

Punjab Economy: Growth, Structural Transformation, and Roadmap for Future

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Punjab Economy experienced a rate of growth in the vicinity of 5 per cent for about 25 years, starting from the mid-1960s – a period coinciding with the reorganisation of Punjab and the introduction of the Green Revolution. During this period, no other state of India achieved a 5 per cent rate of growth. Punjab also occupied first position among states on account of per capita income. The high-profile economic journey of Punjab, however, was disrupted since the beginning of economic reforms in the Indian economy in 1991. During the post-reform period, many states of India entered a high growth trajectory. Punjab's growth rate, however, did not graduate beyond 5 per cent. Punjab also lost its economic supremacy on account of per capita income. Further, Punjab, since its reorganisation, has experienced structural transformation in the economy. The pace of structural transformation, however, was slower than that of industrial states. The major reasons for this include, lack of benefits of economic reforms, lopsided policy priorities favouring mainly the agricultural sector, low industrial base, weak linkages between agriculture and industry, bypassing of the third and fourth industrial revolutions, low level of investment, and lack of judicious management of government finances. For rejuvenating the Punjab economy and ensuring prosperity, this paper provides the principal contours of a future roadmap.

Introduction

The Punjab economy grew at a rate of 5 per cent per annum between the mid-1960s and early 1990s. However, no other Indian state during this period experienced such a high rate of growth. Even the Indian economy during most of this period grew at a rate of 3.5 per cent per annum, widely known as the 'Hindu Rate of Growth' – a term coined in 1978 by Raj Krishna, a renowned Indian economist (Ahluwalia, 1995; Aiyar, 2016). It was only in the 1980s (a period of partial liberalisation and fiscal expansion) that the Indian economy entered the phase of a 5 per cent rate of growth (Aiyar, 2016). Punjab also emerged as a top-ranking state on account of per capita income. The commercialised agricultural sector, led by the Green Revolution, was the engine of growth during this period.

Punjab, however, lost its economic supremacy among the Indian states since the onset of the economic liberalisation policy of the early 1990s. The economic reforms ushered in new sources of growth, and as a result, the Indian economy and the economies of many states entered a higher growth trajectory. However, the economy of Punjab, during this high growth trajectory, did not achieve a rate

of growth of more than 5 per cent. Punjab, being an agrarian economy, suffered during the post-reform era as the thrust of the liberalisation policy is on industry, investment, public finance, banking, other services, and international trade. Punjab economy also slid down in the case of per capita income. Gradually, more states have attained per capita income higher than that of Punjab.

In light of this, the present study aims to analyse the growth path and structural transformation of the Punjab economy, identify the reasons for its sluggish growth, and to delineate a roadmap for the rejuvenation of the Punjab economy. The study is based on secondary data. The data sources include the National Accounts Data from the Ministry of Statistics and Programme Implementation (MoSPI), Government of India (GoI); Statistical Abstracts of Punjab, Directorate of Statistics, Department of Planning, Government of Punjab; Punjab Budget Documents, Department of Finance, Government of Punjab; Economic Advisory Council to the Prime Minister (EAC-PM); Census of India; Reserve Bank of India (RBI); and Periodic Labour Force Surveys (PLFS), National Statistics Office (NSO), MoSPI.

The growth rate of the economy has been studied in terms of the rate of growth of the Gross State Domestic Product (GSDP) and per capita NSDP at constant prices. With a view to analysing the relative position of the performance of the Punjab economy vis-a-vis that of other states, the growth profile of the state economy and the share of Punjab in National Gross Domestic Product (GDP), both in total and per capita incomes, have been compared with other states of India. The structure of the economy has been analysed on the basis of the sectoral distribution of state income at current prices and employment across sectors. With a view to get a better insight into the Punjab economy, an analysis of structural transformation in the economy over time has also been undertaken. The rate of growth of state income and per capita income of Punjab has been compared with other states only from 2011-12 onwards. The selection of the period for comparison is governed by the availability of comparable data.

The paper is organised into four sections. Section I deals with growth and structural transformation in the economy. The reasons for the slower growth of the Punjab economy are analysed in Section II. Section III delineates a roadmap for the rejuvenation of the Punjab economy. Concluding observations are offered in Section IV.

I

Punjab Economy: Growth and Structural Transformation

1.1 Growth Rate: State Income and Per Capita Income

State Income

Punjab's economy registered a growth rate of around 5.0 per cent per annum between 1970-71 and 1991-92 (see Table 1). The agriculture sector was the driver of growth during this period. In the mid-1960s, Punjab took the lead in

the country by adopting a new agriculture strategy, popularly known as the Green Revolution, comprising high-yielding varieties of seeds, chemical fertilisers, pesticides, assured irrigation and mechanisation. Further, agricultural extension services by Punjab Agricultural University and Punjab Government, liberal bank credit to farmers, a network of agricultural markets linked with rural roads, and the federal government's ensured procurement policy by the mechanism of minimum support prices (MSP) strengthened the foundations of the Green Revolution. The Green Revolution resulted in phenomenal growth in the productivity of major crops like wheat and rice, which helped the Punjab economy to achieve the highest growth trajectory of 5 per cent during a slower rate of growth (3.5 per cent) phase in the Indian economy. For instance, the land productivity of wheat in 1965-66 (Pre-Green Revolution period) was 1238 kilograms per hectare, and it registered an increase of 207.2 per cent in 1991-92 (3803 kilograms per hectare). Similarly, in the case of rice, land productivity was 1000 kilograms per hectare in 1965-66 and reached 3257 kilograms per hectare in 1991-92, thus witnessing an increase of 225.7 per cent (Government of Punjab, 1971; 1995).

Table 1: Rate of Growth of GSDP of Punjab Economy at Constant Prices (2004-05)

Year	%
1970-71 to 1991-92 ¹	5.0
1992-93 to 2010-11	5.4
2011-12 to 2023-24 ²	5.3
Note: 1. Pre-Reform Period as suggested by Panagariya, 2004. 2. At 2011-12 Prices.	
Source: Economic and Statistical Organisation, Government of Punjab and Ministry of Statistics and Programme Implementation, Government of India.	

During the post-reform phase, though many states and the Indian economy experienced a higher rate of growth, the rate of growth of the Punjab economy did not graduate much beyond 5 per cent. For example, Punjab economy witnessed a rate of growth of 5.3 per cent per annum between 2011-12 and 2023-24 (see Table 1). As a result, its first position during the mid-1960s to early 1990s was relegated to the 21st position among the 28 states of the Indian Union (see Table 2). Major states which experienced higher growth than that of Punjab include Gujarat (8.3 per cent), Karnataka (7.6 per cent), Telangana (6.5 per cent), Haryana (6.4 per cent), Andhra Pradesh (6.4 per cent), Rajasthan (5.6 per cent) and Maharashtra (5.5 per cent). Punjab's rate of growth was even lower than that of the national average (6.0 per cent).

Table 2: State-wise Rate of Growth of GSDP (2011-12 to 2023-24) at 2011-12 Constant Prices

Rank	State	(%) 2011-12 to 2023-24	Rank	State	(%) 2011-12 to 2023-24
1	Mizoram	9.8	15	Rajasthan	5.6
2	Gujarat	8.3	16	Maharashtra	5.5
3	Karnataka	7.6	17	Jharkhand	5.4
4	Tripura	7.6	18	Manipur	5.4
5	Odisha	7.1	19	Himachal Pradesh	5.4
6	Sikkim	6.9	20	Bihar	5.4
7	Assam	6.7	21	Punjab	5.3
8	Madhya Pradesh	6.5	22	Arunachal Pradesh	5.3
9	Telangana	6.5	23	Uttarakhand	4.9
10	Haryana	6.4	24	Nagaland	4.8
11	Andhra Pradesh	6.4	25	Kerala	4.7
12	Tamil Nadu	6.3	26	West Bengal	4.5
13	Uttar Pradesh	5.7	27	Goa	3.5
14	Chhattisgarh	5.7	28	Meghalaya	3.0
	All India	6.0			
Source: Ministry of Statistics and Programme Implementation, Government of India (as on 17.03.2025).					

Two major reasons for the slower growth of Punjab economy in comparison to other states and the Indian economy include the lack of reaping the benefits of economic reforms and a slowdown in the pace of productivity gains of both crops over time. For example, in 2023-24, the wheat yield was 4710 kilograms per hectare, which registered an increase of only 23.8 per cent over the 1991-92 level. Rice productivity was 4341 in 2022-23 and witnessed only a 33.3 per cent increase over 1991-92 productivity levels (Government of Punjab, 1995; 2024).

Performance of Punjab in terms of Share in National Income

Punjab economy's performance measured in terms of its share in national income suggests that its performance witnessed a consistent improvement in the pre-reform period and started sliding down since the onset of economic reforms. For example, the share of Punjab in the National GDP was 3.2 per cent in 1960-61, reached 4.3 per cent on the eve of economic reforms (1990-91), witnessed a continuous decline since the economic reforms, and reached as low as 2.4 per cent in 2023-24 (Economic Advisory Council to the Prime Minister, 2024). In

contrast, the relative performance of Haryana, which was carved out of Punjab on November 1, 1966, improved considerably and surpassed that of Punjab. The share of Haryana in the National GDP was only 1.9 per cent in 1960-61 and increased to 3.6 per cent in 2023-24. The five top-ranking states which have performed much better than Punjab in 2023-24 are Maharashtra (13.3 per cent share in National GDP), Tamil Nadu (8.9 per cent), Uttar Pradesh (8.4 per cent), Karnataka (8.2 per cent) and Gujarat (8.1 per cent). The only large states which have performed worse than Punjab are Assam, Chhattisgarh, Jharkhand, and Uttarakhand (EAC-PM, 2024).

Per Capita Income

It is not only that the performance of Punjab, compared to leading states, suffered on account of the rate of growth and share in national income; Punjab's position also suffered with regard to per capita income during the post-reform phase. For example, Punjab attained Rs. 407 as per capita net state domestic product (NSDP) at constant (1960-61) prices in 1966-67 and, by replacing Maharashtra, having Rs. 394 as per capita income occupied the first position (Government of Punjab, 1971). The predominance of Punjab in terms of per capita income continued till the inception of economic reforms. For example, during the post-reform era, Maharashtra, with Rs. 4110 as per capita NSDP at constant (1980-81) prices in 1993-94, took over Punjab, having Rs. 4022 as per capita income (Government of Punjab, 1997), and later, the per capita income of other states surpassed that of Punjab.

In the year 2011-12, Punjab had Rs 85,577 as per capita NSDP at constant 2011-12 prices and was at the 12th position. In the year 2023-24, Punjab, with a per capita income of Rs. 1,29,561, was pushed to the 14th position (see Table 3).

Table 3: State-wise Per Capita NSDP (Rs) at Constant 2011-12 Prices for 2023-24

Rank	State	2023-24	Rank	State	2023-24
1	Goa	3,57,611	15	Arunachal Pradesh	1,11,107
2	Sikkim	2,92,339	16	Odisha	99,396
3	Gujarat	1,95,617	17	Tripura	97,250
4	Karnataka	1,91,970	18	Rajasthan	90,414
5	Haryana	1,82,816	19	Chhattisgarh	87,681
6	Tamil Nadu	1,79,732	20	Nagaland	81,158
7	Telangana	1,77,000	21	West Bengal	77,933
8	Maharashtra	1,66,013	22	Assam	75,938
9	Kerala	1,62,040	23	Meghalaya	74,489
10	Himachal Pradesh	1,54,330	24	Madhya Pradesh	67,301
11	Mizoram	1,52,363	25	Manipur	65,471
12	Uttarakhand	1,50,931	26	Jharkhand	65,062

13	Andhra Pradesh	1,31,083	27	Uttar Pradesh	50,341
14	Punjab	1,29,561	28	Bihar	32,227
Source: Ministry of Statistics and Programme Implementation, Government of India (as on 17.03.2025).					

Punjab's per capita NSDP registered a rate of growth of 3.5 per cent per annum between 2011-12 and 2023-24, and Punjab was at the 22nd position among Indian states. (see Table 4). Major states which experienced growth higher than Punjab include Gujarat (6.9 per cent), Karnataka (6.5 per cent), Telangana (5.7 per cent), Tamil Nadu (5.6 per cent), Andhra Pradesh (5.5 per cent), Haryana (4.6 per cent), Maharashtra (4.3 per cent), and Kerala (4.3 per cent). Punjab's rate of growth was even lower than that of the national average (4.6 per cent).

Table 4: State-wise Rate of Growth of Per Capita NSDP (2011-12 to 2023-24) at Constant 2011-12 Prices

Rank	State	(%)	Rank	State	(%)
		2011-12 to 2023-24			2011-12 to 2023-24
1	Mizoram	8.4	15	Kerala	4.3
2	Gujarat	6.9	16	Manipur	4.2
3	Karnataka	6.5	17	Chhattisgarh	3.9
4	Tripura	6.2	18	Rajasthan	3.9
5	Odisha	6.2	19	Jharkhand	3.9
6	Telangana	5.7	20	Uttar Pradesh	3.8
7	Tamil Nadu	5.6	21	Nagaland	3.6
8	Andhra Pradesh	5.5	22	Punjab	3.5
9	Assam	5.2	23	West Bengal	3.5
10	Sikkim	5.2	24	Arunachal Pradesh	3.5
11	Himachal Pradesh	4.8	25	Uttarakhand	3.5
12	Madhya Pradesh	4.8	26	Bihar	3.3
13	Haryana	4.6	27	Goa	2.7
14	Maharashtra	4.3	28	Meghalaya	1.8
	All India	4.6			
Source: Ministry of Statistics and Programme Implementation, Government of India (as on 17.03.2025).					

Performance of Punjab in terms of Share in Per Capita National Income

Punjab's performance measured on the basis of relative per capita income (percentage of per capita NSDP of Punjab to the all-India per capita Net National Product or per capita Net National Income) has also deteriorated after the economic reforms. The relative per capita income of Punjab was 119.6 per cent of the national average in 1960-61; it increased to 146.7 per cent in 1990-91 and declined drastically to 106.7 per cent in 2023-24. In comparison, Haryana witnessed an improvement in its performance in terms of its per capita income share in the national average. Haryana had a per capita income of 106.9 per cent of the national average in 1960-61, which increased to 176.8 per cent in 2023-24. Five states which have significantly outperformed Punjab in 2023-24 on account of share in per capita National Income include Telangana (193.6 per cent), Karnataka (180.7 per cent), Tamil Nadu (171.1 per cent), Gujarat (160.7 per cent) and Kerala (152.5 per cent). Although Punjab's relative performance in terms of share in per capita national income has declined over time, it remained better than several large states such as Assam, Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Odisha, Rajasthan, Uttar Pradesh, and West Bengal in the year 2023-24 (EAC-PM, 2024).

1.2 Structural Transformation

The structure of the Punjab economy has undergone a remarkable transformation. The primary sector (62.8 per cent) was the major contributor to the state income, followed by the tertiary sector (24.2 per cent). The share of the secondary sector was only 12.9 per cent (see Table 5). In 1990-91, on the eve of economic reforms, the primary sector's share declined to 44.0 per cent. The secondary and tertiary sectors' contribution to state income increased to 23.8 per cent and 32.2 per cent, respectively. The process of structural changes continued in the Punjab economy. By the year 2023-24, the contribution of the primary sector came down to 25.0 per cent. The tertiary sector, contributing 47.0 per cent to the state income, emerged as a new engine of growth. The share of the secondary sector also increased, but marginally to 28.0 per cent.

Table 5: Structural Transformation of Punjab Economy at Current Prices

Sector	1966 -67	1970 -71	1980 -81	1990 -91	2000 -01	2011 -12	2023 -24
Primary	62.8	58.4	49.1	44.0	35.9	30.8	25.0
Secondary	12.9	15.3	20.0	23.8	23.0	25.4	28.0
Tertiary	24.2	26.3	30.9	32.2	41.1	43.8	47.0
Source: Ministry of Statistics and Programme Implementation, Government of India.							

Along with studying the changing structure of Punjab over time, a comparative analysis with industrial states has also been carried out (see Table

6). In 1970-71, the share of the primary sector in state income was highest in Punjab (58.4 per cent), except that of Haryana (68.8 per cent). In contrast, Maharashtra had the lowest share of the primary sector (28.6 per cent), followed by Tamil Nadu (39.9 per cent). Though the share of the primary sector in the state income came down to 25.0 per cent in 2023-24, it remained the highest among states.

Table 6: Sectoral Distribution of State Income (%)

State	Gujarat				Haryana				Karnataka			
Year	1970-71	1990-91	2011-12	2023-24	1970-71	1990-91	2011-12	2023-24	1970-71	1990-91	2011-12	2023-24
Primary	48.9	31.6	22.8	19.6	64.8	44.1	23.6	18.1	54.7	35.0	14.5	12.6
Manufacturing	16.0	25.1	28.4	34.6	9.9	19.9	19.4	17.7	15.4	16.5	17.6	12.7
Secondary	20.8	32.6	40.5	44.6	15.2	24.8	31.6	29.0	23.2	24.9	28.7	20.0
Tertiary	30.3	35.8	36.7	35.8	20.0	31.1	44.9	52.9	22.2	40.1	56.8	67.4
State	Maharashtra				Punjab				Tamil Nadu			
Year	1970-71	1990-91	2011-12	2023-24	1970-71	1990-91	2011-12	2023-24	1970-71	1990-91	2011-12	2023-24
Primary	28.6	22.6	18.0	13.0	58.4	44.0	30.8	25.0	39.9	19.6	13.1	13.0
Manufacturing	26.5	25.2	21.5	14.5	8.0	15.0	14.8	17.2	19.3	27.4	21.9	18.6
Secondary	34.2	34.3	30.9	23.3	15.3	23.8	25.4	28.0	26.1	35.9	36.4	33.4
Tertiary	37.2	43.1	51.1	63.7	26.3	32.2	43.8	47.0	34.0	44.5	50.5	53.6

Source: Ministry of Statistics and Programme Implementation, Government of India.

The contribution of the secondary sector in the state income of Punjab was 15.3 per cent in 1970-71, the lowest among states, barring Haryana. Maharashtra had the highest share of the secondary sector (34.2 per cent) in state income, followed by Tamil Nadu (26.1 per cent). In the year 2023-24, the share of the secondary sector increased to 28.0 per cent, which remained lower than that of Gujarat (44.6 per cent), Tamil Nadu (33.4 per cent), and Haryana (29.0 per cent). In the year 1970-71, the share of the tertiary sector in the state income of Punjab was 26.3 per cent, higher than that of Karnataka (22.2 per cent) and Haryana (20.0 per cent).

The tertiary sector in Punjab has emerged as a dominating sector over time. The share of the tertiary sector increased to 47.0 per cent in 2023-24; however, it was the lowest among states, barring Gujarat (35.8 per cent). Thus, the Punjab economy witnessed structural changes over time; however, the pace of changes has been slower than that of other states like Gujarat, Haryana, Tamil Nadu, Karnataka, and Maharashtra.

The structural transformation in the Punjab economy, studied on the basis of the sectoral distribution of the workforce, also reveals that the economy has experienced changes. Historically, the agriculture sector remained at the forefront of employment in Punjab. According to 1971 Census data, the share of the agriculture sector in employment in Punjab was 62.7 per cent. However,

the share of the agriculture sector declined over time. In the year 2011, it came down to 35.6 per cent. The main reason seems to be the increasing mechanisation of agricultural operations. The contribution of the non-agriculture sector witnessed an increasing trend. During the 1971 Census, the share of the non-agriculture sector was 37.3 per cent in the overall employment in the state. The share increased to 64.4 per cent during the 2011 Census.

According to the Periodic Labour Force Survey (PLFS) Report 2023-24, the share of agriculture and allied sectors came down to 27.2 per cent in 2023-24. On the other hand, the share of the non-agriculture sector increased to 72.8 per cent (MoSPI, 2024). The declining trend of the share of agriculture and allied sectors in GSDP and employment is in conformity with the theories of structural transformation as well as the experience of the developed economies.

II

Reasons for Slower Growth of Punjab Economy

The foregoing analysis reveals that, since the onset of economic reforms, the Indian economy and major industrial states have entered a higher growth trajectory. The economy of Punjab, however, has performed poorly on account of the rate of growth as compared to a number of other states. Punjab has also suffered hugely in terms of its rank based on per capita income. The pace of structural transformation in the economy is also slower than that of leading industrial states. Multiple factors such as not reaping the benefits of economic reforms, lopsided development priorities favouring only agriculture, low industrial base, weak linkages between agriculture and industry, bypassing of the Third and the Fourth Industrial Revolutions, low investment, and lack of judicious management of government finances, are responsible for Punjab's slow growth.

2.1 *Economic Reforms and Punjab Economy*

Punjab failed to reap the benefits of economic reforms introduced in India in the early 1990s. Economic reforms have mainly covered industry, foreign trade, investment, technology, money and banking, public enterprises and public finance. The Indian economy has entered a higher growth trajectory during the post-reform phase. In 2006-07, the economy experienced a rate of growth of 9.2 per cent (Government of India, 2007). It has been found that many states like Karnataka, Maharashtra, Tamil Nadu, Gujarat, Andhra Pradesh, and Haryana have also experienced a higher rate of growth during the post-reform era. Punjab's rate of growth, however, was lower than that of the states mentioned above during the post-reform period (see Table 2). In Punjab, on the eve of economic reforms, agriculture and allied activities were the backbone of the economy as these contributed 44 per cent to state income in 1990-91 and contributed around 25 per cent to state income in 2023-24 (MoSPI, 2025a). The

agriculture and allied activities, however, remained mainly uncovered by the economic reforms, and hence, the Punjab economy could not benefit from the economic reforms (Singh, 2019).

2.2 Lopsided Policy Priorities

The priority of the most celebrated growth model of Punjab was the development of a single sector, namely agriculture. The focus of the growth model was on a national programme of agricultural development, namely, the Green Revolution, to make India self-sufficient in food grains for food security. The Punjab government accorded top priority for making the Green Revolution a success story. As a result, the State and people both became well-off due to a phenomenal improvement in the yield of the two major crops, namely wheat and rice. As stated earlier, the wheat yield was 1236 kilograms per hectare in 1965-66, and it increased to 4710 kilograms per hectare during the year 2022-23. Similarly, the land productivity of rice was only 1000 kilograms per hectare in 1965-66, and it reached 4341 kilograms per hectare in the year 2022-23. Unfortunately, since the mid-1960s, neither the Central nor the State governments have thought about 'what next to agriculture?' (Ghuman, 2011). The implicit assumption in the minds of governments, perhaps, was that the agricultural sector was a perennial source of growth. This assumption was totally contrary to the development experience, which enunciates that the agricultural sector cannot be an evergreen source of economic growth. Limits to growth in the agricultural sector arrive due to agriculture being prone to natural calamities, having low-income elasticity of demand of agricultural products, a shrinking export base, the rapid expansion of cheaper synthetic raw material as a substitute to agriculture-based raw material, and inability of the sector to provide gainful employment for growing labour force. The theories of structural transformation and the development experience suggest that as an economy advances, the contribution of agriculture, both in income and employment, declines. Though it happened in Punjab, but the pace was slower than that of states like Gujarat, Haryana, Tamil Nadu, Karnataka and Maharashtra.

Unfortunately, the agriculture sector, the traditional engine of growth, is also facing crises mainly because the productivity of wheat and rice has almost stagnated over time. The productivity of wheat is hovering around 4700 kilograms per hectare, and that of rice around 4400 kilograms per hectare.

2.3 Low Industrial Base

A very weak industrial base is also causing the slow growth of the state economy. For example, the contribution of the manufacturing sector in the state income was only 17.2 per cent in the year 2023-24, which was lower than that of industrial states like Gujarat (34.6 per cent), Tamil Nadu (18.6 per cent), and Haryana (17.7 per cent). Further, whatever, industrial development has taken place in the state is dominated by small-scale units. In the year 2019-20, small-scale industrial units were 3,37,955, which comprised 99 per cent of the total

industrial units (3,38,545) in the state (Government of Punjab, 2021). The small-scale industrial units mainly have outdated technology, high costs, and low-quality goods. These units are struggling for survival in the wake of economic liberalisation and globalisation, as these policies, including large scale imports of cheaper Chinese goods, have eroded their competitive edge. The industrial development in the State has also been constrained due to many factors like poor natural resource base, expensive land, far away from ports and the national market, withdrawal of freight equalisation policy in 1993 by the Government of India, Central Government's tax holidays to neighboring hill states, and sensitive international border (Ghuman, 2022b). According to a survey, around 3074 industrial units comprising an investment of Rs. 3,000 crores have moved to neighbouring hill states that enjoy the benefits of tax holidays (Jagga, 2010). Paradoxically, while other industrial states are reaping the benefits of economic reforms, Punjab is experiencing a flight of industrial capital.

2.4 Weak Linkages between Agriculture and Industry

Agriculture is the backbone of the Punjab economy. However, the agricultural sector has very weak backward and forward linkages with industry (Singh, 2016). Wheat and paddy are the two principal crops. A significant share of the production of these crops is contributed to the central pool for the public distribution system of the Government of India. In the year 2022-23, out of the total wheat procured (103 lakh tonnes), the State contributed 96 lakh tonnes to the central pool, which was 93.7 per cent of the total market arrival of wheat. Similarly, out of the total market arrival of paddy (183 lakhs tonnes) converted to rice (123 lakhs tonnes), of which around 99 per cent was contributed to the central pool. It is not only that State exports agricultural produce to other states in the form of contribution to the central pool, but the State also imports most agro-based industrial goods from other states. For instance, many of the branded products of wheat and rice, branded cotton-based products like surgical cotton and branded juices are imported by Punjab from other states. No doubt Punjab manufactures agricultural inputs as well as agricultural implements and machinery but at the same time most of the agricultural inputs like chemical fertilisers; pesticides; machinery including tractors, rotavators, diesel engines, harvest combines, other agricultural machinery and agricultural implements; and irrigation-related equipment are imported from other states as well from abroad.

2.5 Third and Fourth Industrial Revolutions and Punjab

Bypassing the Third and Fourth Industrial Revolutions has proved dearer to the industry of Punjab. The State missed the information technology (IT) revolution - Third Industrial Revolution. No city of Punjab could emerge as an IT hub like Bengaluru in Karnataka, Hyderabad in Telangana, Gurugram in Haryana and Chennai in Tamil Nadu. Now, Punjab is missing the Fourth Industrial Revolution (Industry 4.0) driven by smart and digital technologies like artificial

intelligence (AI), the internet of things (IoT), large scale machine-to-machine communication (M2M), 3-D printing, sensor/gene editing, advanced robotics, etc.

2.6 Low Level of Investment

Investment is another economic parameter which declined drastically during the post-reform period. The investment-GSDP ratio in Punjab was 32.41 per cent in the year 1995-96 at constant 1993-94 prices (Government of Punjab, 2004). It declined to 15.44 per cent in the year 2022-23 at constant 2011-12 prices (Government of Punjab, 2024), which is almost half of the national average of 33.6 per cent (MoSPI, 2025b). Punjab, since the onset of economic reforms, has not succeeded in attracting sufficient capital, particularly foreign capital. The foreign direct investment (FDI) in Punjab was only 0.44 per cent of total FDI in the country from October 2019 to December 2024 (Government of India, 2024).

2.7 Lack of Judicious Management of Government Finances

The lack of judicious management of government finances has also taken its toll on the economy. The finances of the state started deteriorating from the mid-1980s onward (NITI Aayog, 2018). The crisis compounded after the neo-liberal economic policies of the 1990s, as during this period, the economy grew at a slower rate vis-a-vis other states and hence adversely affected the fiscal parameters. It is hard to find concerted efforts made by the governments during post-liberalisation phase, critically analysing the causes of deteriorating fiscal parameters and preparing a strategy to overcome the crisis. The piecemeal approach adopted to mitigate the fiscal crisis ruled the roost and led to astoundingly alarming outcomes in the form of burgeoning public debt; increasing committed expenditure and expenditure on welfare schemes and free services; abysmally low capital expenditure; fiscal deficit beyond the prescribed limit; and policy of no additional resource mobilisation. Table 7 exhibits a glimpse of the latest position of fiscal parameters.

Table 7: Fiscal Health of Punjab		
Fiscal Indicators	2024-25 (Revised estimates)	Observations
Per Capita Total Tax Revenue	Rs 26,008	19th Position among states for 2024-25 (Budget Estimates) ¹
Committed Expenditure as a Percentage of Total Revenue Receipts	75.29	Very high

Committed Expenditure and Power Subsidy as Percentage of Total Revenue Receipts	94.76	Meagre resources available for development, other expenditures and devolution to local Government
Capital Expenditure as a Percentage of GSDP	1.03 against 3 per cent of GDP at the national level	Capacity to create productive assets constrained
Revenue Deficit as a Percentage of GSDP	3.54	Norm: Zero or surplus (FRBM Act, 2003)
Fiscal Deficit as a Percentage of GSDP	4.54	Norm: 3 % of GSDP (FRBM Act, 2003)
Total Outstanding Liabilities - As per cent of GSDP	46.7 ²	Highest among major states ³
Interest Payments as a Percentage of Revenue Receipts	23.09	Very high
Debt Servicing (Payment of Principal and Interest) as a Percentage of Revenue Receipts	35.50	Very high
Source: Punjab Budget 2025-26, Department of Finance, Government of Punjab. 1. Statistical Abstract of Punjab, 2024; 2. State Finances: A Study of Budgets, RBI. 3. Norm: 32.5 per cent of GSDP for all states in aggregate by the financial year 2025-26 as per the 15 th Finance Commission and 37.5 per cent of GSDP by 2014-15 (Punjab Fiscal Responsibility and Budget Management -FRBM Act, 2003).		

The fiscal parameters like low per capita total tax revenue (Rs 26,008), high committed expenditure including power subsidy (94.76 per cent of total revenue receipts), high revenue deficit (3.54 per cent of GSDP above the norm of zero as per the FRBM Act, 2003), high fiscal deficit (4.54 per cent of GSDP above the norm of 3 per cent), low capital expenditure (1.03 per cent of GSDP), mounting public debt (46.7 per cent of GSDP) and high debt servicing (35.5 per cent as a percentage of Revenue Receipts) present a precarious fiscal health of the state (see Table 7). In the past also, the fiscal parameters deteriorated and were not in consonance with the established policy norms (NITI Aayog, 2018; Government of Punjab, 2022; Ghuman and Khurana, 2023; NITI Aayog, 2025).

III Roadmap For Future

Punjab economy at present has been passing through a crisis-ridden phase, and for its rejuvenation, surgical changes are required relating to growth, sectoral development, investment, finances, environment, and governance.

3.1 Achieving Faster Growth

The first task before the Government is to restore the economic pride of the State by taking the Punjab economy to a higher growth trajectory of 7.5 per cent per annum in the next ten years i.e. by 2035 and 10 per cent by 2047 (on the completion of 100 years of India's Independence). It is relevant to mention that India has envisioned to become a developed nation by 2047, and on the pattern of the national goal of developed India (Viksit Bharat), Punjab should also aspire to become a developed state (A Viksit State) by 2047. No doubt, 7.5 per cent and 10 per cent rates of growth look very ambitious but are achievable if the policy-makers optimally harness the strengths of the economy. The strengths include well-developed infrastructure, as Punjab is among the top-ranking states in the field of infrastructure (Mahajan et al., 2022); adequate market as the percentage of multidimensionally poor of the total population is very low in Punjab (4.75 per cent as per NITI Aayog, 2023); demographic dividends evidenced by the predominance of the working age (15-59 years) population estimated to be 67.0 per cent of the total population by 2036 (National Commission on Population, 2019); huge scope of financing of development projects by banks as advances to deposit ratio is low (57.1 per cent in the year 2024, against the national average of 80.08 per cent see Table 8); and sizeable Punjabi diaspora (comprising of 3-5 million).

For revitalising the Punjab economy, it is also suggested to adopt the hybrid model of development combining state and market-led models anchored by the government; initiating farmers-centric reforms in agriculture with a view to improving agricultural productivity and the income of farmers and agricultural workers; and promoting farm - centric industrialisation (Ghuman, 2023).

3.2 Rapid Industrialisation and Strengthening its Linkages with Agriculture

Giving a big push to industrial development is essential for putting the economy on a fast track of growth. Along with retaining and encouraging the existing industry in the state, Punjab should identify industries which have locational advantages in the state and devise its industrial policy accordingly to boost the identified industries.

There are three types of industries which have locational advantages in the state. These are high-tech agro-based industries; footloose industries; and smart-technologies and knowledge-driven industries.

High-tech Agro-based Industries

As stated earlier, agriculture and industry in Punjab have weak linkages. For achieving a higher rate of growth, it is essential to develop agriculture and industry simultaneously by promoting high-tech agro-based industries in the state. Punjab has agro-based industries, however, these are predominately small-scale units, family-driven, mostly by artisans and are using old technologies; hence, products are not cost-effective (Ghuman, 2022a). With a view to making existing agro-based industries competitive, it is essential to upgrade their technology and promote professionalism in organisational structures. Further, Industry 4.0 technologies have opened new vistas for the promotion of high-tech agro-based industries such as the smart food-processing industry, precision farming industry, smart cold chains and logistics, agriculture biomass-based industries, agro-biotechnology industry, controlled environment agriculture, agro-robotics industry, agri-tech platforms and software, agricultural drones, seed technology industry, and biotechnology in livestock.

These industries could prove very useful for Punjab in addressing problems relating to food security, climate change, environmental resources, disguised unemployment in agriculture, and unemployment among educated youth. These industries would, in the long run, help in achieving more sustainable and productive linkages between agriculture and industry.

Footloose, Smart-technologies and Knowledge-driven Industries

Footloose industries connote those industries that use very lightweight raw materials, are less land-intensive, incur low transport costs and make high-value additions. These industries rely on skilled manpower and are environment friendly; hence, they can be located in proximity to residential areas. In view of these advantages, Punjab should formulate a time-bound action plan for the development of footloose industries. These industries, in addition to promoting industrialisation in the state, will also help in reducing unemployment, will not require much fertile land, and at the same time will not pose a threat to the environmental resources (Ghuman, 2011).

Smart technology and knowledge-driven industries represent a new paradigm in industrial development, wherein, generation, management and application of smart technologies and knowledge are the cornerstones. These industries engage researchers and highly skilled manpower, who actively contribute to research and development (R&D) activities. The major thrust of these industries is on the development of smart and digital technologies, intellectual property rights (IPRs), patents, and management of knowledge. The Industrial and Business Development Policy 2022 of Punjab has recognised the significance of these industries in the state, specifically by identifying Industry 4.0 as a thrust sector for future industrialisation and generating employment in the state (Department of Industries & Commerce, Government of Punjab, 2023).

A wide array of industries such as artificial intelligence (AI); the Internet of Things (IoT); 3D printing; robotics; cloud computing; data analytics; cyber security technology; smart sensors; electronics; semi-conductors; computers

and peripherals; software development; and telecommunication and information technology are the key industries of footloose, smart -technologies and knowledge-driven group of industries. Other industries of this group include pharmaceuticals; optical instruments and lenses; surgical and medical instruments; biotechnology; engineering and scientific instruments; e-vehicles; aerospace and defense. Additionally, new and renewable sources of energy (NRSE) equipment; energy storage devices; bio-energy; and waste management units are also included in this group (Ghuman, 2022b; Ghuman and Singh, 2023).

The potential for footloose, smart technology, and knowledge-driven industries is also very high from the perspective that the State has an extensive network of universities and technical institutions. Punjab has around 40 universities; 499 arts, science, commerce, and home science colleges; 80 engineering, technology, and architecture colleges; 198 polytechnics; and 8 medical colleges in the year 2023 (Government of Punjab, 2023). This robust academic ecosystem provides skilled and research-oriented manpower for footloose, smart technologies, and knowledge-driven industries. These industries thrive in the vicinity of educational institutions and, hence, should be located in close proximity to universities, research centres, and engineering and medical institutions in the form of knowledge-industry corridors. Based upon the contiguous belt of educational institutions, five knowledge-industry corridors, namely, Chandigarh-Mohali-Ludhiana Corridor; Chandigarh-Mohali-Patiala Corridor; Chandigarh-Mohali-Ropar-Hoshiarpur Corridor; Ludhiana-Jalandhar-Kapurthala-Amritsar Corridor; and Sangrur-Bhatinda-Faridkot Corridor need to be developed in Punjab (Ghuman, 2022b; Ghuman and Singh, 2023).

3.3 Development of Modern Tertiary Sector

At present, the tertiary sector has been playing a pivotal role in the Punjab economy. In the year 2023-24, its share is highest at 47.0 per cent in the state income. It also provides employment to nearly two-fifths of the total workforce in the state. The tertiary sector, except for a few of its sub-sectors, has been using traditional technologies, and operations are mainly family driven. The sector has weak linkages with other sectors. The service sector can help in a big way to boost the rate of growth in the economy by upgrading the existing technology and also by developing the latest technology-driven domains such as information technology-enabled services (ITES), including business process outsourcing, digital education, social media and digital entertainment platforms; cyber security; environmental services; logistics; and fintech (financial technology) business services. In addition, Punjab should also promote the emerging area of the tertiary sector, namely quaternary/knowledge services comprising scientific research, consultancy, IPRs, career counseling and employment services, immigration and study abroad services, and biotechnology. The State should also harness the potential of quinary services. These services involve leadership roles of top-ranking decision-makers and

administrators in the form of policy innovations; application of new technologies and their evaluation; and data science. Developing a complementary relationship of the tertiary sector with other sectors of the economy would make this sector a more powerful engine of growth and creation of decent jobs (Ghuman, 2022a).

3.4 Diversification of the Rural Economy, including the Agricultural Sector

It is not only that overall development is lopsided in Punjab, even the development of the rural economy is also lopsided. It has been mainly confined to crop husbandry as it has contributed half (56.2 per cent) of the share of the primary sector in the state income in 2023-24 (MoSPI, 2025a). Diversification of the rural economy in the form of the promotion of allied activities of agriculture, like animal husbandry, fisheries and forestry, can also be an expanding source of growth for both the rural people and the state economy. Animal husbandry has already established its economic credentials by contributing around 35 per cent to the share of the primary sector in the state income (MoSPI). Its further development would bring prosperity to the economy of the state in general and rural households belonging to small and marginal farmers, and landless labour in particular, as animal husbandry plays a pivotal role in their livelihoods. Non-farm activities like cottage and small rural enterprises, construction, transport and storage, retail trade, education and services, including repair services, have performed well in the state (Ghuman, 2005; Vatta and Garg, 2008; Shergill, 2013; Institute of Applied Manpower Research, 2013; Sidhu and Singh, 2015) and their development in future can further help in the diversification of the rural economy. No doubt the agriculture sector will not be a major driver of growth in future, but crop diversification, including promotion high-value crops, popularising of niche farming, contract farming, water management methods like sprinkler and drip irrigation, and marketing arrangements for new crops can add to the growth of the economy (Ghuman, 2022a).

3.5 Attracting both Domestic and Foreign Capital

During the post-reform era, Punjab could not attract adequate fresh capital, including foreign capital. As mentioned earlier, the flow of FDI in Punjab was abysmally low. Punjab set up the Punjab Bureau of Investment Promotion (Invest Punjab) in 2013 as a single window system for providing state-level regulatory clearance and approval for fiscal incentives. Its portal has features like an online unified regulator, above 40 state-level approvals across more than 12 departments, a dedicated relationship manager, and time-bound and digital approvals (Invest Punjab, 2019). Despite innovative initiatives of 'Invest Punjab,' the state failed in attracting investment in a big way. The investment-GSDP ratio has rather declined over time. More policy initiatives like integrating the State Single Window Portal with the National Single Window Portal, organising investment summits on the pattern of industrial states promoting

start-up culture, revival of the state-owned industrial development corporations for the promotion of joint ventures with the private and co-operative sectors, and mitigating corruption from regulatory clearance and granting of fiscal incentives are urgently needed in the State.

Table 8: State-wise Percentage of Advances to Deposits of Scheduled Commercial Bank as per position of March, 2024 (Q3)							
State	Deposits (Rs Crores)	Advances (Rs Crores)	% of Advances to Deposits	State	Deposits (Rs Crores)	Advances (Rs Crores)	% of Advances to Deposits
Andhra Pradesh	421938	655914	155.45	Assam	201131	116962	58.15
Tamil Nadu	1268624	1446339	114.01	Punjab	598585	341818	57.10
Telangana	740259	803528	108.55	Uttar Pradesh	1549075	762604	49.23
Maharashtra	4265757	4412991	103.45	Bihar	453686	222073	48.95
Rajasthan	598138	522488	87.35	West Bengal	1077915	527353	48.92
Chhattisgarh	212472	172674	81.27	Odisha	471149	228490	48.5
Madhya Pradesh	565825	425237	75.15	Uttarakhand	209904	84752	40.38
Gujarat	1116598	836191	74.89	Jharkhand	311956	113529	36.39
Kerala	754366	521725	69.16	Himachal Pradesh	138727	47828	34.48
Karnataka	1557249	1065248	68.41	Goa	109552	28806	26.29
Haryana	741200	482371	65.08	All India	19633612	15722619	80.08
Source: Statistical Abstract of Punjab (2024), Directorate of Statistics, Department of Planning, Government of Punjab.							

On the investment front, Punjab can also harness a huge potential of resources for development from the banking sector. At present, banks in Punjab mobilise more resources (deposits) from Punjab and invest relatively less amount (advances) in the state. Thus, through banks, Punjab's resources are transferred to other states. In the year 2023-24, the advances to deposit ratio in Punjab was only 57.1 per cent, much below that of states like Andhra Pradesh (155.45 per cent), Tamil Nadu (115.01 per cent), Telangana (108.55 per cent), Maharashtra (103.45 per cent), and India as a whole (80.01 per cent).

Punjab should tap this potential for development. The Punjab State Industrial Corporation and other public sector corporations can help the entrepreneurs, particularly start-ups in Punjab to prepare viable industrial and other development projects for getting funds from the banking institutions. Punjab can additionally mobilise Rs. 1,37,530 crores from the banking sector by attaining the national average of advances to deposit ratio of 80.08 per cent.

3.6 Improving Fiscal Health

With a view to rejuvenating the Punjab economy, the government should make it a top priority to improve its fiscal health. Debt burden committed expenditure including subsidies and freebies, unproductive expenditure, capital expenditure, revenue deficit, fiscal deficit, and resource mobilisation need the attention of policymakers on a priority basis. Policy measures for improving fiscal health of the economy include resource mobilisation by tapping new tax sources; improving the compliance of the existing taxes and implementing digital technology-driven tax reforms; making evidence-based efforts for getting more resources from the Union government; taking optimal advantage of centrally sponsored schemes; strictly adhering to the Punjab Fiscal Responsibility and Budget Management Act, 2003 for bringing fiscal deficit, revenue deficit and public debt within prescribed limits; regulating committed expenditure by rationalising subsidies particularly freebies, and reducing over-dependence on public debt; promoting capital expenditure; curbing unproductive and wasteful expenditure by adopting zero-based budgeting; adopting outcome-budgeting measuring the results and impacts of government spending; and increasing the share of non-tax revenue in total revenue by increasing user charges; restructuring of public sector undertakings including disinvestment and asset monetisation (Ghuman and Khurana, 2023).

3.7 Developing Harmonious Relationship between Growth and Environmental Resources

The development model of Punjab has resulted in a very high rate of growth, particularly before the economic reforms. But at a high cost in the form of reckless exploitation and pollution of environmental resources. Undoubtedly, this model was instrumental in securing the country to achieve self-sufficiency in food grains. This model also helped the State to emerge as a leading state in terms of economic prosperity. The Punjab model of development, at the same time, has led to the sickness of environmental resources like soil, water, and air. The severity of sickness of environmental resources has reached a critical stage and is now threatening the lives of people. The excessive use of chemical inputs in the agriculture sector has manifested in the form of growing cases of chronic diseases like cancer in the Malwa belt (Ghuman, 2012; Mittal et al., 2014; Kaur and Kaur, 2016). Punjab must critically review its ongoing model of development and re-model it with a focus on high economic growth and sustainability of environmental resources. In the State, along with using chemical inputs as per prescribed norms, ecologically sustainable cropping systems, including organic farming, should also be encouraged. Organic farming can be promoted in the state by setting up a state-of-the-art Centre of Excellence for Organic Farming; strengthening R&D for organic and natural farming; making institutional arrangements for certifying the organic products; procuring, processing and marketing of organic products through co-operatives

like the Punjab State Co-operative Supply and Marketing Federation Limited. (MARKFED) and Punjab State Co-operative Milk Producers Federation Limited (MILKFED); and setting up of organic farmer's huts/outlets (Punjab State Farmers' & Farm Workers' Commission, 2023). It is also pertinent to mention that industrial development has also polluted environmental resources in the state. It has been found that 57 per cent of industries in Punjab are highly polluting the environment and fall in the red category (Ghuman, 2012), suggesting the need to conduct independent environmental audits for all industrial units in the state. Punjab has regulatory bodies, especially the Punjab Pollution Control Board (PPCB), that undertake environmental audits. However, PPCB needs more power and should be made totally autonomous from government control. In the future, from an environmental perspective, the Punjab government should incentivise the setting up of white, green, and orange industries in the State (Ghuman and Singh, 2023).

3.8 Improving Quality of Governance

Quality of governance is a significant determinant of economic development. Recognising the governance deficit, the Punjab Government constituted a Governance Reform Commission in 2009, which was reconstituted in 2012 with a view to improving the quality of governance. The Commission, in addition to suggesting far-reaching governance reforms like changes in the processes, procedures, rules, and regulations in the delivery of public services, also recommended Punjab Right to Service Bill, which the Government enacted in the form of Punjab Right to Service Act, 2011 aiming to deliver public services within a stipulated time. This Act has been replaced by the Punjab Transparency and Accountability in Delivery of Public Service Act, 2018. To further improve the quality of governance, particularly in overseeing the implementation of the Act, the Government constituted the Punjab Transparency and Accountability Commission as a statutory body. The present state government made another governance innovation by making a provision for delivering of select public services at the doorstep of citizens. Learning from the good experiences of time-bound delivery of citizen-centric services (Kumar et al., 2020; Pareek and Sole, 2020; Singh, 2023), it is suggested to extend this model of governance to cover the time-bound delivery of services relating to industry and development projects, including physical and digital infrastructure. The time-bound clearance of industrial and development projects, including infrastructural projects, would help Punjab attract investment both from domestic and foreign sources, which is urgently required to boost the tempo of development in the state. Finally, the delivery of citizen-centric and development-centric services within stipulated time would certainly help to improve the quality of governance, which in turn would stimulate economic development in the State.

IV

Concluding Observations

Punjab experienced the highest economic growth among the Indian states from the mid-1960s to the early 1990s. Punjab also enjoyed first position on account of per capita income. The phenomenal development of the agricultural sector ushered in by the Green Revolution played a strategic role in the growth story of Punjab. Punjab, being an agrarian state, however, could not reap the benefits of economic reforms as their focus is mainly on non-agricultural sectors. The slow growth of the Punjab economy, as compared to other states, started since the economic reforms, and the trend is continuing. Factors other than economic reforms causing the slowdown of the economy include the lopsided policy priorities emphasising only one sector, low industrial base, weak linkages between agriculture and industry, bypassing of the Third and Fourth Industrial Revolutions, low investment, and lack of judicious management of government finances.

For rejuvenating the Punjab economy, policy recommendations focusing on achieving faster growth, promoting industrialisation with a view to strengthening linkages between agriculture and industry, developing high-tech tertiary sector, diversifying the rural economy, attracting investment, improving fiscal health, promoting sustainable development, and improving quality of governance should be considered by Punjab government on priority basis, and accordingly, an institutional arrangement should be made to implement these policy recommendations in a time-bound manner.

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