	1.77	1.85	2.66	1.84
7. Others***	0.79	0.66	0.51	0.37	0.54	0.49
Sub Total	**16.40**	**22.01**	**26.97**	**30.25**	**34.28**	**28.43**
D. Marriages and Other Socio-Religious Ceremonies	14.63	11.79	15.46	13.44	11.23	13.59
Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

***** Miscellaneous items include juice, cold-drinks, bedding etc.
**Miscellaneous items include water purifier, sewing and washing machine etc.
***Others include hair dresser, parlous and donation etc.

As far as expenditure on durable is concerned, the percentage varies from 14.98 for marginal, 18.72 for small, 17.34 for semi-medium, 20.19 for medium and 20.95 for large farmers. A total of 16.40 per cent of consumption expenditure of marginal farmers is on services, the same for small, semi-medium, medium and large farmers are 22.01, 26.97, 30.25 and 34.28 per cent, respectively. About 14.63

per cent of total consumption expenditure on marriages and other socio-religious ceremonies is spent by marginal farmers, the same for small, semi-medium, medium and large are 11.79, 15.46, 13.44 and 11.23 per cent, respectively. From the data, it is conclude that marginal farmers have better affordability of consumer non-durable, large farmers have higher capacity of consumer durable and also have greater capacity to spend on services.

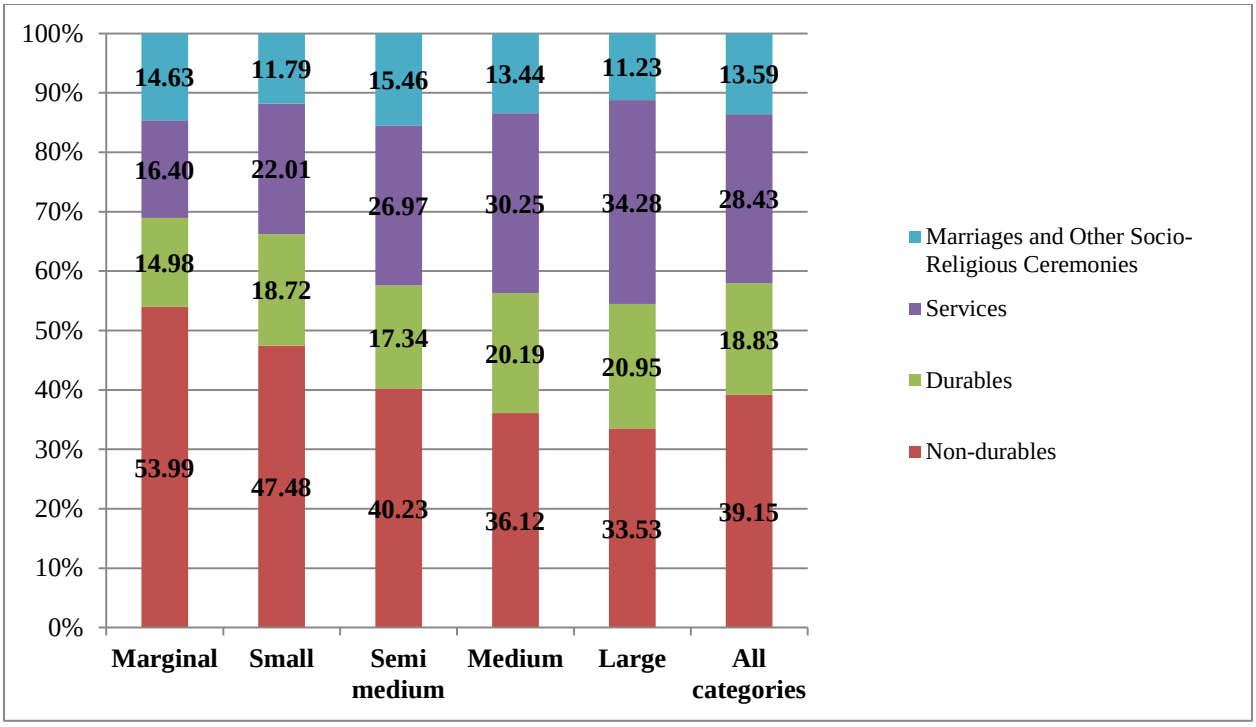

Figure 4.3.1: Consumption pattern of farmers in Amritsar district of Punjab, 2018-19

4.3.3 Per capita consumption expenditure

We have confined our attention to the analysis of the absolute amounts and percentages of various items of consumption expenditure incurred by various categories of farmers. Since the family size varies from marginal to large farmers, it becomes relevant to compare per capita consumption level of different categories of farmers.

Per capita consumption expenditure of an average all categories of farmers are ₹ 82701.38 (Table 4.3.3). However, there are some differences in per capita consumption expenditure across the different categories of farmers. For instance, per capita consumption expenditure of marginal, small, semi-medium, medium and large farmers is ₹ 37130.80, ₹ 43775.14, ₹ 81562.07, ₹ 119496.56 and ₹ 127728.01, respectively. The table reflects the increasing trend of per capita consumption as increase in the farm size category. Medium farmers have highest per capita consumption expenditure on non-

durables items, whereas on durable items and services large farmers have more per capita consumption expenditure.

Table 4.3.3Per capita consumption of farmers in Amritsar district of Punjab, 2018-19

(₹/annum)

Items of consumption	Marginal	Small	Semi medium	Medium	Large	All categories
A. Non-durables						
1. Cereals	2732.63	2269.24	2724.84	3054.57	3301.74	2747.75
2. Pulses	680.70	582.65	723.88	783.28	777.25	709.83
3. Milk and milk products	5176.93	5410.08	9093.78	11973.44	13460.77	8973.59
4. Sugar, sweet & gur	1310.29	1206.41	1469.95	1590.66	1370.19	1465.17
5. Edible oils	896.79	872.87	961.48	1100.94	966.82	973.16
6. Vegetables	832.24	742.36	923.02	1018.20	892.58	897.65
7. Fruits	335.85	380.03	602.28	853.91	758.29	603.65
8. Condiments & spices	425.95	403.23	508.98	615.23	539.76	508.01
9. Pickles	86.83	69.05	88.43	105.86	113.22	91.03
10. Tea leaves	442.33	581.91	680.56	746.09	629.28	642.91
11. Biscuit & bread	129.42	197.13	259.25	272.66	273.83	234.44
12. Meat and eggs	106.49	226.65	285.17	497.66	521.33	327.14
13. Tobacco, liquor & opium	368.61	611.43	829.45	1140.63	1843.08	907.48
14. Fuel and gas	1790.63	1579.38	1982.45	2193.75	1916.80	1927.18
15. Electricity	1405.64	2076.75	3752.40	5351.56	4476.04	3600.85
16. Clothing and footwear	1728.37	1892.26	5826.71	9526.56	8925.75	5755.13
17. Toiletries	1358.13	1277.15	1481.36	1609.06	1411.80	1452.42
18. Miscellaneous items*	239.02	405.33	616.95	731.25	652.97	558.63
Sub total	**20046.85**	**20783.89**	**32810.92**	**43165.31**	**42831.48**	**32376.02**
B. Durables						
1. House construction	606.16	737.93	1885.11	3773.44	5581.88	2301.28

2. Watches and clock	32.77	62.20	102.82	152.34	223.80	108.76
3. Electric Fans /Cooler	237.55	226.65	267.34	417.97	381.78	305.56
4. T.V. / Computer / Stereo	264.64	685.22	1028.24	1570.31	2185.36	970.08
5. Furniture	622.54	643.05	1161.91	2156.25	1632.44	1295.94
6. Utensils	196.59	274.09	425.01	425.78	671.41	384.62
7. Bike and bicycles	1114.02	1138.52	1473.81	3953.13	1448.13	2034.19
8. Car / Jeep	-	1475.86	3084.73	5625.00	7240.65	3386.75
9. Phone / Mobile	1209.86	1161.71	1683.58	1630.47	2022.12	1528.10
10. Generator/ Inverter	475.10	706.30	527.83	570.31	618.75	575.85
11. Cosmetic	163.83	221.38	613.52	843.75	1342.81	597.22
12. AC	-	-	898.00	1589.84	1527.12	977.74
13. Refrigerator	196.59	337.34	407.87	812.50	1263.82	545.94
14. Miscellaneous items**	443.15	523.40	582.67	603.13	617.96	560.62
Sub Total	**5562.81**	**8193.65**	**14142.45**	**24124.22**	**26758.03**	**15572.66**
C. Services						
1. Education, Ielts / Coaching	1867.63	2456.25	7746.09	12656.25	13691.42	8194.45
2. Entertainment	330.93	488.61	582.67	733.59	1142.71	617.20
3. Health care/Medical	1263.11	1936.54	5813.68	9089.84	10479.20	5705.98
4. Conveyance fuel	1441.68	3314.89	5501.92	10473.44	13072.67	6500.36
5. Lawyer	409.57	527.09	486.70	539.06	1316.48	566.24
6. Tailor	485.75	621.97	1446.39	2214.84	3396.52	1521.69
7. Others***	291.61	289.90	418.15	445.31	689.84	404.92
Sub Total	**6090.27**	**9635.25**	**21995.60**	**36152.34**	**43788.83**	**23510.83**
D. Marriages and Other Socio-Religious Ceremonies	5430.86	5162.34	12613.11	16054.69	14349.66	11241.88
Total	**37130.80**	**43775.14**	**81562.07**	**119496.56**	**127728.01**	**82701.38**

***** Miscellaneous items include juice, cold-drinks, bedding etc.

**Miscellaneous items include water purifier, sewing and washing machine etc.

***Others include hair dresser, parlous and donation etc.

4.3.4 Household consumption distribution

The distribution of consumption among all the categories of farmers in Amritsar district of Punjab is shown in the Table 4.3.4. There are inequalities in the household consumption. For example, the bottom 10 per cent households share only about 3.10 per cent of the total consumption of all the farmer households. On the other hand, the top 10 per cent households share about 21.16 per cent of the consumption of all categories of farmer households. This is about 7 times the consumption of bottom households. A clear contrast is obvious from the fact that the bottom 50 per cent households account for about 26.97 per cent, whereas the top 50 per cent households account for rest 73.03 per cent of total consumption of all the farmer households. Gini coefficient for all the categories of farmer household is of the order of 0.48, indicating relatively fair consumption distribution.

Table 4.3.4 Distribution of household consumption expenditure of farmers in Amritsar district of Punjab, 2018-19

Cumulative percentage of households	Cumulative percentage of households consumption expenditure of all categories
10	3.10
20	7.44
30	12.82
40	18.94
50	26.97
60	36.36
70	48.56
80	62.56
90	78.84
100	100.00
Gini Coefficient	**0.48**

4.3.5 Per capita consumption distribution

The distribution of consumption among all the categories of farmers in Amritsar district of Punjab is shown in the Table 4.3.5. There are inequalities in the household consumption. For example, the bottom 10 per cent households share only about 4.52 per cent of the total consumption of all the farmer households. On the other hand, the top 10 per cent households share about 17 per cent of the consumption

of all categories of farmer households. This is about 4 times the consumption of bottom households. A clear contrast is obvious from the fact that the bottom 50 per cent households account for about 31.52 per cent, whereas the top 50 per cent households account for rest 68.48 per cent of total consumption of all the farmer households. Gini coefficient for all the categories of farmer household is of the order of 0.45, indicating relatively similar consumption distribution as comparison to household consumption distribution.

Table 4.3.5 Distribution of per capita consumption of farmers in Amritsar district of Punjab, 2018-19

Cumulative percentage of households	Cumulative percentage of households consumption expenditure of all categories
10	4.52
20	9.88
30	14.70
40	22.72
50	31.52
60	41.97
70	54.41
80	66.35
90	83.00
100	100.00
Gini Coefficient	**0.45**

4.3.6 Farm expenditure

Farm expenditure refers to that expenditure which includes total fixed cost as well as total variable cost. The total fixed cost was found to be highest in large farmers ₹ 185949 followed by medium ₹ 111715, semi medium ₹ 86046, small ₹ 51790 and marginal farmers ₹ 29073 respectively. In the same way the cost incurred on the variable items was found to be highest on large farmers as comparison to the other categories of farmers. The variable cost of large farmers ₹ 1534836 followed by medium ₹ 619001, semi-medium ₹ 312579, small ₹ 147382 and marginal farmers ₹ 77312.27, respectively. Therefore, the total cost incurred on the farm was found to be was ₹ 106386, ₹ 199173, ₹ 398625, ₹ 730717 and ₹ 1720786 of marginal, small, semi-medium, medium and large farmers, respectively.

Table 4.3.6 Farm expenditure of farmers in Amritsar district of Punjab, 2018-19

(₹/farm/annum)

Cost items	Marginal	Small	Semi medium	Medium	Large	All Categories
Fixed cost						
Depreciation on fixed capital (machinery, livestock structure)	22792.6	40531.9	67340.84	87429.6	145525.5	66139.6
Interest on fixed capital	6281.27	11258.8	18705.7	24286.0	40423.75	18372.13
Total fixed cost	**29073.87**	**51790.7**	**86046.54**	**111715.6**	**185949.3**	**84511.73**
Variable cost						
Seeds	3879.0	8112.59	15156.0	26864.0	58105.0	17914.56
Seed treatment	191.0	404.41	883.75	1485.20	3165.00	1004.61
Fertilizer / FYM	9976.0	23574.7	45966.79	79724.8	172750.83	53968.22
Weedicides, Insecticides/ Pesticides	6473.0	15776.47	31641.25	58056.8	147466.67	39788.75
Irrigation charges (D.E, E.M & canal charges)	1750.0	4250.0	10050	15900.0	32500.0	10785.0
Fuel & mobile oil (other than irrigation)	4813.0	11366.18	22503.57	42506.00	95300.0	28057.22
Permanent, hired & casual labour	6970.0	18536.77	45326.78	78101.00	178608.34	52289.17
Land revenue / Land rent	6071.43	5647.06	31428.57	173000.00	561666.67	97288.89
Harvesting, transportation & market charges	8160.0	18051.73	37453.82	67633.68	147803.5	44972.06
Feed of livestock	22464.28	29044.1	48596.43	35072.0	59416.7	38977.78
Repair of irrigation structure, farm machinery &building/ shed	4857.14	8741.17	15506.14	26640.0	47083.34	17750.0
Interest on variable cost	1707.42	3877.67	8066.24	14017.9	30970.29	9036.59
Total variable cost	**77312.27**	**147382.9**	**312579.3**	**619001.4**	**1534836**	**411832.9**
Total cost	**106386.1**	**199173.6**	**398625.9**	**730717**	**1720786**	**496344.6**

Table 4.3.7 Farm expenditure of farmers in Amritsar district of Punjab, 2018-19

(₹/acre/annum)

Cost items	Marginal	Small	Semi medium	Medium	Large	All Categories
Fixed cost						
Depreciation on fixed capital (machinery, livestock structure)	11933.30	9719.88	7903.85	5575.87	4277.65	6045.67
Interest on fixed capital	3288.62	2699.95	2195.50	1548.85	1188.23	1679.35
Total fixed cost	**15221.92**	**12419.83**	**10099.36**	**7124.72**	**5465.88**	**7725.02**
Variable cost						
Seeds	2030.89	1945.47	1778.87	1713.27	1707.97	1637.53
Seed treatment	100.00	96.98	103.73	94.72	93.03	91.83
Fertilizer / FYM	5223.04	5653.41	5395.16	5084.49	5077.92	4933.11
Weedicides, Insecticides/ Pesticides	3389.01	3783.33	3713.76	3702.60	4334.71	3637.00
Irrigation charges (D.E, E.M & canal charges)	916.23	1019.18	1179.58	1014.03	955.32	985.83
Fuel & mobile oil (other than irrigation)	2519.90	2725.70	2641.26	2710.84	2801.29	2564.65
Permanent, hired & Casual labour	3649.21	4445.27	5320.04	4980.93	5250.10	4779.63
Land revenue / Land rent	3178.76	1354.21	3688.80	11033.16	16509.90	8892.95
Harvesting, Transportation & Market charges	4272.25	4328.95	4395.99	4313.37	4344.61	4110.79
Feed of livestock	11761.40	6965.01	5703.81	2236.73	1746.52	3562.87
Repair of irrigation structure, farm machinery & building/ shed	2543.01	2096.20	1819.97	1698.98	1383.99	1622.49
Interest on variable cost	893.94	929.90	946.74	894.00	910.36	826.01
Total variable cost	**40477.63**	**35343.62**	**36687.71**	**39477.13**	**45115.70**	**37644.69**
Total cost	**55699.53**	**47763.45**	**46787.08**	**46601.85**	**50581.60**	**45369.71**
Total cost excluded land rent & feed of livestock	**40759.40**	**39444.22**	**37394.46**	**33331.95**	**32325.18**	**32913.89**

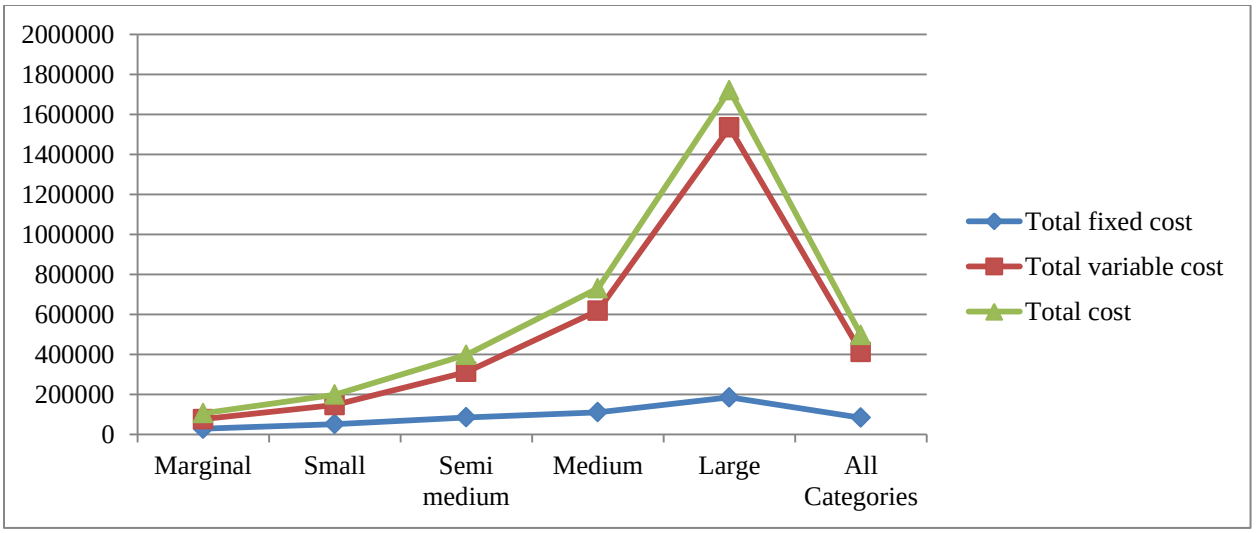

Figure 4.3.2 Farm expenditure of farmers in Amritsar district of Punjab (per farm), 2018-19

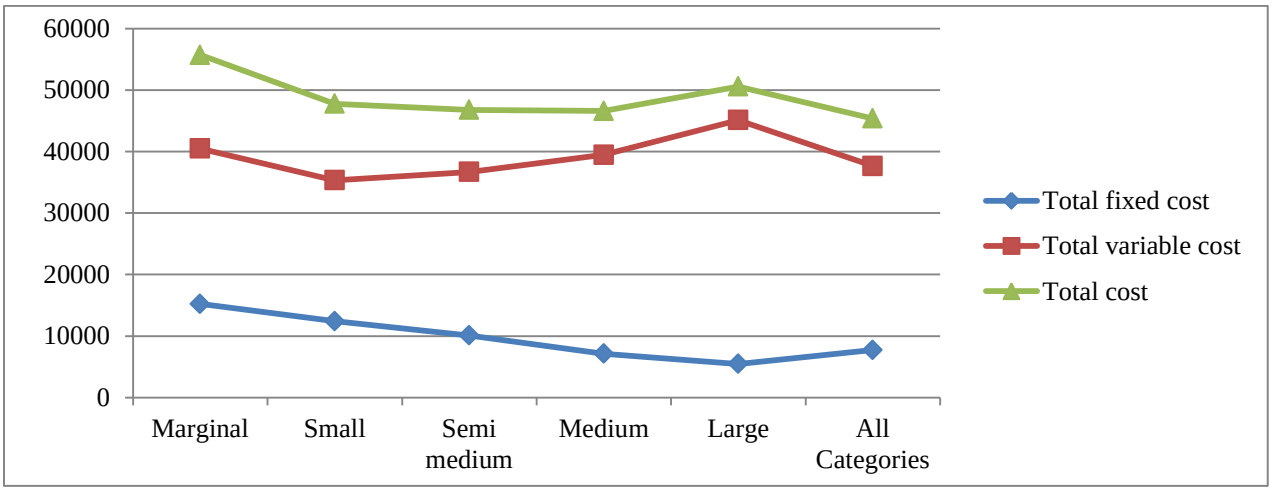

Figure 4.3.3 Farm expenditure of farmers in Amritsar district of Punjab (per acre), 2018-19

4.3.8 Savings of farmers

Savings are the surplus which can be calculated by deducting the consumption expenditure from the net income of farmers. The savings of marginal, small, semi-medium, medium and large farmers was found to be ₹ 22428, ₹ 89322, ₹ 183083, ₹ 247166 and ₹ 562859, respectively. As the farm size increased the saving were also increased in same pattern. The average savings of all categories of farmers was found to be ₹ 180370.

Table 4.3.8 Savings of farmers in Amritsar district of Punjab, 2018-19

(₹/annum)

Farm size categories	Net Income (Rs)	Consumption (Rs)	Savings (Rs)
Marginal	184318	161890	22428
Small	333588	244265	89322
Semi medium	608021	424938	183083
Medium	858989	611822	247166
Large	1371378	808518	562859
All categories	**610417**	**430047**	**180370**

4.3.9 Average propensity to consume

Average propensity to consume is defined as the proportion of income spent on consumption, is worked out for the all categories of farmers. The average propensity to consume comes to 0.70 for an average of all farmers of Amritsar district of Punjab. The average propensity to consume was found highest for marginal 0.87 whereas, APC was found lowest for large farmers 0.59, respectively. Except above the APC of small, medium and semi-medium was found to be 0.73, 0.71 and 0.70 respectively. Since the average propensity to consume was lesser than one in all categories of farmers, it shows every category has a surplus which they can save or consume on productive things.

Table 4.3.9 Average propensity to consume in respect of farmers in Amritsar district of Punjab, 2018-19

Farm size categories	Average Consumption ($\bar{C}$) (₹)	Average Income ($\bar{Y}$) (₹)	Average propensity to consume ($\bar{C}/\bar{Y}$)
Marginal	161890	184318	0.87
Small	244265	333588	0.73
Semi medium	424938	608021	0.70
Medium	611822	858989	0.71
Large	808518	1371378	0.59
All categories	**430047**	**610417**	**0.70**

CHAPTER V

SUMMARY

Agriculture endures to grasp the place of pride in India since time immemorial, as this sector is backbone of socio-economic growth of the Indian economy. Quality and size of the land are major determinants of production and productivity of farming sector. But majority (83 %) of Indian farmers are small ones who cultivate less than two hectares of land. In addition to this, fragmentation of land holdings and changing trend towards nuclear families, are the major difficulties of these farmers. The capital intensive farming system has reduced the human employment and enhanced the dependence of farmers on the market.

As a result of the development of agriculture, the socio-economic conditions of the rural community have significantly changed. The levels of income and expenditure of the farmers have undergone a substantial transformation. For an agricultural economy like Punjab, it has deep ramification upon the continuation of the reform process. Hence, it is of utmost importance to understand the changing pattern of income and expenditure among different categories of farmers. Thus, the present study on income and expenditure pattern of farmers was conducted in Amritsar district of Punjab during 2018-19 with the objectives; to study the socio-economic characteristics of different categories of farmers; to assess the levels and patterns of income of different categories of farmers; to examine the domestic and farm expenditure of different categories of farmers.

The ultimate sample of study was obtained by using three-stage random sampling technique. At the first stage of sampling three blocks were selected randomly, and at second stage six villages, two from each block were chosen. At the third and last stage, 15 farmers were selected randomly from each village. In all, 30 farmers were selected from each block with total sample size of 90 farmers in the study area, which were further divided into five categories viz. marginal (< 2.5 acres), small (2.5- 5 acres), semi-medium (5-10 acres), medium (10-25 acres) and large (>25 acres).The interview schedule was prepared to collect the information regarding the education, family size, operational area, income, consumption, expenditure pattern etc from the respondents. The data were analyzed by using simple tabular averages and percentages. Gini coefficient was worked out to examine the inequalities in income and consumption of different categories of farmers. The major findings of present investigation are summarized as follows:

- Majority (58.89 %) belonged to 45-60 year age group whereas 23.24 per cent belonged to 30-45 year age group. The percentage of farmers in the 18-30 year age group was negligible (3.33%).
- The proportion of males as compared to females was greater in all categories of farmers. The number of adult males was higher than that of adult females in the sampled farm families.

- Four-fifth of the families (81.11 %) were nuclear in the sample households. However, joint families accounted for only 18.89 per cent of total families.
- Large farmers were better educated as compared to other categories of farmers.
- The per cent share of farm earners was 31.15 per cent which was about 2.5 times higher than non-farm earners (12.69 %).
- An average area leased-in by large and medium farmers was worked out to be 11.67 and 4.02 acres which accounted for 34.30 and 25.64 per cent of the operational area. On the other hand area leased-in by the marginal, semi-medium and small farmers was 0.21, 0.78 and 0.18 acres respectively which accounted for 10.99, 9.16 and 4.32 per cent of total operational area.
- The average household durable assets of sampled farmers were ₹ 1384644, which included the house, computer, clocks, fan, refrigerator, air conditioner, television, furniture, car, bike, cycle, mobile phone and generator etc.
- The total value of farm assets was worked out to be ₹ 249251, ₹ 450354.9, ₹ 748231.57, ₹ 971440.0 and ₹ 1696950.0 which increased with increase in farm size.
- Net income per household was the highest for large farmers (₹ 1371378), followed by medium, semi-medium, small and marginal farmers ₹ 858989, ₹ 608021.7, ₹ 333588 and ₹ 184318.6 respectively.
- The proportion of total income from crops was observed to be 33.95 and 46.12 per cent for marginal and small farmers, whereas it was 54.94, 69.21 and 88.61 per cent for semi-medium, medium and large farmers, respectively.
- The net per capita income was found to be ₹ 42274, ₹ 59782, ₹ 116702, ₹ 167771 and ₹ 216647 for marginal, small, semi-medium, medium and large farmers, respectively.
- The bottom 50 per cent households accounted for about 20 per cent of total income, whereas the top 20 per cent accounted for about 50 per cent of total income earned by the farmers.
- The bottom 10 per cent households accounted for 1.82 per cent per capita income of total income and the top 10 per cent households accounted for 28.47 per cent of the per capita income. This came out to be about 15 times the income shared by the top households than bottom indicating inequality between the household income of farmers.
- Consumption expenditure on non-durables, durables, services, marriages and other socio-religious ceremonies depicted a tendency to increase from marginal to large farmers.
- More than half (53.99 %) of the total expenditure of the marginal farmers was incurred on non-durables, which was 33.53 per cent in case of large farmers.

- The average per capita consumption expenditure of farmer was observed to be 39.15, 18.83, 28.43 and 13.59 per cent on non-durables, durables, services and marriages, respectively.
- Inequalities were also found in case of household consumption as the bottom 10 per cent households shared very low proportion (3.10%) of the total consumption of all the households and the top 10 per cent households shared about 21.16 per cent, which was about 7 times the consumption of bottom households.
- In the distribution of per capita consumption expenditure, the bottom 10 per cent households shared only 4.52 per cent of all the households and the top 10 per cent households shared about 17 per centof the total consumption, which was about 4 times higher than the consumption of bottom households.
- The total cost incurred on the farm was found to be ₹ 106386, ₹ 199173, ₹ 398625, ₹ 730717 and ₹ 1720786of marginal, small, semi-medium, medium and large farmers, respectively.
- The savings of marginal, small, semi-medium, medium and large farmers were found to be ₹ 22428, ₹ 89322, ₹ 183083, ₹ 247166 and ₹ 562859, respectively.
- The average propensity to consume decreased with the increase in farm size. For marginal and large farmers, it was observed to be as 0.87 and 0.59, whereas for small, medium, and semi-medium farmers, it was found to be 0.73, 0.71, and 0.70, respectively.

Policy implications

As per the above discussion, some suggestions and policy implications are enlisted below:

- Farmers need to initiate the farm allied activities and off farm projects to increase their income.
- As non-farm activities increase the income and reduce the family dependency, hence agro-based industry and non-farm sector should be developed in the rural area.
- Dairying is the second major contributor towards the income of the farmers. Therefore, government should promote dairy farming, measures like providing the cross-bred cows at subsidized rates, subsidy on feed of livestock, enhancing milk processing industries etc. should be taken for augmenting the income of farmers.
- Farmers need to manage their household expenditure efficiently in order to enhance the possibilities of financial viability.
- Government should make policies for the welfare of farmers such as reduction in farm input prices, improve marketing facilities etc.
- Crop failure is one of the major reasons of economic instability of the farmers. Therefore, effective crop insurance schemes should be launched.
- The marriages and socio-religious ceremonies should be kept simple with limited expenditure.

REFERENCES

Aggarwal P C (1971) Impact of green revolution on landless labour. *Econ Polit wkly* **6:** 2363-68.

Aggarwal B K (1980) Socio-economic development of weaker sections- A comparative study of farmers and agricultural labourers in the rural Punjab. Ph.D Thesis. PAU, Ludhiana.

Anonymous (2012) Statistical Abstract of Punjab. Economic and Statistical Organization, Punjab.

Anonymous (2018) Statistical Abstract of Punjab. Economic and Statistical Organization, Punjab.

Asokan S R and Singh G (2001) Small farmers: An endangered species. *Poilt Econ J of India* **10**: 5-1l.

Brithal P S and Singh M K (1997) Demand for livestock products by rural households: A Study in western Uttar Pradesh. *Agric Econ Res Rev* **10**: 95-105.

Chowdary P A, Banerjee S, Brahma A and Biswas M K (2002) Report of the Farmers Commission of Experts on Agriculture in Andhra Pradesh, Hyderabad.

Chahal S S, Singh M and Singh T (2013) A study into present status and future strategies for marginal and small land holders in Punjab. *Indian J Econ Dev* **9:** 124-36.

Chai Andreas (2018) Household consumption patterns and the sectoral composition of growing economies: a review of the interlinkages. UNIDO industrial development report, Department of policy, research and statistics.

Demandante S R (2019) The rural household economy: Income, expenditure, and investment patterns. *J Agric Econ, Ext and Rural Dev*: ISSN-2360-798X **7:** 860-80.

Gill S S (1994) Economic development and structural changes in Punjab – Some policy issues: Principal Iqbal Singh Memorial Lecture. pp. 39-42. Echo Publishers, Ludhiana.

Gaur M (2014) Indebtedness and farmer suicide in the liberalized economy of Punjab. *Glob J Res Anal* **3:**126-27.

Hazarika C, Saikia B and Hazarika J P (2002) Prospects of increasing farm income and employment through diversification. *Agric Situ India* **59**: 549-56.

Kaur R (2011) Indebtedness among farmers, Patiala: Twenty first century publications.

Kaur S and Singh G (2014) Analysis of income distribution among marginal and small farmers in rural Punjab. *Int J Sci & Res* **3**: 755-59.

Luxminarayan H (1979) Inter size group and inter state variation in distribution of agricultural assets. *Econ Polit wkly* **14:** 52-58.

Mahendradev S (2011) Macro and Farm Level Investment in India: Trends, Determinants and Policies, Study prepared for FAO (Rome).

Mishra A K, Hisham S. El-Osta, Mitchell J. Morehart, James D. Johnson and Jeffrey W. Hopkins (2002) Income, Wealth, and the Economic Well-Being of Farm Households. *Econ Res Ser* Agricultural Economic Report No. 812.

Nandal D S (1972) Pattern of income, investment, expenditure and savings of selected demonstration farms in Haryana. *Indian J of Agric Econ* **27:** ISSN 0019-5014

Odoemenem, I U, Ezihe J A C and Akerele S O (2013) Saving and investment pattern of small-scale Farmers of Benue state, Nigeria. *Glob J of Human Soc Sci* **13** Version 1.0 Online ISSN: 2249-460 x & Print ISSN: 0975-587X

Pandey V K and Kaushal A K (1980) The economic viability of small farmers in Haryana. *Financ Agric* **12:** 11-17.

Penda Simon T and Benjamin C Asogwa (2011) Efficiency and income among the rural farmers in Nigeria. *J Hum Ecol* **35:** 173-79.

Rajkumar G K (2018) Employment, income and expenditure pattern of tribal farm families in Gadchiroli district of Maharashtra. M.Sc. Thesis. Department of Agricultural Economics, MPKY Rahuri, Maharashtra, India

Sajjad H and Chauhan C (2012) Agrarian distress and indebtedness in rural India: Emerging perspectives and challenges ahead. *J of Geogr and Reg Plann* **5:** 397–408.

Sekhon M K, Kaur M, Mahal A K and Sidhu M S (2009) Efficiency and viability of small and marginal farmers in Punjab. *J Agric Dev Policy* **19:** 91-100.

Sharma V K, Kingra H S, Bhogal S and Singh S (2015) Sustainable agriculture development and pattern of domestic consumption expenditure of Punjab farmers. *Indian J Econ and Dev* **11:** 439–47.

Sidhu H S (2002) Crisis in agrarian economy in Punjab- some urgent steps. *Econ and Polt Wkly* **37**: 3132-138.

Singh S (1993) Poverty and indebtedness among weaker section in rural Punjab. Ph.D. dissertation. Punjabi University, Patiala, India.

Singh N K, Singh R and Singh R P (1997) Impact of diversification on income employment and credit needs on marginal farms. *Agric Situ India* **54**: 191-93.

Singh S (2000) Contract farming for agricultural diversification in the Indian Punjab: A study of performance and problems. *Indian J Agric Econ* **55**: 283-94

Singh J and Kolar J S (2001) Agricultural economy of Punjab at the cross roads. *Intl J Punjab Stud* **8**: 239-50.

Singh G, Gill S S and Peshin R (2004) Profiling socio-economic status of small holders in Punjab. *J Agric Dev & Policy* **16**: 69-78.

Singh M (2006) An economic analysis of small and marginal farmers in Punjab.Ph.D. dissertation. Punjab Agricultural University, Ludhiana, India.

Singh M and Joshi A S (2008) Economic analysis of crop production and dairy farming on marginal and small farms in Punjab. *Agric Econ Res Rev* **21**: 251-57.

Singh N (2010) Rural healthcare and indebtedness in Punjab. *Econ Polit Wkly* **45:** 22-25.

Singh S, Sharma V K, Kingra H S and Bhogal S (2013) Income level, expenditure pattern and poverty among Punjab farmers. *J Agric Dev Policy* **23**: 26-39.

Singh S and Bhogal S (2014) Depeasentisation in Punjab: Status of farmers who left farming. *Curr Sci* **10**: 1364-168.

Singh S, Sharma V K, Kaur M, Kingra H S and Bhogal S (2015) Pattern of income and expenditure of marginal and small farmers in Punjab. *J Agric Dev Policy* **25**: 106-15.

Singh Hari and S S Burark (2016) Income and employment generation under existing farming systems in tribal dominated Banswara district of Southern Rajasthan. *Econ Aff* **61:** 119-25.

Singh S (2016) Income and employment of marginal and small farmers in south–western Punjab. M.Sc. Thesis. Department of Economics and Sociology, PAU, Ludhiana.

Singh A (2018) Economic viability of farming in Amritsar district of Punjab.M.Sc. Thesis. Department of Economics and Sociology, PAU, Ludhiana.

Srinatha T N (2018) Income and expenditure pattern of different categories of rural households in southern Karnataka : an economic analysis. M.Sc. Thesis, University of Agricultural Sciences GKVK, Bengaluru.

Terano Rika and Zainalabidin Mohamed (2012) In proceedings, "*International conference on business and economic research*" expenditure analysis of the farm household economy in malay paddy growing villages. ISBN: 978-967-5705-05-2.

Vatta K, Garg B R and Sidhu M S (2008) Rural employment and income: The inter-household variations in Punjab. *Agric Econ Res Rev* **21**: 201-10.

Vatta K and Garg B R (2008) Rural non-farm sector in Punjab: Pattern and access to employment and income. *Indian J Agric Econ* **63**: 224-43

Zainab Bi Afrin (2016) Income and expenditure pattern of farm households in sira taluk – Karnataka. M.sc Thesis, Department of Agricultural Economics University of Agricultural Sciences GKVK, Bengaluru.

VITA

Name of the student	:	Simardeep Singh
Father's name	:	S. Rakeshwinder Singh
Mother's name	:	Smt. Sukhjit Kaur
Nationality	:	Indian
Date of birth	:	01.08.1995
Permanent home address	:	Village- Urdhan, Post office-Gaure Nangal Tehsil-Ajnala, District- Amritsar

EDUCATIONAL QUALIFICTION

Bachelor degree	:	B.Sc. Agriculture (Hons.)
College	:	Khalsa College, Amritsar
University and year of award	:	Guru Nanak Dev University, 143005
% marks	:	72.9 %
Master's Degree	:	M.Sc. (Agricultural Economics)
University and year of award	:	Punjab Agricultural University, Ludhiana, 2019
OCPA	:	7.03/10.00
Title of Master's Thesis	:	Income and expenditure pattern of farmers in Amritsar district of Punjab