CONCLUDING OBSERVATIONS

As one unravels the history of Punjab, it is evident that the state traditionally served as a bulwark for India, against almost all the military invasions from the Northwestern frontiers of India. The tribulations caused by religious, cultural and ethnic movements that erupted at different period of times have had their repercussions on this region. Owing to its precarious geographical location, this region has had to face the instabilities caused by the marauders coming from the West, be they Greeks, Persians, Turks, Mughals or Pathans. Post-colonial destiny of the region did not change in this regard. Even within the Indian Union, the regional state has had to undergo through an unstable period for the determination of its boundaries, as well as due to its contiguity to the international boundary line.

A study of this period of sixty years encompasses the partition of the state, a further vivisection in reorganization, wars and militancy. Post-partition recuperation, which could have immensely fructified the infrastructural input, saw instead the state facing political instability and the border disturbances. Territorial reorganization took away a major chunk of the industrial gains that had been achieved after decolonisation. The dividends of the Green Revolution never culminated in a spectacular industrial revolution. As discussed earlier the eruption of militancy was one major factor. Thus the agriculturally developed economy of Punjab has coexisted with relative backwardness of its industrial sector. The relative backwardness is in double sense i.e. in comparison to its industrial sector with its own agricultural sector and second, in comparison with the level of industrial development in some other states. Over the years Punjab has slipped in comparison to the state like Gujarat and Maharashtra in terms of registering economic growth.

As is evident from our discussion in the preceding chapters both the colonial state and the post-colonial state in India followed economic policies that have
to a large extent have shaped the present structure of Punjab economy with its strengths and weaknesses, namely a highly developed agrarian economy and a relatively under-developed industrial sector. Development of canal colonies\(^1\) during the British colonial rule and the introduction of green revolution strategy by the post-colonial Indian state have been the two watermarks of the respective economic policies followed in Punjab. The impact of the historical torrent of partition was major scar, which took years to heal, the entire economy was shattered and industrial production came to a halt. Owing to the efforts at reconstruction and rehabilitation begun by the government, some manufacturing started by 1950. However, in the early five year Plans, a high priority was given to investment in basic infrastructure and agriculture to cope with the food deficit. Punjab was able to register impressive success fairly early due to the fact that the Sikh landed peasantry, which had acquired the skills of undertaking modern irrigated agriculture, was there to play the role of key agent of agrarian-oriented development pattern initiated in the post-partition period.\(^2\) No doubt, as pointed out in the introductory chapter, a relatively better irrigated Punjab seemed to be the most natural and suitable choice for the introduction of the green revolution strategy.

An increased level of agricultural output in the 1950s created a demand for the agro-processing, agro-input and machine goods and was supplemented by an increased demand from the rest of India for such products as machine goods, hosiery knitwear, textiles and sporting goods. Some industrial development had

\(^{1}\) Imran Ali in his seminal work on the subject has argued that the development of canal colonies were primarily aimed at the realization of three objectives of the colonial rulers, namely, maximization of revenue extraction, military recruitment and political entrenchment. In his own words: “From 1885 on, the economy of Punjab began to be reshaped by the unprecedented extension in agricultural production brought about by canal colonization”. Reflecting upon this colonial-empire dictated process of development of canal irrigation in western Punjab accompanied by large-scale process of migration of mainly Sikh peasantry from central Punjab, Ali has referred to the fact that while Punjab ‘experienced economic growth’ as a result of the colonial policy but “yet remained backward, or even... acquired through the very process of growth further structural resistance to change... that continued backwardness have entrenched because of, rather than in spite of, economic change”. Ali, Imran, 1989, The Punjab under Imperialism 1885-1947, Oxford University Press, Delhi, p. 5.

begun, particularly in the small-scale sector, by the 1960s and agricultural implements, bicycles and foundry products were being produced. A few towns that emerged as industrial centres – Ludhiana, Amritsar and Jullundur, did so because they were on the Grand Trunk Road to Delhi. Whatever industrial activity had begun was disrupted temporarily by the Indo-Pakistan war of 1965, particularly, in the border towns like Amritsar. The next major historical occurrence on Punjab’s soil was the usage of the Borlaug seed, which propelled Punjab to unprecedented agricultural prosperity. This triggered some manufacturing activity particularly, in agricultural implements and consumer product as the buying capacity of the people accelerated with increased agricultural inflows. While Punjab was in the throes of the agricultural boom, it was bifurcated in 1966 stripping it of some important industrial clusters.

The gains of the investment of capital and technology were reflected in the rapid agricultural growth, accompanied by an even faster growth in the secondary and tertiary sectors of Punjab’s economy. Consequently, during 1967-68, the income from manufacturing sector grew from 9.04 per cent per year compared to 4.5 per cent in agriculture and 5.2 per cent for manufacturing in India as a whole. The net per capita income originating in manufacturing rose from a ranking of sixth among the major states in 1960/61 to third in 1989/90.

The consequences of the green revolution strategy for Punjab’ economic development in an overarching sense have, however, not very different from those of the canal colony’s strategy as the state is marked by structural imbalance in the economy that is the presence of developed agrarian sector coexisting with a not so developed non-agrarian sector. Significantly in both situations what was discernable was a marked degree of absence of autonomy for Punjab to chart out its own economic priorities and strategy of development in tenor with its own resources endowments and its own stage of economic transition. The distortion that crept in Punjab economy due to the adoption of
these agrarian models of development was/ is the ruralization of Punjab economy, society and politics. As Chadha argues: ‘in the post-partition period, in Indian Punjab, there was a steady shift of power from the urban bourgeoisie to the rural elite... the development of agriculture has been the first priority with each successive government in the state.’ He further argues that ‘it is perhaps ironic that the investible surpluses of rural Punjab have been used to the advantage of agriculture and allied activities only; a modern industrial culture has never emerged directly out of rural enterprise.' It explains as to why unlike the states like Maharashtra, Punjab economy has remained dependent upon its agrarian sector and has not made much headway in achieving the normal process of economic transition from the agrarian sector to the non-agrarian sectors.

The above draw our attention to the repetition of a historical error. As like the British colonial government, which wanted Punjab to be primarily agriculturally developed, the central government in free India, too, propped Punjab as the ‘bread basket’ or the ‘granary of India’. The irony of the situation, was that political and other compulsions conditioned the planning process in such a way, that there was a focus on agriculture in the state, as a national priority, which led to the neglect of other areas of infrastructure conducive for industrial development. No doubt, Punjab contributed to the realization of the goal of achieving self-reliance through food self-sufficiency and thus avoiding the humiliation of accepting the conditions of US food aid.4

It also did not help the cause of the development of non-agriculture sector that the generation of capital surpluses in the state in the aftermath of the success of green revolution had been accompanied with political instability. In 1966, a reorganized and truncated Punjab became the only area, where a majority Sikh

---

population resided and the established political fulcrum lost its balance. The local state party, i.e. the Akali Dal joined hands with the Jan Sangh and fought on a common platform to the Congress Party. Besides anti-Congressism, Akali Dal and the Bharatiya Jan Sangh also had another commonality in the sense that they both represented the newly rich social segments in the state, viz. the Jat landed peasantry and the Hindu trading and business classes in the urban area. However, in the process they became the targets of their political configuration. The seventies saw many political tribulations at the level of Government formation due to unsettled political coalition. In the post-emergency period, many factors arose which muddled the political scene of the state. Emergency had enveloped the social tensions arising from the Green Revolution, and some communal tension was brewing in the otherwise, calm social fabric of the State, certain inimical international forces also fished in troubled waters. So unfortunately Punjab could not witness a quick capital formation, which should normally follow a successful Green Revolution.

The Green Revolution led to a rapid agricultural growth, which created surpluses, flowing from the agricultural sphere into the hands of capitalist farmers and rich peasants. The rural rich felt the need for fresh avenues of investment but generally they were conditioned to siphon their surpluses into agricultural amenities or at the most into small and medium industry. The lopsided character of economic development in general and industrial development, in particular, inhibited opportunities for investment in large-scale industry.

Social scientists, activists and advocacy groups have pointed out several structural and social factors responsible for the present agrarian crises, which are resulting in farmer’s suicide in relatively agriculturally developed states of India. The consensus emerged on factors responsible for the present agrarian distress are: the changed pattern of landholdings; depletion of the forest areas; heightened cropping intensity; changed cropping pattern due to a shift towards
Cash crops; liberalization policies which prematurely pushed Indian agriculture into the global markets without a level playing field; heavy dependence on high cost inputs; growing costs of cultivation; volatility of crop output; market vagaries; lack of remunerative prices, neglect of agriculture by the government, decline in public investment; break up of joint families; individualization of agricultural operations, so on and so forth.

Punjab has entered the new millennium with problems in the agriculture sector. During the mid-nineteen-sixties, the green revolution transformed the state’s agriculture and contributed significantly in making India self-reliant in food. The increase in production and productivity of wheat and rice in the state has been unprecedented in the history of agriculture in India. These achievements presented a rosy picture of agriculture in Punjab until recently, as the achievements of the state in agriculture have run out of steam. Growth rates in agricultural production and productivity are stagnating and profitability in farming progressively getting reduced. Sustainability in agricultural production and the natural resource base are under threat, as warnings have been sounded on over-exploitation of land and water resources, and degradation of the environment and ecology. The technology base, which led to the green revolution, is not expanding any more. Alternative growth paths need to be explored to expand the growth potential of the state. Punjab is endowed with abundant resources and an enthusiastic farming community, which has resulted in increase in grain-production from 73 lakh tonne in 1970-71 to 253 lakh tonne in 1999-2000. The state contributed in 1999-2000, around 50 per cent to the Central Pool Stock of wheat and rice. The fast-track adoption of production-augmenting technologies has led to several growth-related problems on the economic, social and environmental fronts in Punjab agriculture, so much so that the sustainability of wheat-paddy rotation is being doubted and debated. Today, Punjab is at the crossroads, as the existing production pattern and marketing systems are out of tune with the immediate and long-term supply and demand situation in both national and international
markets. A package of dynamic, pro-active and responsive policies and action programmes are required to revive Punjab agriculture, so as to meet the oncoming pressures of free trade, liberalization and globalisation.

It has been very much clear from this study that Punjab may not be able to add much to its agricultural production since it is already near the saturation point so far as the exploitation of the new areas are concerned. Besides, water is going to become the most limiting resource in the further intensification of agriculture. The decline of the nutrient content in the soil has been another major factor. We are of the opinion that unless the state makes rational use of its irrigation resources it would be difficult to maintain even the present type of cropping pattern in the long run. Punjab agriculture is today at a crossroad. The sector continues to be very important in the state’s economy, accounting for about 40% of the state domestic product and providing employment to an equal proportion of the total labour force. However, the input intensive technologies of the green revolution are no longer giving the same marginal returns as before. The status quo is an increasingly unsustainable option, and there is growing realization among GOP policy makers that urgent action is needed to encourage agricultural diversification. However, existing input subsidies for power, water and fertilizer, and price support policies distort the incentive structure for diversification and sustainable use of natural resources, and their removal, as everywhere, is fraught with complex political economy considerations. Agricultural research and extension, marketing arrangements and information systems have been slow to respond to new demands for a diversified agriculture. On the plus side, Punjab has a history of successful agricultural entrepreneurship; reasonably literate farmers with average farm sizes more than twice the India average; widespread mechanization and rural connectivity, all of which are factors that with a facilitating policy environment can help achieve a second agricultural transformation.
After leading Indian agriculture in the 1970s and 1980s, the decade of the 1990s was a difficult one for Punjab agriculture. Productivity of the dominant rice-wheat cropping system slowed – with the rice part of the system in particular disarray due to stagnant productivity and adverse environmental impacts. Revamping growth in an environmentally and fiscally sustainable manner is the main challenge confronting the state today. This study has identified a number of priorities for moving ahead. These include correction of administratively determined support prices for rice and wheat, introduction of metering for agricultural power, and reduction of input subsidies to better align prices of inputs with their scarcity values and also to release public resources for more productive uses. Without these reforms, of which the important one of correction of support prices is in the GOI domain, it will be difficult for public services in research, extension, irrigation, and marketing to substantively shift their focus away from the rice-wheat system, and without this shift in focus it is unlikely that the scale of diversification being sought by the state will materialize. On the institutional side, the state needs to encourage greater public-private partnerships in agricultural research and extension, and private participation in modernization of agricultural markets, while local level institutional arrangements involving beneficiary groups need to be actively promoted for operation and maintenance of existing public infrastructure and delivery of public services.

Given political realities, the reform process will need to be accelerated by a program of public awareness, education and informed debate. Wide stakeholder participation, particularly from amongst the farming community, is necessary to realize reforms that may run counter to established interests in the status quo. There is a mismatch in the state between the high level of technical accomplishment in agriculture and an underdeveloped debate on policy issues facing the sector. While the State Government is aware of the critical policy issues discussed in this study, it is constrained by prevailing public opinion. Political parties in Punjab should itself work to raise the public awareness,
being as frank as possible about the problem, and cautious about claims of what can be achieved through measures such as contract farming in the absence of more fundamental reforms. With the right leadership and commitment there is no reason to believe that Punjab agriculture cannot regain its past glory. Government of Punjab, meanwhile, is caught in a paradoxical situation. On one hand it wants to promote diversification because of environmental considerations, while on the other hand political considerations force it to lobby hard with Government of India each year for ever higher MSPs for rice and wheat. It would appear that unless GOI and GOP can speedily reach a mutually acceptable agreement to reign in MSPs and government procurement, the situation might worsen before it gets better. Since Punjab will in the long run gain most from the reforms, both in enhancing growth prospects and sustainable use of natural resources, it would be in the interest of the state to lead the national effort to reform MSP.

Development perspective

While enunciating a development perspective for Punjab, an essential prerequisite is to spell out a vision for the state—the kind of economy, society, polity, ecology and ideology envisaged for it, over a given period of time. This style of dealing with the issue is strikingly different from the usual style wherein the future agenda is set in the light of the evolving scene, particularly with reference to problems that have emerged on the way. The intention is to define and work out a feasible dream for the state and thus goes beyond the conventional diagnostic and curative approach.

In its bare essentials, the state has to be not only efficient and progressive economically, just and harmonious socially, democratic and participatory politically, friendly and prudent ecologically, aesthetic and functional spatially, but also civil and sustainable systemically. In this light, one can envision Punjab eventually as a region which is sub-urban, displaying a continuum of
rural and urban, agriculture and non-agriculture, with a hierarchy of settlements interlinked by a free-flowing transport network; thereby serving as a stage for what is envisioned. Herein, symbolically, the role of a development architect, social scientist and a professional practitioner gets entwined. Things would have been easy if Punjab were a clean slate to work on. Certainly it is not. This poses a real challenge. The evolved scene has to be redesigned and reconstructed rather than being built anew.

Some salient features of Punjab may be recapitulated. It enjoys the highest per capita income in the country (Rs. 23,043 against the national average of Rs. 15,562 in 1999-2000), and is highlighted as a model of agricultural development. Here poverty is not such a big issue; achieving a higher level of economic well being or becoming more affluent is!

The phenomenon of Punjab diaspora all over the affluent world amply shows it that people can move to a greener pasture anywhere in the world if the opportunities at home are not attractive enough. Such was the stimulus which motivated many a natives of Punjab to migrate not only to other parts of India, as diverse as newly reclaimed agricultural lands, lucrative urban places or remote forested areas, but also to emigrate to several foreign countries including, the United Kingdom, Canada, United States, Australia and Middle East, among others. This exposed them to the ethos of the developed world. No wonder, the popular development perspective seeks transformation of the state in the mould of a western economy with the much needed adaptation. It has to fabricate its own model of development, consistent with ecological conditions, cultural ethos and sustainability parameters. Above all, any development perspective envisaged for the state has to be in the spirit of its interconnectivity with other parts of the country, particularly the neighbouring states.

One peculiar feature of the development process in Punjab may be underlined: As soon as a new growth activity is initiated, it picks up momentum, and
reaches a plateau rather too soon. The green revolution is one such case. It made a beginning in 1966; by 1985, it had reached a saturation level and has been seeking a new direction, which is more remunerative than the wheat-rice rotation regime. Not much success has been met on this count. Water depletion in the mechanized (read tube well) irrigated lands and water logging in the canal irrigated ones have emerged as serious problems. Sustainability of the development process and providing new channels for its flow are now the crux of the matter. This cannot be ignored as a parameter of the development perspective.

A statement on development perspective for the state will not be complete if we do not take care of the globalise psyche of its people. Punjab is an anomaly to the students of migration studies. Though well placed economically, it has been a net out migration state for the last hundred years or more. Though not a coastal state, it has recorded large-scale emigration too. Punjab is an extrovert entity, actively interacting with areas all over the world at large. This global dimension of the state has to find a place in any formulation of a development perspective for it.

Finally, as rightly perceived, Punjab is eulogized for the progressive outlook, great dynamism, and exceptional enterprise of its people. It also has advantage of having a fairly laid out infrastructure base. Virtually any problem it faces, or any situation, which constrains its development, can largely be attributed to a management failure. People believe that Punjab can be a model state simply if its political and administrative train is on the right track. Thereby, ‘good governance’ is underlined as the most critical aspect of its development scene. It is deemed basic to the actualisation of all other development perspectives.

For Punjab, future agricultural strategy should reflect on how the sector can best respond to international market demand for improved quality of produce. Future export market access may be hindered by rising sanitary and photo-
sanitary (SPS) standards and increasing technical requirements (labelling, identity preservation, etc.) in importing countries. In domestic upper-income urban markets too, food safety and standards are likely to be increasingly rewarded. To meet these challenges adequate arrangements need to be established in Punjab as soon as possible. An ongoing Bank study is examining WTO issues in relation to Indian agriculture in depth and hence these aspects are only flagged here. On the basis of a recent paper though, it appears that these fears may largely be misplaced. There is a wide gap between bound and applied import tariffs in India, and also between applied tariffs and rates actually needed to protect domestic production. Indian agriculture is reasonably competitive on an import substitution basis and producer support estimates calculated under the importable hypothesis (i.e., India as a net importer of major commodities) suggest the sector was ‘net taxed’ in the 1990s. Under the exportable hypothesis, due to the extremely low international prices, the sector was ‘net subsidized’ in 2000. The subsequent upturn in international prices may well have reversed this trend again.

Globalisation of the world agriculture brings about new challenge to beleaguered Punjab economy. The key question is can Punjab penetrate the world markets to its advantage? The world of agriculture is changing quickly with new rules of the game that were first put in place under the Dunkel proposal and now being governed under the auspices of the WTO regime. Market access, domestic support, and export subsidies have become three major pillars of the Agreement on Agriculture. Furthermore, sanitary and phyto-sanitary issues have come to play a major role in the Agreement on Agriculture. TRIPS have also played a major role in protecting intellectual property rights to the advantage of the West. There has been a growing presence of the multinational corporations in developing countries, particularly

---

in trading agricultural commodities. Increasing concentration and growing scale in food business in terms of processing, distribution, and retailing has been prevalent in developing countries. In world trade negotiations India has achieved reasonable tariff cover and has a larger room to play. However, sensitive items such as milk powder, maize, and rice needs to be renegotiated. Working against Punjab agriculture, however, is also the agricultural sector in the developed country, which remains highly subsidised. There is an argument in India among the policymakers that since developed countries provide subsidies to the farmers it justifies developing country farmers such as Indian farmers also to have their own share of subsidies from their governments. But the argument does not recognize the non-affordability of such high subsidies given that the state finances in India are already in bad shape. The major question is then how do we compete in this distorted world. One possible answer lies in more engagement with the WTO negotiations and building effective and meaningful alliances with other negotiating partners such as Cairns Group, and China. It is also of significance that the government both federal and state team up with trade experts around the globe to tackle the major distortions imposed by the developed country agriculture.

Concerns are often voiced about the probable impact of the WTO and other international trade related changes on India’s (and Punjab’s) agriculture. Two sets of concerns, in particular, are notable:

- The WTO requirements on ‘Aggregate Measure of Support’ would lead to elimination of price and subsidy support to Indian agriculture.
- Trade liberalization and increased integration with the global economy would lead to a deluge of cheap (often subsidized) imports, which would wipe out the production base of a large section of domestic agriculture.

---

The new economic reforms and the structural adjustment program initiated have raised certain issues and there are many divergent views about its implications especially for the agricultural and rural development.

It follows that the advent of WTO has added another dimension to overall economy of the country in general and agricultural and rural development in particular. The globalisation of Indian economy is expected to increase more opportunities for export of the agricultural products at least it appeared that way in the beginning. It was expected that the agricultural scenario might change from growing subsistence low value crops to high value crops for export. This might prove to improve the economic conditions of the farming community, as they will be able to get better prices for their produce in the international market. In India, however, more than 80 percent of the farmers cultivate marginal and small land-holdings of less than two hectares and find it difficult to meet the cost of farm inputs, especially purchased inputs. It is most likely that the benefits of globalisation go to large farmers and will further accentuate the existing disparity in the rural sector. Statutory bodies and research studies suggest that the Agriculture in India is passing through a difficult time. The National Agricultural Policy of the ministry of agriculture, government of India (2000), mentioned that the “agriculture has become a relatively unrewarding profession due to a generally unfavourable price regime and low value addition, causing abandoning of farming and increasing migration from rural areas. The situation is likely to be exacerbated further in the wake of integration of agricultural trade in the global system, unless immediate corrective measures are taken”.

The emerging challenge of maintaining a balance between the human numbers and the capacity to produced food is increasing in our country day by day. The need for maintaining a food security system with imported food has arisen after

---

7 Government of India, 2000, National Agricultural Policy, Department of Agriculture and Co-operation, New Delhi.
nearly 30 years. Food security is the first among the hierarchical needs of human society. The ongoing global discourse on human rights also puts it as the most fundamental one. Another important issue is relating to the acquisition of farmland for non-farm purposes by the state. The state governments are forcibly taking over land for special economic zones (SEZs). The state in the absence of a fair and transparent policy on land acquisition buys land at cheap rates, carries out some development work and sells plots to citizens at exorbitant profits. In the process farmers not only lose their only source of livelihood but also helplessly watch the government agency and private firms collaborate and make huge profits. It seems that the role of the state is no better than the commission agent, it no more ensure that the disposed farmer’s interests are protected and they are given a stake in development projects undertaken on their land.

What can Policymakers do to revive Punjab’s Agricultural Economy?

Under these circumstances what can policymakers do in order to make headway in the agricultural sector in Punjab? First, there is a need to examine closely the emerging global trends and explore the possible opportunities. Second, Punjab needs to take advantage of the increased demand for the flowers, fruits, animal products, and fishery in today’s world. The state has the potential of increasing its share in our export of these products. Third, the composition of trade is changing faster than that of production and this provides opportunities for spreading and diversifying Punjab’s agricultural base. Finally, the policymakers need to recognize the growing importance of vertical coordination of agricultural markets, quality assurance, and the role of international market information.

For the well being of Punjab agriculture, it is important that the policymakers reduce their dependency on the Food Corporation of India to sell their food grains and look for the alternative agricultural commodities that can be sold in
the growing markets in and outside of India. There needs to be a shift from supply driven agriculture to demand driven agriculture and diversify the crop base to include poultry, dairy, fruits and vegetables, basmati rice, durum wheat, pulses, oil, and oilseeds. It is important to identify niche markets that can increase the income of the farmers. Focusing on high value and value addition of agricultural commodities is important given the high transport cost of shifting agricultural commodities from Punjab to the nearest port. Fostering private initiative in production, marketing, and distribution is essential to increase the efficiency of the food distribution system. Developing institutions to meet these new needs is also fundamental for making progress in the agricultural sector.

In Punjab there is a need to shift to a new production profile. Punjab farmers need to move away from common rice and wheat varieties and focus on high value crops such as basmati rice and durum wheat. Diversifying their crop base to crops like soybean and maize and increasing the production of livestock and poultry will help in reducing the pressure of land from food grain production. It is also important to integrate high yielding short duration legumes into the existing rice-wheat cropping system in order to have positive environmental benefits. Fruits and vegetables such as okra, eggplant, and potatoes can be produced for export in domestic markets. Developing dairy industries to produce milk and milk products for the urban centres of north India is another way of diversifying the crop base in Punjab. In addition, where water availability is not a problem, development of inland fisheries is also a possibility. More and more quality seeds for production in agriculture are becoming a serious need. Punjab farmers with their ability to maintain high quality production systems can become involved in producing seeds for the rest of the country. In summary, Punjab’s non-traditional export needs to go up in line with the trend that is happening in the rest of India. Value addition is an essential part of transforming Punjab agriculture. Hubs of processed wheat products around modernized private industries can be developed to produce
dalia, atta, maida, suji, biscuits, pasta in place of whole wheat. Transporting processed wheat products is much more cost effective than transporting whole grains. The use of soyabean and maize for the livestock industry to produce high value livestock products should be a priority. Furthermore, producing Soya products such as tofu, Soya chops, and Soya milk will also add value to Soya production. Processing plants for processing vegetables and fruits and for processing dairy and poultry are also economically efficient ways of diversifying the agricultural base. Expanding crop diversification and increasing agro-industrialization requires the building of a golden triangle with farmer, agro-industry, and the banker as the corners of the triangle.

What can the relatively autonomous policymakers of Punjab do as the role of the centre in economic decision-making has considerably declined in the present era of globalisation? The immediate need is to identify a legislative mechanism to promote contract farming and to ensure the enforceability of such contracts in producing high value crops. Freeing up of land lease markets and computerization of land records will help in easing land transactions among farmers. Ensuring that land tenancy laws are not a constraint to agro-industry development is also important. Market reforms related to rationalization of input subsidies and removal of all restrictions in terms of stocking limits, movements, and levies in transporting food grains should be implemented. Institutional innovations such as warehouse receipt system, futures trading, and commodity exchanges should be established to tap international markets. Crop insurance programs that will help farmers to protect themselves from the volatility of international markets as well as from vagaries of monsoon should be implemented and the success of the programs such as on Kisan credit cards should be expanded. Developing institutions for certifying quality characteristics of agricultural produces will go a long way in enabling farmers to reach out to international markets. Institutional reforms, particularly in input supplying agencies and in irrigation systems should be undertaken. Finally, encouraging farmers’ associations and cooperatives to
build collective bargaining power and to enter into contracts with agro-processors and supermarkets is essential for adding value to the products produced by farmers.

It is obvious that for the advancement of the Punjab agriculture, not only do supply side factors like stagnant yields and overexploited groundwater resources call for diversification away from rice, but changing demand patterns also suggest that non-cereal products are most likely to present the best growth opportunities in the future. The key to Punjab’s future agricultural success will depend on how actively the state is able to respond to these changing market demands. Precision diversification based on agro-ecological zones of Punjab is now being recommended. In precise terms, rice is to be shifted from tracts ‘where sandy and loamy soils predominate’. Production of Basmati rice, which is less water-intensive, should be encouraged through assured support price. At least 20 per cent of the area under wheat and rice should be shifted to some other crops, such as maize, oilseeds, sugarcane and fruits/vegetables or other farm enterprises. The corporate sector, in linkage with farmers’ associations, should be asked not only to improve quality of agricultural products, but also promote agro-processing industry.

In sum, it is important that the Punjab policymakers bring the experts together, both domestic and international to reflect on the future development strategies of Punjab. Getting the bankers, entrepreneurs, and farmer leaders on the same table and meeting their needs in order to make progress will be essential in the near future. Most importantly there must be active involvement of the farmers’ bodies in the process. Last and not the least, getting the legislation to clean up for all the controls that are pulling down the agricultural economy will be important. Attempt has also to be made to make the overall administration clean, responsive and transparent. The rest will follow.

---

The social implications of the Green Revolution on groundwater are just as widespread as its environmental consequences. As more and more water is pumped out of the ground, the remaining water is left in fewer and fewer hands. Groundwater is just one issue of many crucial ones surrounding the Green Revolution, yet with all the findings and observations done on it in the last half century, many people still see it as the answer to world hunger.

In an otherwise progressive state, governance remains an issue of a major concern. As discussed in the first chapter in the period immediately after independence, Punjab came to be known for its development-oriented administration. The decade of 1980s, however, transformed the administration into a law and order oriented one (reminiscent of the colonial rule). Parties were losing their political relevance as the hardliners who were seeking secession took over the centre stage along with the state’s coercive agencies. In the early nineties when militancy came to an end, the parties in order to valorise political processes in the state and also to become relevant and win legitimacy of the masses concentrated on the peace agenda neglecting the economic issues. Unfortunately there has been a tendency to raise the contentious ethnic issues whenever a party has found it to its advantage. It also does not help that Punjab is a state where religion, caste, kinship, region, language and leadership factors all play role in its politics making it conflictual in nature. It has only been since 1997 that the mainstream parties have started speaking the language of development. However the populist policies that remain the bane of the electoral politics of the state have continued to bring great disadvantage to its economy. The politics of vendetta and the personality clashes across the parties as well as within the party has also not helped the beleaguered economy of the ruling party devotes its time in fixing the opposition party leaders rather than in providing good governance.
The lopsided nature of the polity of Punjab has been the other factor that does not help the political parties in addressing the substantive economic issues despite bringing them in their election manifestos with regularity. Let us explain it at some length. In Punjab the scheduled castes constitute 31 per cent of the population as per the 2001 census that is the highest in the country. Besides filling up 29 reserved seats in the assembly, the dalits figure nowhere in the politics of the state irrespective of the parties in power. After making an impressive start with 9 seats in 1992 assembly elections, Bahujan Samaj Party (ESP), a party of the marginal sections, has managed only one seat in the subsequent state elections that too way back in the 1997 elections. Significantly the politics of Punjab also remains lop-sided in terms of gender representation also as in terms of numbers the women legislators have never reached into two digits. Assembly elections in 2007 were no exception as only 54 women candidates were in the fray of whom 7 could win. In caste terms, the politics in post-green revolution Punjab has for long been dominated by the Jat Sikhs constituting the ‘rich farmers’ who come across as a dominant caste in the sense of the term Srinivas used it. Being 20 per cent of the population they are numerically strong, own the 60 per cent of land and are middle peasant caste having presence in all the three regions of the state like Kammas and Reddis in Andhra.9 Within the caste also, it is the kinship/family ties that determine the leadership role in the parties whether it is the Congress or the SAD. Such a closed nature of electoral politics in terms of leadership role ‘complements’ the exclusionary nature of market economy that is being prescribed under the shadow of globalization. It is hardly surprising then that one finds a ‘marked dissonance between political economy and electoral process in Punjab, with the former hardly influencing the latter’.10


It is hardly surprising then that the successive governments have not only been lethargic but worse also acquired dubious reputation. The involvement of the leading politicians and their favourite bureaucrats in massive corruption (read scams) gets reflected in the poor condition of the state finances. Despite high per capita income, Punjab has been plagued with a severe fiscal imbalance for a decade and a half. The revenue and fiscal deficits combined with a debt of Rs 53000 crore is much higher than the all-state average. Lack of fiscal discipline has crippled the capacity of the government. There has not been much success in intervening and rectifying the difficulties and imbalances in the economy. Thus, for ensuring a smooth transition, the state requires improvement in finances, which cannot be achieved without improving administrative and political governance. The step that needs to be taken by the government, without losing time and which is going to contribute substantially to development, is the diversification of agriculture so as to make it sustainable in the near future. This is of paramount importance to Punjab. As the preceding discussion makes it amply clear that Punjab shall continue to remain an agrarian state, the development of its small-scale industries would be the backbone for its future progress.\footnote{Planning Commission, *Punjab Development Report*, 2003, Government of India, p. 10.}

Agricultural diversification needs to be encouraged to reverse the trends. The state government should encourage industrialization and investment in agro-processing industries as there lays the strength of the state in comparison to other states in the present competitive liberalized economy conducive to private investment. This study defines the present problem as the result of all the three participating actors in state’s agriculture; farmers, academic institutions concerned with research in the agricultural field and the government. If the coordination between these three is established, it can go a long way in turning Punjab’s uncertain future into a promising future. These involve increased reorganisation of resource management practices, analysis of the value of such...
practices under current and future conditions, assessment of the ways to adopt sustainable practices and modern agricultural planning approaches. Empowering farmers, groups and communities to take greater responsibility for the long-term management of their resources and securing a better and promising future. The issues taken up in the study serves to direct attention to a number of important causes leading to stagnation in agriculture and provide possibilities for sustainable agriculture management in this northern Indian state of Punjab. This study has argued that now as Punjab has for long achieved political stability and peace and now policy makers should look for the positive potential of the agrarian sector that can be harnessed for the sustainable growth. For this to happen, proper policies in the economic, social and ecological sectors should be put in place.

*****