



Structural Change and Patterns of Agricultural Development in Himachal Pradesh: From 2005-06 to 2020-21

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Abstract: Structural transformation involves the redistribution of economic activity among broad sectors like agriculture, manufacturing and services. The economy of Himachal Pradesh during its statehood in 1971 was heavily reliant on agriculture. The primary sector played a significant role in the GSDP and employment. But with the passage of time as the process of development proceeded, the %age contribution of the primary sector to the GSDP decreased and that of the secondary and tertiary sectors increased. The present study aims to examine the structural changes and patterns of agricultural development in the economy of Himachal Pradesh over the period 2005-06 to 2020-21. This work is significant because it provides a thorough and in-depth discussion of the process of structural change in Himachal Pradesh, which has not been covered in earlier research. Based on secondary data sources, the study employs simple statistical tools like splicing technique and compound annual growth rates to examine the economic indicators like GSDP, area, production and yield of principal crops of the state. The study found that the contribution of the primary sector to GSDP in Himachal Pradesh significantly declined, while the secondary and tertiary sectors experienced substantial growth, indicating a shift towards industrialization and a service-led economy. The results of the study showed that while pulses exhibited the highest growth rates in production and yield, the pattern of agricultural transformation is shifting in favour of commercial crops like chillies and oilseeds

as opposed to traditional food crops like wheat, maize, rice, barley, ragi, and common millets. The study concludes with some policy suggestions like expansion and modernization of agricultural techniques, irrigation systems and promotion of land consolidation and cooperative farming to address challenges such as groundwater dependence, declining net sown area, and land fragmentation.

Keywords: Structural change, sectoral contribution, agricultural development, cropping patterns, Himachal Pradesh.

1.1. INTRODUCTION

The process of industrialization and development involves structural changes of economies, which encompasses multiple dimensions. Over the long term, the most crucial dimension is the shift in composition of output and employment across various sectors of the economy. It has been observed in various studies that with the development of an economy, the contribution of agriculture to GDP, which remains initially high, gradually declines while the contribution of the manufacturing or industrial sector to GDP begins to rise. Agricultural development is a multi-dimensional process that plays a vital role in the rural development of Himachal Pradesh. The lives and livelihood of mostly people in Himachal Pradesh depends upon the agriculture sector and its related activities. More than half of the state's workforce i.e. 57.03% relies on agriculture sector for their survival and in terms of the total GSVA, agriculture and its related activities accounts for about 13.47% share (Economic Survey of Himachal Pradesh, 2022). The agriculture sector of the state has an overall influence on other sectors through input linkages, employment, trade, transportation etc. and therefore is regarded as one of the major contributors to the state's domestic product.

Various studies have been conducted related to structural changes, area, production, productivity and diversification of various crops in the primary sector. Kannan and Sundaram (2011) examined the trends and patterns in agricultural growth at the national and sub-national levels in India for the period 1967-68 to 2007-08. As per the analysis of data there has been a remarkable shift in the cropping pattern from food grain cultivation to commercial crops. Acharya et al. (2012) conducted a study in Karnataka to estimate the area, production and productivity of various crops through compound growth function for the period 1982-83 to 2007-08. Panwar and Dimri (2018) analysed a significant increase in total cropped

area, irrigated area and cropping intensity over the period 1966-67 to 2015-16 based on the time series data obtained from secondary data sources. As a result of adoption of high-tech agricultural practices, the production of crops like wheat, rice, sugarcane, cotton and oilseeds has increased significantly. With the change in agricultural practices like organic farming in later years, the productivity of wheat and rice has declined. Suman et al. (2019) examined the impact of area and yield on production of major crops of Rajasthan through compound growth rates (CGR) of area, production and productivity. Kumari et al. (2021) conducted a study with the aim to analyse the area, output and productivity of major Indian crops by using the compound annual growth rates. Mesfin et al. (2011) conducted a study in eastern Ethiopia to analyse the trends and patterns of crop diversification by using the Tobit model on the basis of data collected from 167 households. Abro (2012) conducted a study to analyse the effect of various forces on diversification of major crops in Pakistan by using Generalized Least Square (GLS) technique with fixed effect model for the period 1980 to 2011. Dhanta and Negi (2018) conducted a study to examine the growth of major agricultural crops and levels of crop diversification in H.P. The analysis is conducted at the district level and focuses on major crops like wheat, maize, paddy, barley, pulses, apple, other fruits', potato and 'other vegetable' and oilseeds. The Herfindahl-Hirschman's Index is used to calculate the diversification levels on the basis of past 44 years of data. Deogharia (2020) examined the growth performance of major crops and diversification of Indian agriculture based on secondary sources of data. The study found consistent trends in terms of cultivated area, the production and the productivity under cereals while the horticulture crops have registered an increasing trend in terms of area, production and productivity during the period 2009-10 to 2016-17. Latta and Sharma (2017) have conducted a study over the period 1970-71 to 2010-2011 in order to analyse India's GDP and to examine sector-wise structural changes in Himachal Pradesh. On the basis of secondary data, the study revealed that the percentage of the tertiary sector has consistently increased from 24.76% in 1970-71 to 40.4% in 2010-11. In contrast, the percentage of the primary sector has shown a continuous decrease, while both the secondary and tertiary sectors have shown a continuous increase with minor fluctuations. Ayon (2018) conducted a study in Bangladesh to analyse the changes that have taken place in sectoral composition of the country's GDP for the period ranging from 1973 to 2017. According to the study, all the three sectors grew over

time but the growth of the industrial sector was fastest followed by the service sector. Panchal and Patel (2018) conducted a study to analyse the structural changes in Gujarat considering the aspects like irrigation and cropping pattern over the period spanning from 1950-51 to 2013-14. By using compound growth rates, the changes in terms of total gross cropped area and the trends in different sources of irrigation are examined in the state. Goel (2019) on the basis of secondary sources of data attempts to find whether structural changes in the economy of Haryana exist or not. The study revealed that in terms of GSDP the share of agriculture and its related sectors has fallen from 60.7% in 1969-70 to 21.3% in 2006-07 while the share of industrial sector increased from 17.6% to 32.1% over the same period in Haryana. The share of the tertiary sector has also increased from 21.7% to 46.6% during this period. Negi (2021) analysed the degree and pattern of structural change undergoing in agriculture in mostly rural and hilly state of Himachal Pradesh. The study focused on how the land is allocated among various social classes and class sizes as well as the source of disparity in distribution of landholding in the state.

The present study aims to examine the patterns of agricultural development in the economy of Himachal Pradesh over the period 2005-06 to 2020-21. This study is driven by the necessity to analyse the economic dimensions responsible for agricultural development in the economy of Himachal Pradesh. Being a significant part of the state of Himachal Pradesh, agriculture acts as a major contributor to supporting a large population. Hence, it is necessary to understand the extent to which the agricultural sector is being shaped by changes in land use, cropping patterns, and agricultural practices. This work is significant because it provides a thorough and in-depth discussion of the changes in land use patterns and the growth trends in area, production and yield of principal crops in Himachal Pradesh, which has not been covered in earlier research. The following are the specific objectives of this study:

1. To analyse the changes in the land use patterns in the economy of Himachal Pradesh from 2005-06 to 2020-21.
2. To study the growth rates in area, production and yield of principal crops in the economy of Himachal Pradesh from 2005-06 to 2020-21.
3. To study the sectoral contribution in GSDP of Himachal Pradesh from 2005-06 to 2020-21.
4. To analyse the sectoral growth rates in GSDP of Himachal Pradesh from 2005-06 to 2020-21.

1.2. DATABASE AND METHODOLOGY

1.2.1. Sources of Data

The present study is carried out entirely using secondary sources of data for the period 2005-06 to 2020-21, in order to analyse the objectives of the study. For this study, time series data regarding the GSDP, source-wise net irrigated area, land use patterns, area, production, and yield of major crops cultivated in the state were collected from various issues of Statistical Abstracts of Himachal Pradesh and the Annual Season and Crop Reports released by the Directorate of Land Record, H.P.

1.2.2. Analytical Tools Used

The data on GSDP and NSDP was spliced to 2011-12 constant prices. Besides, the data were analysed using simple statistical tools like compound annual growth rate, tabular analysis and %ages.

Splicing GSDP

All the data on GSDP at different constant prices was converted to 2011-12 prices. For this, GSDP data on previous old series was multiplied by the conversion factor which was calculated as a ratio of sum of GSDP data for the current base year for the years common in current base year and previous base year to sum of GSDP data for the previous base year for the years common in current base year and previous base year. It has been worked out separately for each sub sectors in the economy.

$$\text{Conversion factor} = \frac{\sum_{i=1}^j (GDP)_{new}}{\sum_{i=1}^j (GDP)_{old}}$$

where, j = number of years common between new and old series of GSDP.

Compound Annual Growth Rate (CAGR)

CAGR is the year-over-year growth rate of a variable over a specified period of time. In order to estimate the area, production and yield of principal crops of the state the compound growth rates were worked out by fitting exponential function of the following type to the data: -

$$Y_t = AB^t$$

where, Y_t = area/ production/ yield of major crops in t_{th} period

t = time variable (1,2,3..., n),

A = constant,

B = regression coefficient of Y on time t

After log transformation of the above function as $\ln Y_t = \ln A + t \ln B$, Compound Annual Growth Rate (CAGR) was estimated as:

$$\text{CAGR (\%)} = (\text{antilog } B - 1) \times 100$$

1.3. RESULTS AND DISCUSSION

1.3.1. Land Use Pattern

The land use pattern of the state of Himachal Pradesh is presented in Table 1.3.1. A significant portion of the land is dedicated to forest cover, which has increased from 24.2 % in 2005-06 to 24.62 % in 2015-16 but slightly declined to 24.55 % in 2020-21. From 2005-06 onwards, land put to non-agricultural uses has steadily declined from 10.4 % in 2005-06 to 7.70 % in 2010-11 of the total geographical area of the state and further increased to 7.84 % during 2015-16 and to 7.98 % during 2020-21.

On the other hand, area under barren and unculturable land has witnessed a continuous increase from 14.5 % in 2005-06 to 17 % in 2010-11 which slightly declined to 16.7 % in 2020-21. Area under permanent pastures and other grazing land has marginally increased from 32.90 % in 2005-06 to 32.94 % in 2015-16 which remained stable at 32.82 % in 2015-16 and 2020-21 respectively. Miscellaneous tree crops and groves, which are not included in the net area sown, have maintained a minor but consistent share, slightly increasing from 1.4 % in 2005-06 to 1.48 % in 2020-21. Land dedicated to culturable waste has declined from 3 % in 2005-06 to about 2.73 % in 2020-21, indicating improved land utilization practices.

Area under current fallows was 1.38 % in 2005-06 which continuously declined to 1.18 % in 2015-16 but has increased to 1.72 % in 2020-21. An increasing trend in the area under fallow other than current fallows can be noted in the period of 2005-06 to 2020-21. It has continuously increased from 0.2 % in 2005-06 to 0.51 % in 2020-21. Net area sown has increased from 11.8 % in 2005-06 to 12.04 % in 2015-16 then declined to 11.49 % in 2020-21. Area sown more than once has marginally declined from 8.8 % in 2005-06 to 8.14 % in 2020-21.

A declining trend in the total cropped area can be noted over the period of study as its area has continuously declined from 20.7 % in 2005-06 to 19.6 % in

2020-21. To sum up, while there has been a positive trend in terms of land dedicated to forest cover and the reduction of culturable waste, the rise in the area under barren and unculturable land and the decline in sown and total cropped areas emphasise the need for focused interventions in order to ensure sustainable land use and agricultural productivity.

Table 1.3.1: Land use pattern (Area in ha)

<i>Classification of land</i>	<i>2005-06</i>	<i>2010-11</i>	<i>2015-16</i>	<i>2020-21</i>
Geographical area	4544829 (100)	4575638 (100)	4577153 (100)	4577984 (100)
Forest land	1100853 (24.20)	1125742 (24.60)	1126831 (24.62)	1123800 (24.55)
Land put to non-agricultural uses	473316 (10.40)	352667 (7.70)	358714 (7.84)	365258 (7.98)
Barren and unculturable land	656079 (14.50)	778525 (17.00)	773781 (16.91)	765774 (16.73)
Permanent pastures and other grazing land	1495863 (32.90)	1507522 (32.94)	1502082 (32.82)	1502082 (32.82)
Misc. Tree crops & Groves (Not included in net area sown)	65433 (1.40)	64905 (1.41)	68748 (1.50)	67643 (1.48)
Culturable waste	138029 (3.00)	124121 (2.71)	119488 (2.61)	124853 (2.73)
Current fallows	62801 (1.38)	57497 (1.30)	53896 (1.18)	78844 (1.72)
Fallow other than current fallows	13435 (0.20)	21294 (0.50)	22306 (0.49)	23270 (0.51)
Net Area Sown	539020 (11.80)	543365 (11.87)	551307 (12.04)	525894 (11.49)
Area sown more than once	404450 (8.80)	395140 (8.60)	381285 (8.33)	372689 (8.14)
Total Cropped Area	943469 (20.70)	938505 (20.50)	932592 (20.37)	898583 (19.63)

Source: Annual Season and Crop Reports released by the Directorate of Land Record, H.P. (values in parentheses indicate the %age of the total geographical area).

Figure 1.3.1 describes the changes in the land use pattern in Himachal Pradesh from 2005-06 to 2020-21. Forest cover showed a minor increase from 24.20 % in 2005-06 to 24.55 % in 2020-21. Land put to non-agricultural uses declined initially from 10.4 % in 2005-06 to 7.7 % in 2010-11 but eventually increased from 7.7 % in

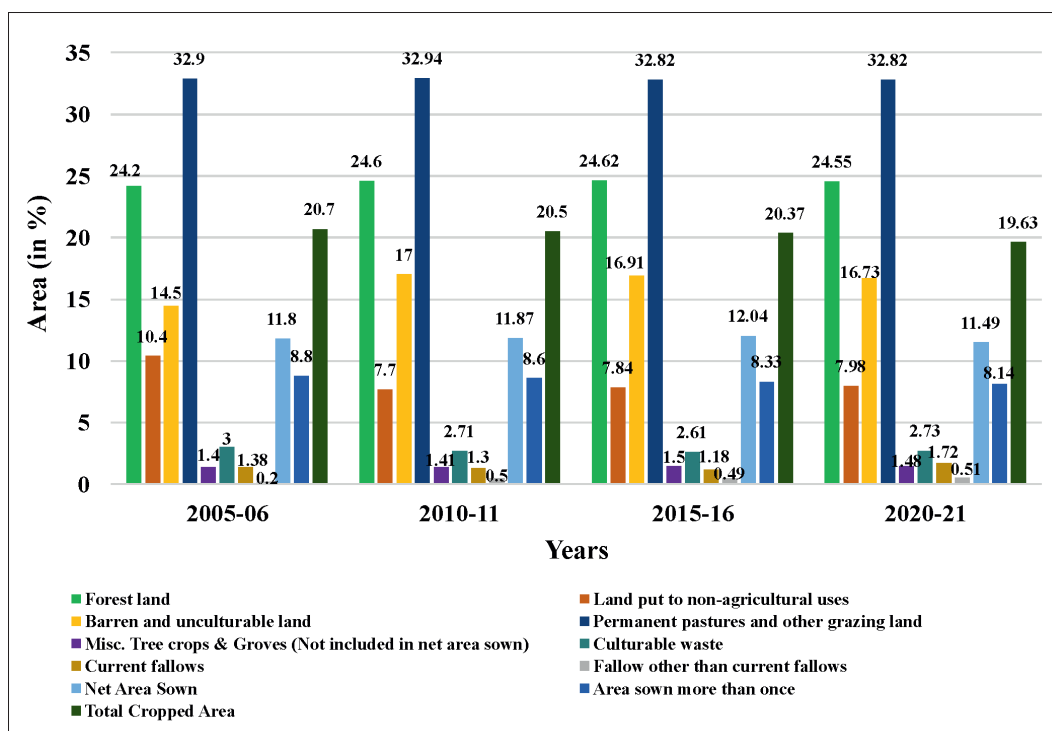


Figure 1.3.1: Land Use Pattern (Area in %)

Source: Annual Season and Crop Reports released by the Directorate of Land Record, H.P.

2010-11 to 7.98 % in 2020-21. Barren and unculturable land increased from 14.5 % in 2005-06 to 16.7 % in 2020-21. Permanent pastures and grazing land remained stable around 32.9 % throughout the study. Miscellaneous tree crops and groves slightly increased from 1.4 % 2005-06 to 1.48 % 2020-21. Culturable waste declined from 3 % in 2005-06 to 2.73 % in 2020-21. Current fallows increased from 1.38 % in 2005-06 to 1.72 % in 2020-21. Similarly, other fallows also increased from 0.2 % to 0.51 % during the same period. Net area sown initially increased from 11.8 % in 2005-06 to 12.04 % in 2015-16 but eventually fell to 11.49 % by 2020-21. On the other hand, total cropped area continuously declined from 20.7 % in 2005-06 to 19.6 % in 2020-21.

1.3.2. Area, Production and Yield of Principal Crops

The performance of principal crops in terms of growth rates in their area, production, and yield is shown in Table 1.3.2. During 2005-06 to 2012-13, the production of

pulses exhibited the highest growth rate of 18.81 %, followed by wheat (9.07 %), chillies (6.72 %), and oilseeds (4.57 %). Also, in terms of yield, pulses witnessed the highest growth rate of 18.65 %, followed by wheat (9.28 %), oilseeds (8.55 %), chillies (5.98 %), and barley (5.83 %). However, the growth trends in terms of production and yield of crops have changed in the later period, from 2013–14 to 2020–21, with the majority of foodgrains experiencing either stagnant or negative growth rates. Pulses, which had shown significant growth in the previous period (2005–06 to 2012–13), witnessed a decline in both production (-0.46 %) and yield (-1.00 %). Similarly, other foodgrains like wheat, maize, barley, ragi, and common millets experienced a declining growth trend in both production and yield. On the other hand, chillies and oilseeds continued to show remarkable growth trends in both production and yield. During 2012–13 to 2020–21, chillies recorded the highest growth rate in both production (15.25 %) and yield (8.69 %), while oilseeds continued to maintain a steady growth rate of 3.29 % in production and 8.42 % in yield during the same period. From the above analysis, it is clear that chillies and oilseeds have consistently outperformed many traditional foodgrains in terms of growth trends in both production and yield. The higher growth rates in production and yield of other food crops like chillies and oilseeds emphasize the favourable market conditions and potential profitability associated with their cultivation, thereby driving the shift in agricultural development towards these crops.

Table 1.3.2: Area, Production & Yield of Major Crops in Himachal Pradesh
(Area in ha, Production in M.T. and Yield in unit per ha)

Crops	Particulars	2005-06	2012-13	CAGR (2005-06 to 2012-13)	2013-14	2020-21	CAGR (2013-14 to 2020-21)
Food Crops							
Wheat	Area	358453	354267	-0.17	350315	333148	-0.72
	Production	365885	671945	9.07	685445	570378	-2.59
	Yield	1.02	1.9	9.28	1.45	1.71	2.38
Maize	Area	295351	294319	-0.05	292777	267407	-1.29
	Production	543061	657162	2.76	678245	725014	0.96
	Yield	1.84	2.23	2.79	2.32	2.73	2.35
Rice	Area	79366	76898	-0.45	74357	68455	-1.17
	Production	112139	125284	1.60	128486	138458	1.07
	Yield	1.41	1.63	2.06	1.74	2.05	2.37

Barley	Area	25535	20354	-3.19	20233	20549	0.22
	Production	29361	34829	2.47	35181	27422	-3.50
	Yield	1.15	1.71	5.83	1.25	1.34	1.00
Ragi	Area	1756	2769	6.72	2003	583	-16.16
	Production	3409	2512	-4.27	1971	493	-17.96
	Yield	1.94	0.9	-10.40	0.98	0.85	-2.08
Pulses	Area	33016	33415	0.17	29615	30760	0.54
	Production	14464	48336	18.81	52223	50570	-0.46
	Yield	0.44	1.45	18.65	1.76	1.64	-1.00
Common Millets	Area	4180	7504	8.72	5409	1910	-13.82
	Production	5671	4835	-2.25	3594	1900	-8.70
	Yield	1.36	0.64	-10.09	0.66	0.99	5.93
Commercial Crops							
Chillies	Area	600	630	0.70	425	643	6.09
	Production	130	205	6.72	147	397	15.25
	Yield	0.22	0.33	5.98	0.35	0.62	8.51
Ginger	Area	2175	2406	1.45	2193	2571	2.30
	Production	16210	16872	0.57	15042	15291	0.23
	Yield	7.45	7.01	-0.87	6.63	5.92	-1.61
Oilseeds	Area	16705	12880	-3.65	11975	10891	-1.35
	Production	4420	6042	4.57	6243	7829	3.29
	Yield	0.26	0.47	8.55	0.46	0.81	8.42

Source: Statistical Abstract of H.P. (various issues); Annual Season and Crop Reports released by the Directorate of Land Record, H.P. (The author has analysed the data using CAGR technique).

Figure 1.3.2 describes the compound annual growth rate in terms of area, production, and yield of the principal crops of Himachal Pradesh from 2005-06 to 2020-21. As it is evident from this figure, the area under cultivation of all the principal crops (except chillies and ginger) witnessed a negative growth rate during the period of study. The production of pulses exhibited the highest growth rate (8.70 %), followed by chillies (7.73 %) and oilseeds (3.88 %) during the study period. Similarly, the growth rate in terms of yield was also found to be highest in the case of pulses (9.17 %), followed by oilseeds (7.87 %), and chillies (7.15 %) during the study period. In conclusion, while pulses exhibited the highest growth rates in production and yield, the pattern of agricultural development is shifting in favour of other food crops like chillies and oilseeds as opposed to traditional foodgrains like wheat, maize, rice, barley, ragi, and common millets, which indicated either low

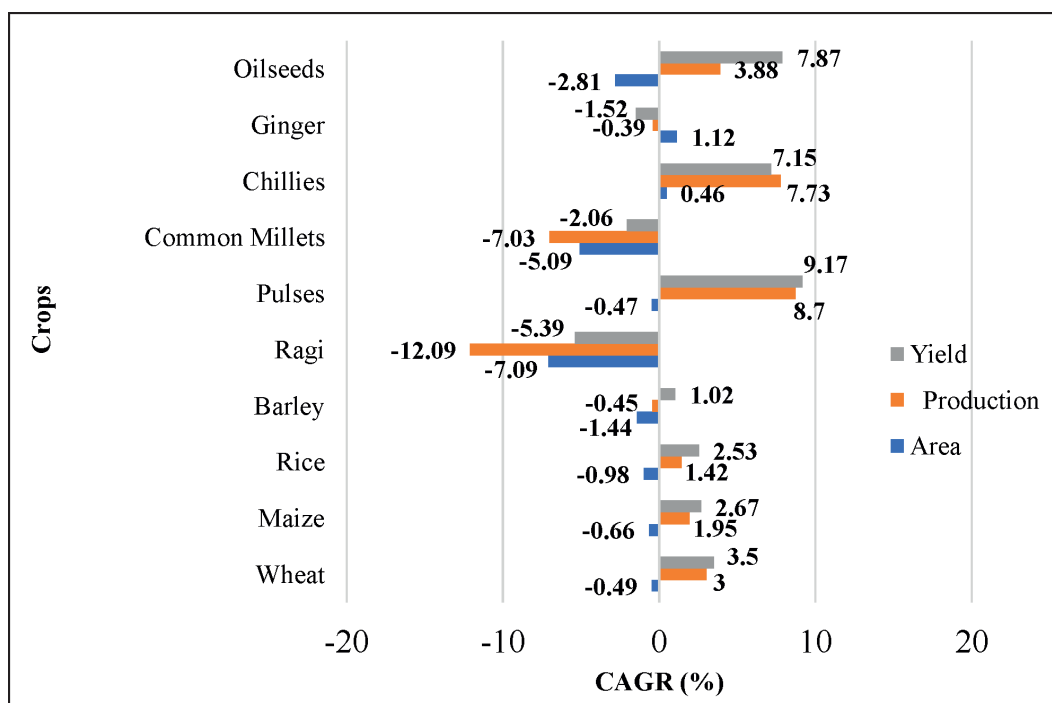


Figure 1.3.2: CAGR of Area, Production and Yield of Principal Crops
(2005-06 to 2021-21)

Source: Statistical Abstract of H.P. (various issues); Annual Season and Crop Reports released by the Directorate of Land Record, H.P.

or negative growth trends in terms of their area, production, and yield during the entire period of study.

1.3.3. Sectoral Contribution in Gross State Domestic Product (GSDP)

The sectoral contribution of GSDP in different sectors of the economy of Himachal Pradesh over the period 2005-06 to 2020-21 is shown in Table 1.3.3. The contribution of the agricultural sector to the GSDP has continued to decline over the years, while that of the secondary and tertiary sectors has increased. In 2005-06, the primary sector contributed about 22.64 % of GSDP, which declined to 17.72 % in 2010-11, 14.71 % in 2015-16, and further to 13.32 % in 2020-21, respectively. Out of the total share of 22.64 % of the GSDP from the primary sector in 2005-06, agriculture and animal husbandry accounted for 15.42 %, followed by forestry and logging (6.42 %), fishing (0.10 %), and mining & quarrying (0.7 %). The share of

agriculture and animal husbandry in GSDP has declined from 15.42 % in 2005–06 to 9.18 % in 2020–21. All the sub-components of the primary sector have been declining over the last fifteen years. Forestry and logging have declined from 6.42 % in 2005–06 to 3.81 % in 2020–21. All the sub-components of the secondary sector except the construction sector witnessed an increasing trend during the period of 2005–06 to 2020–21. Out of this, the manufacturing sector has contributed the highest share of GSDP. The share of the tertiary sector, which comprises transport, storage, and communication; trade, hotels, and restaurants; banking and insurance; real estate and ownership of dwellings and businesses; public administration; and other services, has increased from 38.43 % in 2005–06 to 40.84 % in 2010–11. The share of the tertiary sector in the GSDP was 38.43 % during 2005–06, which slightly declined to 36.07 % during 2010–11 and further increased to 40.84 % in 2020–21. In the service sector, the share of real estate, ownership of dwellings, and business was the highest (10.75 %), followed by other services (10.09 %), trade, hotels, and restaurants (7.83 %), public administration (5.46 %), transport, storage, and communication (3.71 %), and banking and insurance (3 %) during 2020–21. Among all the components of the tertiary sector, real estate, ownership of dwellings, business, and public administration witnessed a decline in share in the GSDP. The remaining components of the tertiary sector witnessed an increasing trend over the period of study. From the above analysis, it is clear that the structure of the economy of Himachal Pradesh has systematically changed from an agrarian sector to more diversified industrial and tertiary sectors (Table 1.3.3).

Table 1.3.3: Sectoral Contribution in GSDP of Himachal Pradesh (%)

Sectors	Year (Based on 2011-12 Prices)			
	2005-06	2010-11	2015-16	2020-21
Agriculture & Animal Husbandry	15.42	12.21	10.27	9.18
Forestry and Logging	6.42	4.90	4.06	3.81
Fishing	0.1	0.09	0.09	0.1
Mining and Quarrying	0.70	0.52	0.29	0.23
Sub-total of primary sector	22.64	17.72	14.71	13.32
Manufacturing	22.31	24.47	26.97	32.01
Construction	10.5	13.36	8.61	7.23
Electricity, Gas and Water Supply	6.12	8.37	8.91	6.6
Sub-total of secondary sector	38.93	46.2	44.49	45.84

Sectors	Year (Based on 2011-12 Prices)			
	2005-06	2010-11	2015-16	2020-21
Transport, Storage & Communications	3.49	4.85	5.2	3.71
Trade, Hotel and Restaurant	7.64	6.71	6.81	7.83
Banking & Insurance	0.20	0.28	4.14	3.00
Real Estate, Ownership of Dwelling & Business	14.1	11.11	10.47	10.75
Public Administration	6.69	6.76	5.08	5.46
Other Services	6.31	6.37	9.10	10.09
Sub-total of tertiary sector	38.43	36.07	40.8	40.84

Source: Statistical Abstract of Himachal Pradesh (Various Issues)

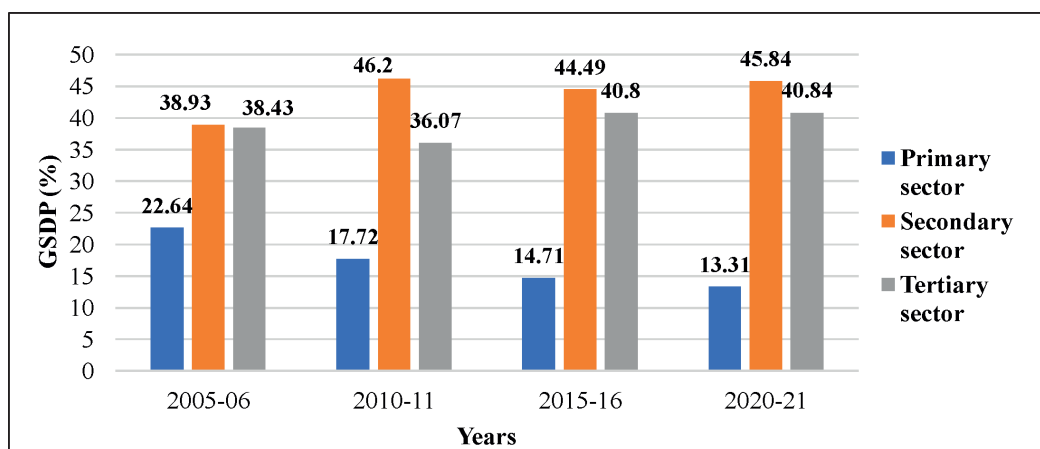


Figure 1.3.3: Sectoral Contribution in GSDP of Himachal Pradesh (%)

Source: Statistical Abstract of Himachal Pradesh (Various Issues)

Figure 1.3.3 depicts the sectoral contribution to the GSDP of Himachal Pradesh from 2005 –06 to 2020–21. The figure shows that the contribution of the primary sector to GSDP has steadily declined from 22.64 % in 2005-06 to 13.31 % in 2020-21, indicating a gradual decline in the relative importance of agriculture and its allied activities. In contrast, the secondary sector, which comprises manufacturing, construction, electricity, gas, and water supply, witnessed a rise in its contribution to GSDP from 38.93% in 2005-06 to 45.84% in 2020-21. Similarly, the tertiary sector has also experienced an increase in its contribution to GSDP, from 38.93 % in 2005-06 to 40.84 % in 2020-21. Overall, the declining trend of the primary sector and the increasing trends of secondary and tertiary sectors in contribution to the GSDP of

Himachal Pradesh reflect profound structural changes, indicating a transition from the primary sector to more diversified secondary and tertiary sectors.

1.3.4. Sectoral Growth Rate in GSDP

Table 1.3.4 shows the sector-wise compound annual growth rate of GSDP in different sectors of the economy of Himachal Pradesh from 2005–06 to 2020–21. The growth experience of different sectors in Himachal Pradesh shows that the growth rate in the primary sector was 2.14 % from 2005–06 to 2012–13, which declined to 2.06 % from 2013–14 to 2020–21. Out of the sub-sectors of the primary sector, the growth rate for agriculture, animal husbandry, and fishing has experienced a continuous decline, while the growth rate for forestry, logging, mining, and quarrying has shown improvement during the study period. All the sub-components of the secondary sector have shown a declining trend but a positive growth rate during the entire period of study. Under the tertiary sector, the banking and insurance sector has experienced the highest growth rate. Between 2005–06 and 2012–13, the compound annual growth rate of transport, storage and communication was 14.66 %, which

Table 1.3.4: Sector-wise Compound Annual Growth Rate of GSDP (%)

Sectors	Year (Based on 2011-12 Prices)	
	2005-06 to 2012-13	2013-14 to 2020-21
Agriculture & Animal Husbandry	2.66	0.87
Forestry and Logging	0.99	4.32
Fishing	5.85	5.49
Mining and Quarrying	-0.32	7.56
Sub-total of primary sector	2.14	2.06
Manufacturing	10.04	9.45
Construction	11.58	2.27
Electricity, Gas and Water Supply	12.86	0.61
Sub-total of secondary sector	10.93	6.49
Transport, Storage & Communications	14.66	2.52
Trade, Hotel and Restaurant	5.32	6.77
Banking & Insurance	13.81	9.37
Real Estate, Ownership of Dwelling & Business	3.91	4.46
Public Administration	7.92	5.14
Other Services	10.94	8.75
Sub-total of tertiary sector	7.32	6.06

Source: Statistical Abstract of Himachal Pradesh (Various Issues)

sharply declined to 2.52 % from 2013–14 to 2020–21. The growth rate of real estate, ownership of dwellings, and business witnessed an increasing trend from 3.91 % to 4.46 % during the period of study. The compound annual growth rate of all sub-components of the tertiary sector (except trade, hotel, restaurant and real estate, ownership of dwellings, and business) indicated a declining trend over the entire period of study.

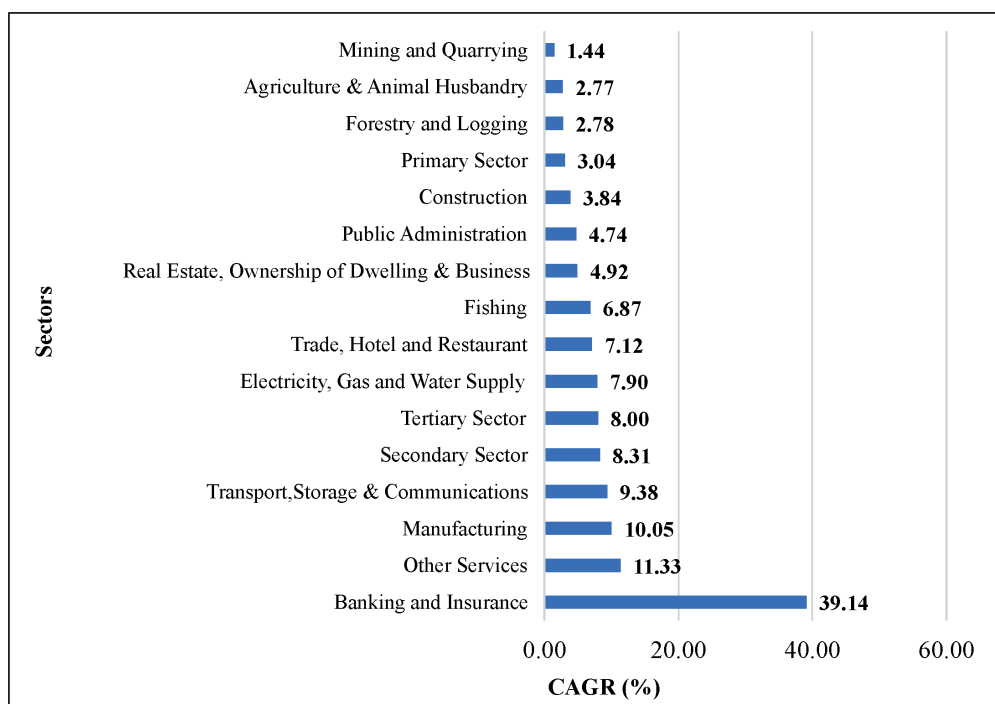


Figure 1.3.4: Sector-wise CAGR in GSDP of Himachal Pradesh (2005-06 to 2021-21)

Source: Statistical Abstract of Himachal Pradesh (Various Issues)

Figure 1.3.4 describes the sector-wise compound annual growth rate in GSDP of Himachal Pradesh during 2005-06 to 2020-21. This figure shows that growth rate of GSDP was highest in the banking and insurance sector (39.14 %) followed by other services (11.33 %), manufacturing (10.05 %), transport, storage and communication (9.38 %), secondary sector (8.31 %), tertiary sector (8 %), electricity, gas and water supply (7.9 %), trade, hotel and restaurant (7.12 %) and fishing (6.87 %). On the other hand, the lowest growth rate was found in mining and quarrying sector (1.44 %) followed by agriculture and animal husbandry (2.77 %), forestry and logging

(2.78 %), primary sector (3.04 %), construction (3.84 %), public administration (4.74 %) and real estate, ownership of dwelling and business (4.92 %).

1.4. CONCLUSIONS

The structural changes and agricultural patterns observed in Himachal Pradesh from 2005-06 to 2020-21 highlights a significant transformation in its economy. The significant decline in the contribution of the primary sector, particularly agriculture and animal husbandry, to GSDP coupled with reduced agricultural land use and increased reliance on non-agricultural activities, reflects a shift towards industrialization and service-led economy. This decline is accompanied by lower compound annual growth rates in the primary sector compared to the secondary and tertiary sectors, which have experienced a substantial rise in their contributions to GSDP. The secondary sector, particularly manufacturing, and construction, have shown a steady rise in its share of GSDP, indicating a shift towards industrialization. Similarly, the tertiary sector, including services like banking, insurance, and other services, has also expanded its contribution to the state's economy. Despite these shifts, the agricultural sector has demonstrated resilience and adaptability through increased production and yields in certain crops such as pulses, chillies, and oilseeds, driven by changing market demands and possibly facilitated by advancements in agricultural techniques and inputs. However, challenges persist, including land fragmentation, declining net area sown and a gradual shift towards non-agricultural uses of land, which necessitate policy interventions in the form of expansion and modernization of agricultural techniques, irrigation systems and promotion of land consolidation and cooperative farming to address these challenges.

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