

AGRARIAN DISTRESS IN HARYANA: AN OVERVIEW

Pooja Gothwal¹, Reena Dahiya² and Manoj Siwach³

Abstract

Agriculture is the principal source of income for more than 50 per cent of the population. Haryana is an agriculturally developed state. However, the peasantry in Haryana is under a tremendous burden of debt, falling profits, the disintegration of land holdings, rising population pressure on the agriculture sector and saturation in productivity and production. The present paper attempts to analyze the symptoms of agrarian distress in Haryana. The level of agrarian distress among farmers increased due to the predominance of the small number of farmers who have not reaped the benefit of economies of scale. The growth rate of agriculture and allied activities has remained unstable for the last two decades. The burden of debts and the stress of payments of debts have increased on farmers. The declining trends in the plan expenditure on agriculture and allied activities in Haryana may affect the overall long-term development of the agriculture sector in Haryana.

Keywords: Agriculture Sector, Production, Agrarian Distress, Haryana.

Introduction

Haryana is the one of smallest states in India, with 4.4 million hectares of land. However, agriculturally, it is a crucial state. Haryana is the second biggest contributor to the Central Food Grain Pool of the Country (Krishak Jagat, Nov. 2020). The average yield of wheat and rice were 4687 and 3334 kg per hectare, respectively, in 2019-2020, as against 3421 and 2705 kg per hectare at the national level. The net Irrigated area increased tremendously from 37.8 per cent (irrigated area as a percentage to net area sown) in 1966-67 to 90.89 per cent in 2018-19. The per hectare consumption of fertilizers and manure has increased fivefold since 1980-81, as per Statistical Abstracts of Haryana data. The per capita income of Haryana was rupees 2,35,707 for the year 2020-21 as against rupees 1,26,855 at the national level (Haryana Economic Survey, 2021-22). Even though the share of the

¹ Ph.D. Scholar, Department of Economics, Chaudhary Devi Lal University, Sirsa (Haryana).

² Assistant professor, Govt. College BHuna, Fathehabad. (Corresponding author)

³ Professor and Chairperson, Department of Economics, Chaudhary Devi Lal University, Sirsa (Haryana).

agricultural and allied sector in the gross domestic product of the state has fallen from 60.7 per cent of GSDP (Gross State Domestic Product) in 1969-70 to 16.9 per cent of the gross state value added (at the constant prices of 2011-12) in 2021-22 but still, it is an important contributor of GSDP. Agriculture provides employment opportunities for more than half of the population in the state. According to NSSO data for the 70th round, cultivation and livestock are the principal sources of income for 69.1 per cent of agriculture households in Haryana.

For the development of the economy, the structural transformation from agriculture to industry and service sectors is necessary. The declining share of the agriculture sector is considered an indicator of the development of an economy. The agriculture sector does not get as much importance as it required. So, even with the relatively good performance of the agriculture sector, as mentioned above, the farming profession became unviable. The researchers have assigned different reasons for this. Sidhu (2002) and Bhalla and Singh (2009) pointed out that agrarian crises are caused by a decline in the yield and output of the agriculture sector. Jayati Ghosh claims that agrarian distress results from lower harvest due to bad weather conditions, difficulties farmers face in accessing credit at reasonable rates, inadequate generation of remunerative employment in the economy, and a sharp fall in capital investment in agriculture. Centre for Study of Developing Societies (CSDS) claimed that farm crises deepened because the benefits of government schemes and policies are mostly given to big farmers.

The peasantry in Haryana is under the tremendous burden of debt, falling profits, the disintegration of land holdings, rising population pressure on the agriculture sector and saturation in productivity and production. The agricultural distress will increase over time if corrective measures are not adopted.

The present paper attempts to analyze the basic reasons for agrarian distress in Haryana so that, based on a concrete analysis of the prevailing situation, suitable suggestions for intervention at various levels can be taken to reduce the distress in the agriculture sector.

Research Methodology

To properly understand the agriculture distress, we should understand the development indicators. The sustainability of a sector depends on its stable growth rate and the production, productivity and population dependency. Thus, for analyzing the density of

distress, trends in growth rate, production and productivity of main crops have been found, and compound growth of production and productivity of main crops of the agriculture sector has also been used. The agriculture sector's productivity also depends on agriculture credit and the size of land holdings. So trends in both indicators are also studied in this paper. Agricultural activities are mainly based on nature, so changes observed in environmental and ecological factors may affect the stability of the agriculture sector. For the development of the agriculture sector, the dependency on natural factors like the shortage of rainfalls and declining soil fertility should be minimized. Trends in irrigation facilities and fertilizers have been studied to analyze dependency on natural factors. For overall development, agriculture sector trends in development expenditure have been studied.

Thus, agrarian distress has been analyzed based on the development indicators such as agriculture credit, size of operational holdings, the growth rate of agriculture and allied activities, relation of percentage share of agriculture and allied activities in GSDP and percentage of the workforce, trends and growth rate of production and productivity, trend and growth rate of agriculture expenditure. The farmers have been categorized into marginal farmers (0 to 1 hectare), small farmers (more than 1 to 2 hectares), semi-medium farmers (more than 2 to 4 hectares), medium farmers (more than 4 to 10 hectares) and large farmers (more than 10 hectares) based on the NSSO criterion. The secondary data have been taken from Statistical Abstracts of Haryana, Agriculture Census of India and the NSSO data for 1985-86 to 202-22. Descriptive statistical analytical tools were used to analyze the results, and the annual compound growth rate for agricultural production, productivity and agriculture expenditure was also used by fitting the exponential function. The Compound Growth rate (r) equals $(\text{Antilog } B-1) \times 100$.

Results and Discussion

The study's findings have been analyzed and presented under subheads based on the abovementioned indicators.

1. Agriculture Credit

Agriculture credit is one of the main causes of agrarian distress in Haryana and India because it is the essential source for land development, farm assets and agriculture inputs. In Haryana, 39.6 per cent of agricultural households are indebted, according to the 77th round of NSSO (2019). To reduce agriculture distress, the proportion of institutional credit should be large enough because high differences exist between interest rates of institutional and non-

institutional credits. The following table explains that the proportion of institutional credit decreased over time. It means cultivators have to borrow a large part of their borrowing from non-institutional sources at an exorbitant interest rate. The share of non-institution credit was increasing till the 70th round in Haryana. Thus, agrarian distress has increased in Haryana from the point of view of agriculture credit.

Table 1
Shares in Total Debt of Cultivator Households in Haryana (Credit Distribution by Different Source wise)

Source of debt	1981-82	1991-92	2001-02	2011-12	2018
Institutional	75.8	68.9	49.9	52.4	48.98
Cooperative Societies/ Banks	22.7	23.0	22.7	24.5	-
Commercial Banks	46.6	43.5	25.7	24.0	-
Others	6.5	2.4	1.5	3.9	-
Non-institutional	24.2	31.1	50.1	47.6	20.95
Money lenders	14.1	12.6	41.5	39.1	-
Relatives and friends	6.3	2.1	3.0	5.8	-
Landlord	2.2	7.8	1.3	0.1	-
Others	1.6	8.6	4.3	2.6	-
Both sources	-	-	-	-	30.07
Total	100.0	100.0	100.0	100.0	100.0

Source: All India Debt and Investment Survey, NSSO, Government of India, various rounds

2. Size of Operational Holdings

Another reason for distress in the agriculture sector is the uneconomically small land holdings in which an increasing trend was found over the period. Table 2 reveals that the number of marginal and small farmers increased considerably, and the number of large and medium farmers decreased over time. Table 3 shows that area of cultivable land with small and marginal farmers increased, and with medium and large farmers, it decreased. Thus, the level of agrarian distress among farmers increased due to the predominance of small farmers who did not reap the benefit of economies of scale.

Table 2
Number of farmers in Different Farm Size Categories

(in per cent)

Years	Marginal Farmers	Small Farmers	Semi-Medium Farmers	Medium Farmers	Large Farmers
1970-71	27.40	18.90	22.50	23.10	8.10
1990-91	40.70	19.90	22.00	14.50	3.00
2000-01	46.00	19.30	18.20	13.20	3.30
2010-11	48.10	19.50	17.60	12.00	2.80

Sources: Agriculture Census (1970-71, 1990-91, 2000-01 and 2010-11)

Table 3
Area of Cultivable Land with Different Farm Size Categories

(in per cent)

Years	Marginal Farmers	Small Farmers	Semi-Medium Farmers	Medium Farmers	Large Farmers
1970-71	3.50	7.20	17.00	38.10	34.20
1990-91	7.90	12.50	25.40	35.00	19.10
2000-01	8.90	11.90	22.00	34.10	23.10
2010-11	9.90	12.70	22.30	32.50	22.60

Sources: Agriculture Census (1970-71, 1990-91, 2000-01 and 2010-11)

3. Unstable Growth Rate:

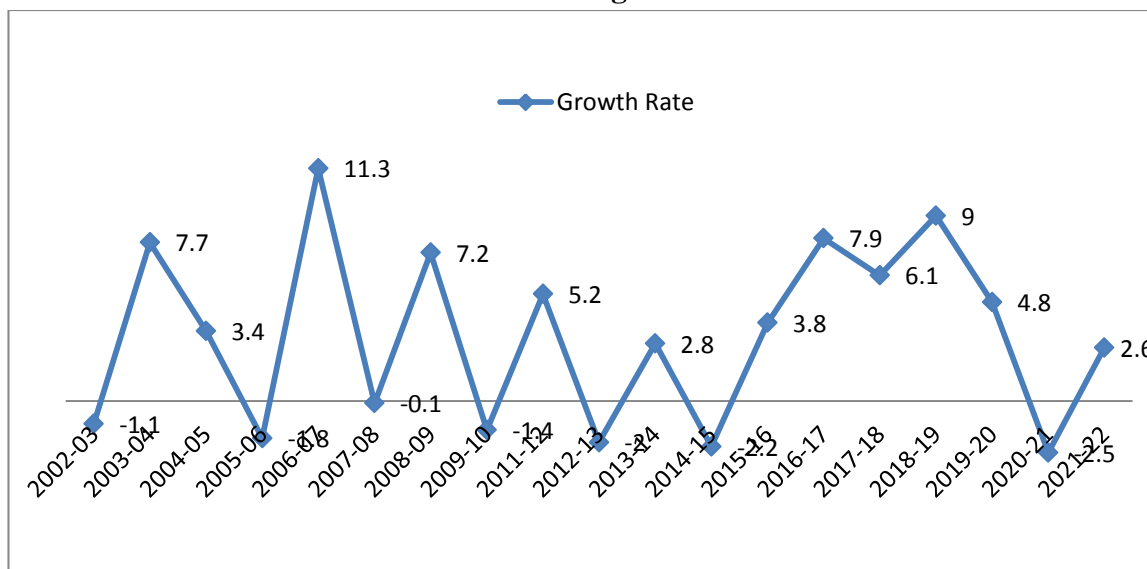
Increasing distress in the agriculture sector also increased due to the unstable growth rate of the agriculture sector. The study's findings on the growth rate of agriculture and allied activities are shown in table 4 and Figure 1. The findings reveal that the growth rate of agriculture and allied activities remained unstable for the last two decades. The fluctuations in growth rate were swift, and they came year after year. Due to these fluctuations in the growth rate of agriculture and allied activities income of the farmers also fluctuated.

Table 4
The Growth Rate of Agriculture and Allied Activities

Year	The growth rate of Agriculture and Allied Activities
2002-03	-1.1
2003-04	7.7
2004-05	3.4
2005-06	-1.8
2006-07	11.3
2007-08	-0.1
2008-09	7.2
2009-10	-1.4
2011-12	5.2
2012-13	-2.0
2013-14	2.8
2014-15	-2.2
2015-16	3.8
2016-17	7.9
2017-18	6.1
2018-19	9.0
2019-20	4.8
2020-21	-2.5
2021-22	2.6*

Source: Haryana Economic Survey from 2002-03 to 2018-19, 2021-22 (*advance estimation)

Figure 1
The trend in the Growth Rate of Agriculture and Allied Activities



Thus, the agriculture sector never provided a stable source of income to farmers, so farmers are more dependent on debts for purchasing agriculture inputs. The burden of debts and stress of payments of debts increased on farmers.

4. Relation of Percentage Share of Agriculture and Allied Activities in GSDP and Percentage of Workforce

In developed countries, the percentage share of agriculture and allied activities in the gross domestic product declined considerably. In contrast, it decreased the workforce depending on the agriculture sector. Thus, from the development point of view, the relation between the percentage share of agriculture and allied activities in gross domestic product and the percentage of the workforce dependent on the agriculture sector should have gone in the same direction.

The findings of the study on this aspect have been given in table 5. The findings reveal that there has been a considerable increase in the gap between the percentage share of agriculture and allied activities in gross domestic product and the percentage of the workforce dependent on the agriculture sector in Haryana. The excess population burden on the agriculture sector increased because other industry and service sectors of the economy did not sufficiently generate employment opportunities for absorbing the workforce depending on the agriculture sector.

Table 5
Percentage Share of Agriculture and Allied Activities in GSDP and Percentage of Workforce

Year	Percentage Share of Agriculture and Allied Activities in GSDP	Percentage of Workforce	Gap
1980-81	53.76	65.13	-11.37
1990-91	44.10	61.44	-17.34
2001-02	31.10	51.56	-20.46
2004-05	23.1	54.08	-30.98
2009-10	16.1	44.11	-28.01
2021-22	16.9	44.96*	-28.06

Source: Haryana Economic Survey, NSSO 60th, 66th round(*As per 2011 Census)

5. Trend and Growth rate of Agricultural Production and Productivity

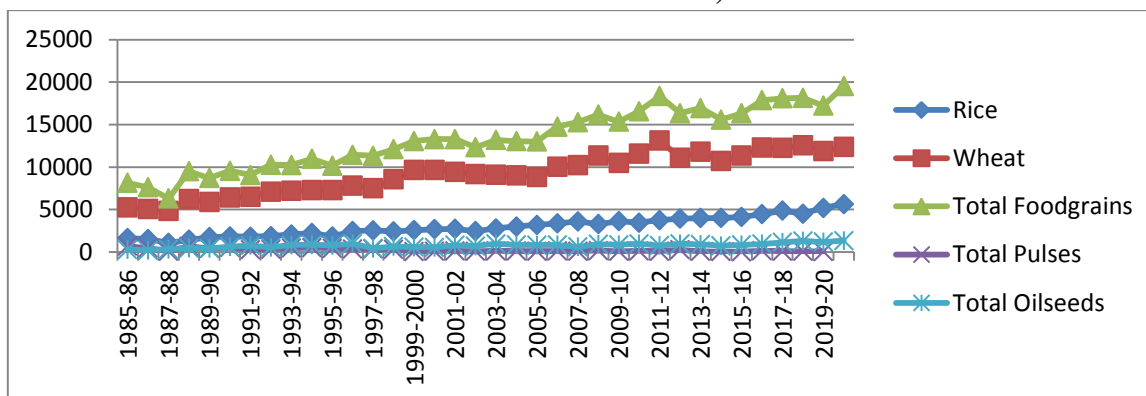
Production and productivity of a sector are the base of development of any sector. The increasing trends in agricultural production and productivity and its growth rate may increase the farmers' income level. The findings related to this aspect have been given in tables 6 and 7 and figures 2 and 3. The trends (shown in figures 2 and 3) reveal that the production and productivity of the wheat crop increased considerably. However, positive trends in production and productivity of rice, total food grains, total pulses and total oilseed were less than the wheat crop.

The findings related to compound growth rates of production and productivity of wheat, rice, total food grains, total pulses, and total oilseed show that growth rates declined over time. The compound growth of production declined over the first period (1985-86 to 1995-96) to the third period (2006-07 to 2016-17). It decreased from 1.24, 3.32, 2.24, -4.12 and 10.53 to 2.37, 2.14, 1.83, -12.58 and 5.10 per cent for rice crop, wheat crop, and total food grains, pulses and oilseeds respectively. The same trend was also found in the productivity growth rate of wheat, rice, food grains, pulses and oilseeds. The findings of table 7 reveal that compound growth of productivity declined over the first period (1985-86 to 1995-96) to the third period (2006-07 to 2016-17) from -2.26, 1.8, 2.30, 2.14, and 5.41 to -.50, 1.7, 1.69, -0.94 and 4.72 for rice crop, wheat crop, food grains, pulses and oilseeds, respectively.

So, a declining trend was found in agricultural production and productivity growth rate. The stress on the agriculture sector is increasing because of a lack of surety in

agricultural income due to the declining trend in agricultural production and productivity growth rate in Haryana.

Figure 2
The trend in Production of Food Grains, Pulses and Oilseeds



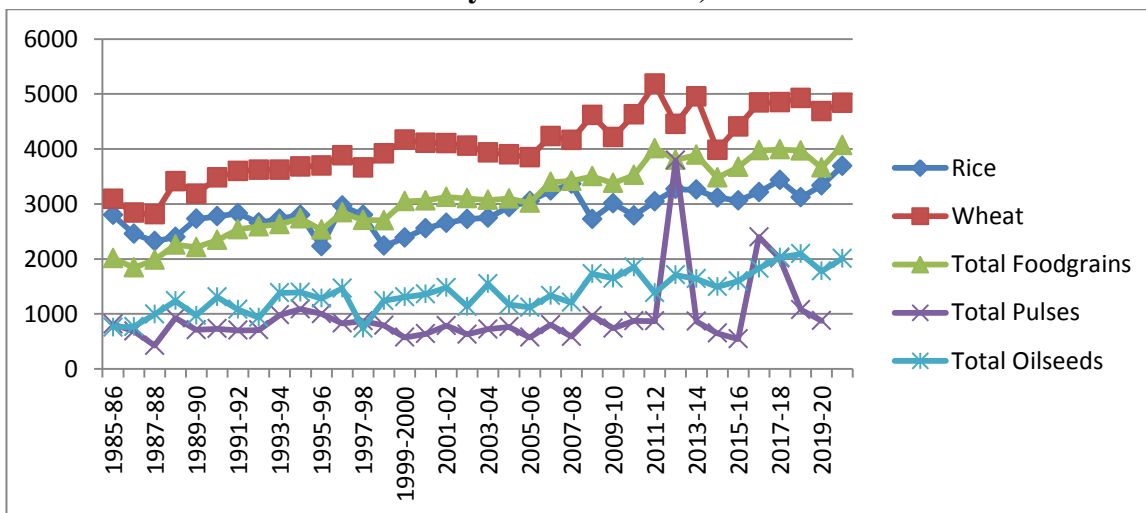
Source: Various issues of Statistical Abstract of Haryana, Govt. of Haryana, Chandigarh

Table 6
Compound Growth Rate of Production in Haryana

Period	Production				
	Rice	Wheat	Total Food grains	Total Pulses	Total Oilseeds
1985-86 to 1995-96	1.24	3.32	2.24	-4.12	10.53
1996-97 to 2006-07	3.19	2.54	2.57	-8.92	-1.62
2006-07 to 2016-17	2.37	2.14	1.83	-12.58	5.10
2016-17 to 2020-21	4.84	0.13	1.78	6.09*	7.13
1985-86 to 2019-20	3.27	2.29	2.10	-6.34	3.99

Source: Computed from various Statistical Abstract of Haryana (*2016-17 to 2019-20)

Figure 3
Trend in Productivity of Food Grains, Pulses and Oilseeds



Source: Various issues of Statistical Abstract of Haryana, Govt. of Haryana, Chandigarh

Table 7
Compound Growth Rate of Productivity in Haryana

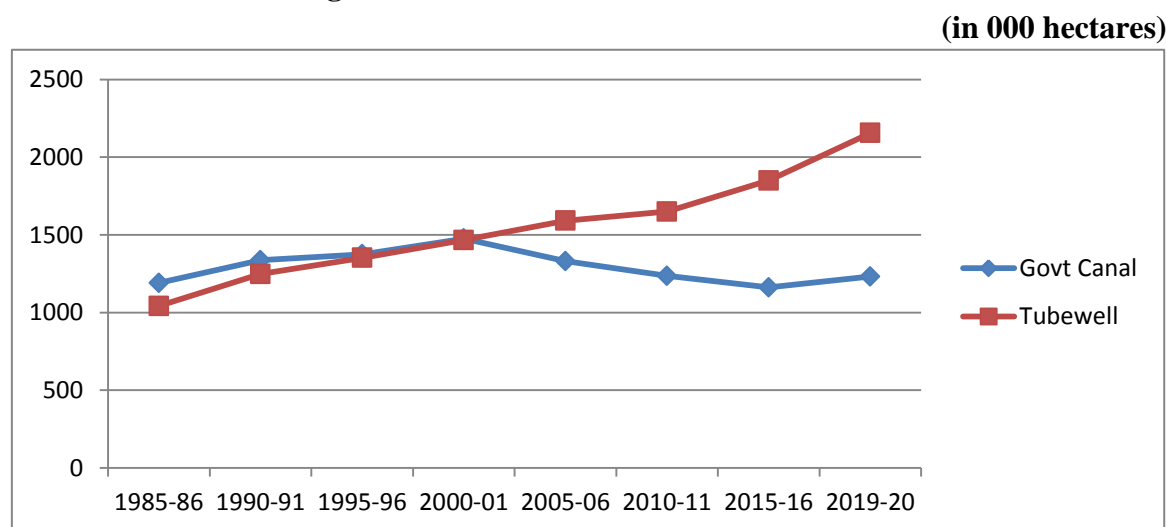
Period	Productivity				
	Rice	Wheat	Total Foodgrains	Total Pulses	Total Oilseeds
1985-86 to 1995-96	-2.26	1.8	2.30	2.14	5.41
1996-97 to 2006-07	0.88	.87	1.79	-0.31	-0.94
2006-07 to 2016-17	-0.50	1.70	1.69	-0.94	4.72
2016-17 to 2020-21	2.81	-0.03	0.49	3.52*	1.89
1985-86 to 2019-20	0.49	1.16	1.67	0.21	2.40

Source: Computed from various Statistical Abstract of Haryana (*2016-17 to 2019-20)

6. Trends in Net Irrigated area and NPK ratio

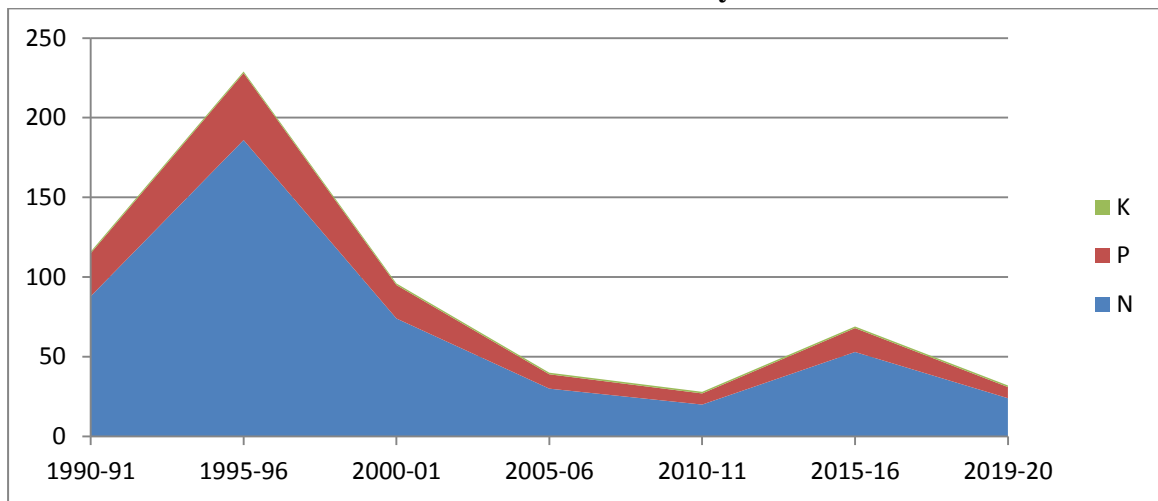
The trend in net irrigated areas under government canals and tube wells has been shown in figure 4. It shows that the net irrigated area under the tube well increased faster than the area under the canal. The canal irrigated area declined over the period. Figure 5 shows the trends in NPK ratios. It shows that an imbalance from the standard ratio of 4:2:1 has been observed in the consumption of NPK (Urea, Phosphate and Potash). The cost of Urea is comparatively low due to higher subsidies as compared to other fertilizers. This cost difference creates an imbalance in the consumption of NPK. So, decreasing area under Government Canals and imbalance consumption of NPK caused a decline in soil fertility and increased production cost.

Figure 4
Trends in Net Irrigated area under Government Canals and Tubewells



Source: Various issues of Statistical Abstract of Haryana, Govt. of Haryana, Chandigarh

Figure 5
Trends in NPK ratio in Haryana

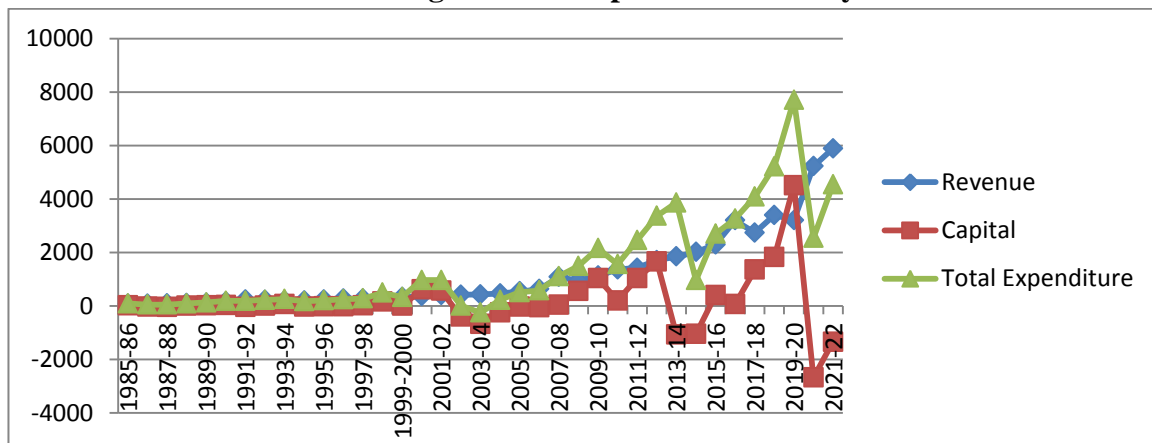


Source: Various issues of Statistical Abstract of Haryana, Govt. of Haryana, Chandigarh

7. Trends in Agriculture Expenditure

Increasing trends in agriculture expenditure, specifically in capital expenditure, are the necessary conditions for increasing the income of the agriculture sector with a multiplier effect—the results related to this aspect have been shown in tables 8, 9 and figure 6. The data in figure 6 reveal that revenue expenditure increased over time, but capital expenditure did not increase even though it declined from 1985-86 to 2021-22. The declining trends in capital expenditure showed that the development of infrastructure in the agriculture sector was not the priority of Haryana's government policy. These trends may affect the overall long-term development of the agriculture sector in Haryana.

Figure 6
Trends in Agriculture Expenditure in Haryana



Source: Various issues of Statistical Abstract of Haryana, Govt. of Haryana, Chandigarh

The results related to trends in the growth of revenue and capital expenditure show that the compound growth rate of revenue expenditure increased marginally over the first period (1985-86 to 1995-96) to the third period (2006-07 to 2016-17) from 12.32 to 12.87 and its decreased for capital expenditure. The percentage of plan expenditure on agriculture and allied activities in Haryana was also declining under the Five Years Plan. Thus, the development of the agriculture sector did not achieve sustainability because overall expenditure trends on agriculture and allied activities were declining. So, the agrarian stress increased in Haryana due to the non-sustainability of the agriculture sector.

Table 8
The compound Growth rate of Agriculture Expenditure in Haryana

Period	Revenue	Capital	Total
1985-86 to 1995-96	12.32	-	8.46
1996-97 to 2006-07	8.71	7.04	8.88
2006-07 to 2016-17	12.87	6.46	12.71
2016-17 to 2021-22	10.70	-	5.68
1985-86 to 2021-22	12.62	-212.28	11.15

Source: Computed from various Statistical Abstract of Haryana

Table 9
Plan Expenditure on Agriculture and Allied Activities in Haryana
(Rs. in Lakh)

Plan	Expenditure on Agriculture	Percentage of total expenditure
4 th Plan (1969-74)	2633	7.35
5 th Plan (1974-79)	4496	6.64
6 th Plan (1980-85)	15753	9.88
7 th Plan (1985-90)	23929	9.53
8 th Plan (1992-97)	45158	9.22
9 th Plan (1997-02)	47620	5.96
10 th Plan (2002-07)	59330	4.57
11 th Plan (2007-12)	254424	5.89
12 th Plan (2012-17)	588000	6.53

Source: Various issues of Statistical Abstract of Haryana, Govt. of Haryana, Chandigarh

Conclusion

It is concluded that the proportion of institutional credit decreased over a long period, and the share of non-institution credit increased in Haryana. The number of marginal and small farmers increased considerably, and the number of large and medium farmers decreased. The area of cultivable land with small and marginal farmers increased and

decreased with medium and large farmers. Thus, the level of agrarian distress among farmers increased due to the predominance of the small farmers, who cannot reap the benefit of economies of scale. The growth rate of agriculture and allied activities has remained unstable for the last two decades. Due to the instability of the growth rate of agriculture and allied activities, it never provided a stable source of income to farmers; that is why farmers are more dependent on debts for purchasing agricultural inputs. The burden of debts, as well as the stress of payments of debts on farmers, increased. There has been a considerable gap between the percentage share of agriculture and allied activities in gross domestic product and the percentage of the workforce dependent on the agriculture sector in Haryana. The excess burden of the population on the agriculture sector kept on increasing. The compound growth of agricultural production and productivity declined from the first period (1985-86 to 1995-96) to the third period (2006-07 to 2016-17). So, a declining trend was found in agricultural production and productivity growth rate. The stress on the agriculture sector is increasing because of a lack of surety in agricultural income due to the declining growth rate of agricultural production and productivity. The decreasing area under government canals and imbalance in the consumption of NPK caused a decline in soil fertility and increased production costs. The declining trends in capital expenditure and plan expenditure on agriculture and allied activities in Haryana under the Five Years Plan showed that the development of infrastructure in the agriculture sector was not the priority of the Haryana government's policy. These trends may affect the long-term development of the agriculture sector in Haryana.

References:

- Bhalla, G. S. & Singh, G. (2009) "Economic Liberalization and Indian Agriculture: A State-wise Analysis", *Economic and Political Weekly*, **44** (52): 34-44.
- Centre for Study of Developing Societies (CSDS) "State of Indian Farmers", <https://www.downtoearth.org.in/news/indias-deepening-farm-crisis-76-farmers-want-to-give-up-farming-shows-study-43728>
- Deshpande, Chand Tanvi (2017). "Agriculture Production and Yield", *State of Agriculture in India*, PRS Legislative Research, New Delhi: 19. Accessed on 25-05-2018 on www.prsindia.org
- Govt. Of Haryana "Economic Survey of Haryana", Department of Economics and Statistical Analysis Various issues from 2000 to 2018.

- Govt. Of Haryana “Haryana Economy”, Economic and Statistical Adviser, Planning Department of Haryana, Various issues from 2003 to 2015.
- Govt. Of Haryana “Statistical Abstract of Haryana”, Department of Economics and Statistical Analysis, Various issues from 2000 to 2017.
- Govt. Of India “All India Report on Agriculture Census” Department of Agriculture, Cooperation and Family Welfare, Ministry of Agriculture and Farmers Welfare, New Delhi.
- Govt. Of India “Key Indicators of Situation of Agricultural Households in India” Ministry of Statistics and Programme Implementation, National Sample Survey Office, 2014.
- Jayati Ghosh “Agriculture in Crisis”, *Frontline*, Print edition: April 17, 2015.
- Sidhu H. S. (2002). "Crisis in Agrarian Economy in Punjab Some Urgent Steps", *Economic and Political Weekly*, **43**(21): 3132–3138.
- Krishak Jagat "Haryana becomes the second biggest contributor to the central food grain pool in the country" *State News* 17, November 2020. (<https://www.en.krishakjagat.org/state-news/haryana-becomes-the-second-biggest-contributor-to-the-central-food-grain-pool-in-the-country/>)