



USAID FIRMS PROJECT

District Economic Development Strategy - Bahawalpur

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Abstract

This report presents the district economic development strategy for Bahawalpur. This strategy is a part of the broader USAID funded project for private sector development in Pakistan. This report takes into account the challenges and opportunities for district Bahawalpur and presents a broad-based economic development manifesto. This strategy also identifies a number of potential projects, which can be undertaken by the government, citizen sector or donors, to contribute towards the long-term economic growth of the district.

Acronyms

AHAN	Aik Hunar Aik Nagar
BCCI	Bahawalpur Chamber of Commerce and Industry
BEE	Business Enabling Environment
CDA	Cholistan Development Authority
DCO	District Coordination Officer
DEDS	District Economic Development Strategy
DG	District Government
DISCOs	Distribution Companies
EDB	Engineering Development Board
EDO	Executive District Officer
ERU	Economic Reforms Unit
GDP	Gross Domestic Product
HCR	Headcount Ratio
MEPCO	Multan Electric Power Company
MTDF	Medium Term Development Framework
MW	Megawatt
NEPRA	National Electric Power Regulatory Authority
OSR	Own Source Revenue
PFC	Provincial Finance Commission
PGR	Poverty Gap Ratio
PIDA	Punjab Irrigation and Drainage Authority
PKR	Pakistani Rupee
PPP	Public-Private Partnership
PSIC	Punjab Small Industries Corporation
PVTC	Punjab Vocational Training Council
SECP	Securities & Exchange Commission of Pakistan
SME	Small and Medium Enterprise
SMEDA	Small and Medium Enterprises Development Authority
SWM	Waste Management
TDAP	Trade Development Authority of Pakistan
TEVTA	Technical and Vocational Training Authority
TMA	Tehsil/Town Municipal Administration

TO /Town Officer
TUSDEC Technology Upgradation and Skills Development Company
USAID United States Agency for International Development
WAPDA Water and Power Development Authority
WHO World Health Organization
WSS Water and Sanitation

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Executive Summary

The district economic development strategy for Bahawalpur presents a private sector-led economic growth agenda for the next 5-7 years. This strategy aims at achieving 5-7% average yearly economic growth for the district; reducing unemployment rate by 1% especially focusing on women and youth; mobilizing around USD 50 million of private investment for key PPP projects; increasing new enterprise creation in target sectors by 15%; enhancing crop productivity of selected crops (wheat, cotton) by 25%; and promoting value addition in selected sectors (meat, milk and dairy products) increasing it by 15-20%. In order to achieve this desired impact, the strategy lays out a number of steps including developing an enabling regulatory regime, facilitating private-led growth in key economic sectors; strengthening infrastructure and allied services through focused private-led investments to ensure consistent economic growth; supporting key areas in agri-business value chain and promote value addition for income enhancement; promoting use of technology and business development services to support key manufacturing/trade/commerce sectors; enhancing productivity in key agri-business and trade/manufacturing/commerce sectors; lowering the cost of financing, inputs and infrastructure to facilitate enterprise growth; building sufficient institutional capacity in key govt. and business organizations to sustainably take on the DEDS implementation; and last but not the least, besides implementing proven techniques, piloting innovative approaches for possible scalability.

The district economic development strategy (DEDS) for district Bahawalpur has been formulated through technical assistance provided by USAID. The district economic development strategies are aimed at providing a multi-stakeholder plan for the promotion of economic activity in Bahawalpur. It is expected that this plan would provide a common foundation to various stakeholders including the district government, provincial government and federal government as well as the multilateral and bilateral donors for identification of developmental priorities of the district and devising tailored solutions to achieve medium-to-long term economic growth. The DEDS takes a regional view of the development within the southern Punjab to identify a future course of action on what could be done to ensure economic development of the district, in terms of income enhancement, employment generation and poverty alleviation, with special focus on women. The idea of regional economic development is not new and globally a number of regions/states/provinces have developed such strategies. Such geographical-region focused strategies provide an assessment of the local economic base, available and potential opportunities bottlenecks to growth and investment. With this localized understanding, the local communities embark on a broad-based development agenda shaped by the local priorities.

Bahawalpur district is characterized by high poverty levels, as depicted by its poverty indicators. The district had an overall headcount ratio (HCR) of 54.58 and an overall poverty gap ratio (PGR) of 17.3. These indicators are higher for rural areas with HCR as high as 71.66, compared to urban HCR, which is around 33.7. Similarly, the rural PGR stands around 23.6. According to some estimates, in Bahawalpur district, approximately 8.13% of the population is extremely poor, 23.6% chronically poor and 21.83% falls in the category of transitory poor. When compared with other districts in Southern Punjab, Bahawalpur is one of the poorest districts, second only to Rajanpur and Muzaffargarh.

While examining various aspects of the district economy, it is clear that Bahawalpur is one of the major economic hubs in the southern Punjab region, with the potential to play a major role in economy of the neighboring districts. Considering the wide agrarian base of the district, it is evident that Bahawalpur can transform into an agricultural hub for South Punjab, providing both inputs as well as access to market to agricultural produce of the nearby areas. Moreover, agri-business opportunities, based on value addition in agricultural products, can complement the

agricultural activities of the region, generate employment and result in sustainable economic growth. Additionally, the district can provide skilled training to the unemployed youth and can then link them up with potential employment opportunities; establish innovative projects for power generation and other areas; act as an investment hub to seek private investment and create unprecedented facilitation protocols for private sector. In summary, the DEDS envisage that not only the district Bahawalpur would generate medium-to-long term economic growth opportunities for its citizens but also would also act as a resource center for the region, while providing a model for the neighboring districts to follow. This indeed can serve as the medium-to-long term vision for the district.

The district economic development strategy has proposed some key recommendations and projects, which support this vision and boost agri-business activity in the district. In the infrastructure sector, due importance has been given to strengthening irrigation infrastructure. Moreover, infrastructure development can be greatly enhanced by focusing on projects that would ensure uninterrupted power supply to agricultural areas and the industries, so that production is not negatively affected by the numerous power outages. In the manufacturing, trade and commerce sector, the potential for cottage industries to evolve out of their present primitive stature into a more formal structure with higher volume of production, an enhanced degree of competitiveness and increased value addition has been discussed. Within the agriculture sector, some key recommendations have been given for strengthening the agri-business sector, such as setting up more storage godowns and building the capacity of the agriculture extension services department. Setting up storage facilities in each tehsil for the major crops of the district will help the government in managing surpluses and deficits in agricultural produce and will thus improve crop management. Transferring these facilities later on to the private sector will provide further avenues for private sector participation in the agriculture sector, easing the government to transfer its resources to other more needed areas.

In order to realize the economic growth vision of the district, a wide range of steps need to be taken in various sectors. Some of these steps haven been mentioned above, but apart from these sector-specific initiatives, there remain some critical cross-cutting issues, which need to be addressed, before the district can successfully embark on its path to realizing its vision. Such cross-cutting issues include enhancing private sector participation, greater resource generation improving efficiency of government, promoting the role of women in the district economy, workforce development and last but not the least integrating poorest of the poor in the mainstream economy. Moreover, in order to achieve this vision and realize the targets set under it, there needs to be firm commitment from key stakeholders including the provincial and district governments, international donors and local business and trade associations.

1. Introduction

1.1 Background

The district economic development strategy (DEDS) for district Bahawalpur has been formulated through technical assistance provided by USAID. It is aimed at ensuring medium-to-long term economic growth in Pakistan, through private sector development. The project is designed to develop an enabling environment to support the development of dynamic, internationally competitive private enterprises in target districts so that sales, investment and employment growth can all be accelerated. This objective is aligned with the previously identified needs through World Bank Doing Business Survey 2010. Formulating broad-based economic development strategies for selected districts of Pakistan is part of USAID's mandate and this report now presents the final district economic development strategy for district Bahawalpur.

1.2 The Project

The objective of the USAID-Project is to improve government service delivery and develop dynamic, internationally competitive firms to accelerate sales, investment, and job growth to undercut the basis of extremism. The DEDS, being part of the project, has been developed by working very closely with private sector and district government. Stakeholders were instrumental in identifying the priority sectors and local constraints. The district economic development strategy will also supplement other future work by USAID, especially formulating the sector strategies at the national level.

The district economic development strategy for Bahawalpur presents a private sector-led economic growth agenda for the next 5-7 years. This strategy aims at achieving 5-7% average yearly economic growth for the district; reducing unemployment rate by 1% especially focusing on women and youth; mobilizing around USD 50 million of private investment for key PPP projects; increasing new enterprise creation in target sectors by 15%; enhancing crop productivity of selected crops (wheat, cotton) by 25%; and promoting value addition in selected sectors (meat, milk and dairy products) increasing it by 15-20%.

1.3 Adopted Methodology

Figure-1 presents a schematic of the methodology. The project implementation has been divided into three distinct phases; for inception, execution and formulation

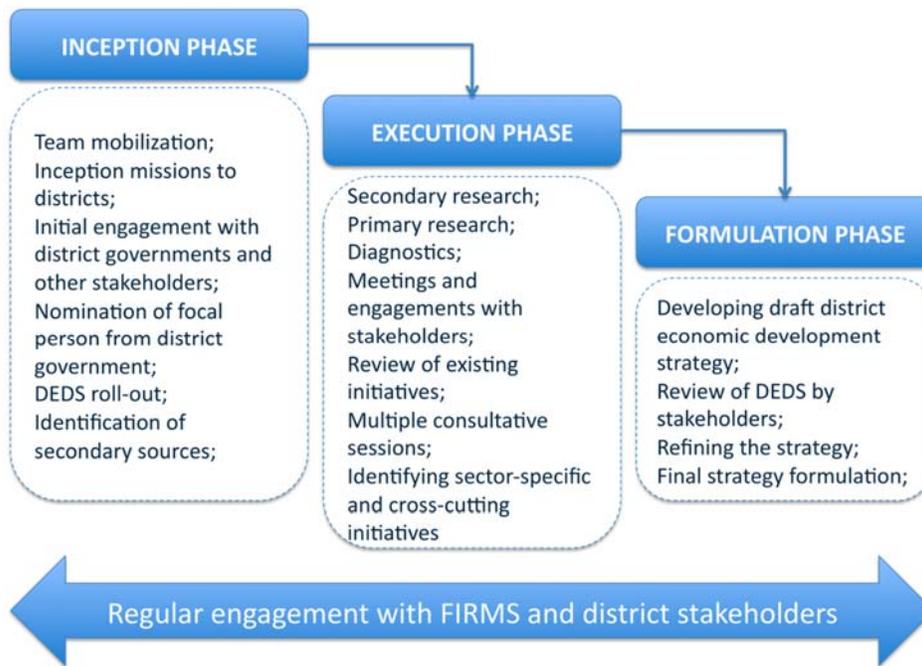


Figure 1 Schematic for Methodology

1.3.1 Inception Phase

During the inception phase, the team was mobilized and various inception missions were sent to the target districts. The team leader engaged with the district government at the highest level, including Commissioner Bahawalpur and District Coordination Officer. The district government ensured its full support and cooperated fully with the team in the subsequent phases as well. The team members held a number of meetings with the district government officials and local stakeholders, including members of chambers of commerce and industry, businessmen, industry associations, etc. The inception phase was culminated with the submission of an inception report. The inception report set the stage for formulating district economic development strategy for Bahawalpur and covered the findings from the team meetings. The inception report also threw light on team's understanding of the assignment, an appreciation of the task, current situation in the target district, outline of the district economic development strategy, a proposed management plan for undertaking the work and some sources for primary and secondary information. The inception report was then approved by the project.

1.3.2 Execution Phase

During the execution phase, besides working closely with district-level stakeholders, extensive secondary and primary research was conducted and diagnostics were run to identify enterprise and sector level growth impediments. The evolved thinking was further refined and validated through a number of sector-specific and cross-sectoral consultative sessions. The execution phase concluded with development of draft reports from sector specialists. These reports/sections were reviewed by the team leader to fill the gaps and integrate them into a cohesive action plan. Some of the activities carried out in the execution phase, include the following:

1.3.2.1 Secondary Research

The team members reviewed all the available research reports, previous work and available data. This secondary review helped in better understanding the local ground realities and identifying gaps. These gaps were then subsequently filled through primary research. The secondary sources include government sources, such as Punjab Economic Research Institute and Punjab Development Statistics, as well as diagnostic reports being done under a number of donor-funded projects.

1.3.2.2 Primary Data Collection

More specifically, during the execution phase, different sector specialists developed a number of tools, instruments and templates for data collection. Two dedicated data collectors worked closely with the rest of the project team for collection of this information. The instruments were pre-tested and then used, after appropriate modifications.

1.3.2.3 Focus Group Discussions

A number of focus group discussions were held to discuss sector-specific issues. These FGDs were conducted by the team leader, infrastructure specialist, agriculture specialist, public finance specialist and the trade and manufacturing specialist. These FGDs were aimed at extensively discussing local problems, possible solutions and the available resources. These FGDs greatly helped in crystallizing the recommendations.

1.3.2.4 Field Visits

Field visits to various parts of the district as well as Cholistan were conducted frequently to assess the situation in ground. The team members visited a number of existing development projects as well as various communities to assess the challenges and the economic situation of the masses.

1.3.2.5 Working with District Government Officials

Some of the team members, especially the Team Leader, Project Manager and the Public Finance Specialist, worked very closely with the district government officials, to identify local priorities, ongoing and planned initiatives and the resource umbrella. Selected government offices were reviewed to assess their present interaction with the public and to identify room for improvement.

1.3.2.6 Consultative Workshops

Two key consultative workshops were held in Bahawalpur. The first one was conducted at the DCO's office to apprise the key district officials about the DEDS and to seek their views on how to undertake this work effectively. The second consultative workshop was conducted mid-term, when different sector specialists presented their interim findings to a number of government and private sector stakeholders and sought their opinion about the proposed pilot initiatives. This session greatly facilitated in refinement and validation of the pilot initiatives.

1.3.3 Formulation Phase

The work done in the execution phase was crystallized into the draft economic development strategy during the formulation phase. The draft was shared with stakeholders through a consultative session and their feedback would be sought. After extensive review the draft is now being shared with USAID and after incorporating the comments, the final version will be developed.

An important development in the past few months was the passage in the Parliament of the 18th Amendment. The Amendment was examined to ascertain if any modification was warranted in the strategy development process and approach. It transpired that the Amendment favored decentralization and transfer of functions from the federal to the provincial governments, but it did not deal with transfer of functions from provincial governments to district governments. Therefore, it had hardly any implication for the district specific recommendations that were emerging in the course of stakeholder engagement. However, there may in future be a transfer of some federally administered development programs to provincial governments, which may lead to transfer of responsibility and resources to provincial governments in the first place and to district governments in the second place. This would require placing greater emphasis on building the local capacity to undertake and manage such transferred projects.

1.3.4 Interaction with Client

Throughout all phases, a close contact was maintained with the project. After the initial approval of the inception report, a bi-monthly progress report was shared to highlight the project progress

throughout its implementation. USAID's representatives were also invited to key events and consultative workshops to keep them informed about the developments.

1.3.5 Embedding Ownership of DE DS

Throughout the project, it was ensured that DE DS should not be seen as a supply-driven initiative and rather should have a strong ownership within various stakeholders, especially government. For this purpose, the following steps were taken:

- The district government officials, right from the top to middle-level officers, were engaged extensively, right from the inception mission to the formulation phase.
- The district government was requested to nominate a focal person for DE DS, to develop an effective working relationship.
- The DE DS took into account the ongoing and planned public sector initiatives and focused on district government's priorities as well.
- The findings of the DE DS team were shared extensively with various government officials and other stakeholders to incorporate their comments.
- The DE DS team kept itself informed of various developmental work going on in the selected districts, within the public, private and citizen sectors' domains.

1.4 Scope of the Project

The district economic development strategies are aimed at providing a multi-stakeholder manifesto for the promotion of economic activity in Bahawalpur. It is expected that this manifesto would provide a common foundation to various stakeholders including the district government, provincial government and federal government as well as the multilateral and bilateral donors for identification of developmental priorities of the district and devising tailored solutions to achieve medium-to-long term economic growth.

The DE DS takes a regional view of the development within the southern Punjab to identify a future course of action on what could be done to ensure economic development of the district, in terms of income enhancement, employment generation and poverty alleviation, with special focus on women. The idea of regional economic development is not new and globally a number of regions/states/provinces have developed such strategies. Such geographical-region focused strategies provide an assessment of the local economic base, available and potential opportunities bottlenecks to growth and investment. With this localized understanding, the local communities embark on a broad-based development agenda shaped by the local priorities.

The DE DS has been formulated based on the following key principles:

- Local comparative advantages can play a great role in promotion of local businesses.
- Businesses need capable human resource, specialized skills and a friendly investment climate.
- All districts have specific set of conditions – both opportunities and bottlenecks – which must be addressed in order to economically develop the district.
- Although the federal and provincial governments have well-defined (and sometimes not that well-defined) economic development plans, such plans must be corresponded by local development plans reflecting ground realities and local priorities.
- With increasing focus on decentralization in the wake of local government system, the need for local economic development becomes all the more important.
- These strategies, when developed for a specific district also have the potential of exploring development synergies between adjacent districts in terms of trade infrastructure development or manufacturing.
- Although the regulatory issues in Pakistan are mostly dealt at the provincial or federal

level, the capacity of local government machinery, the local institutional interface and overall urban governance may play a critical role in manifestation of the overall regulatory regime.

- Crosscutting economic development goals, such as infrastructure development can be best addressed by taking a regional view.

A good district with well-defined development priorities and successful implementation can serve as a model district for Punjab and there may be replication effects in other districts

1.5 Overview of the Strategy

The DEEDS has been formulated after taking into account ongoing projects, planned initiatives and future needs of Bahawalpur and district-specific economic opportunities and bottlenecks. The DEEDS has then attempted to address these bottlenecks, while capitalizing on the opportunities. **Error! Reference source not found.** presents the conceptual framework of DEEDS. While taking cognizance of overall situation of these districts, the focus has been placed on three key economic sectors: infrastructure development; agriculture and agri-business; and manufacturing, trade and commerce. Across these three sectors, various sector-specific and cross-cutting initiatives have been identified, which must be undertaken for up-gradation of the local economy. Within these three sectors, a number of sub-sectors have been covered in consultation with local stakeholders for detailed analysis. This selection has also been informed by earlier diagnostic work carried out by USAID, while keeping in view the following considerations: by: 1) the economic contribution of the sub-sector; 2) the employment generated; 3) the potential for growth; and 4) linkages with the broader USAID mandate. While the DEEDS team was fully cognizant of the linkages between social and economic development, its exclusive focus on latter arises from specific mandate of the assignment.

The next section includes a detailed overview of Bahawalpur, including its population, geography, economy, socio-economic issues, district government, resource and expenditure overview, major development projects, etc. This section also includes a review of the existing district government setup and existing institutional capacity at the district level.

The district profile is followed by the section on sector overview, which has been further subdivided into three sub-sections, one on each selected economic sector. After the sector overview, the fourth section on proposed development agenda forms the crux of DEEDS, re-iterating and summarizing sector-specific recommendations given in the third section, while presenting cross-cutting recommendations on various issues including creating sufficient institutional capacity within government, infrastructure development, urban services, resource mobilization, etc. Several projects have also been identified, which can either be financed by the government or through private sector participation. The international donor agencies can also pick up certain projects for financing.

Within the infrastructure sector, the DEEDS has focused primarily on urban infrastructure, assessing its existing status and future needs. The urban infrastructure includes transport, communications, water supply, solid waste management, power supply, etc. In addition, irrigation and farm-to-market roads have also been covered, which fall under rural infrastructure.

Within the agriculture and agri-business sector, the district economic development strategy has attempted to cover various key crops as well as horticulture (fruits and vegetables). The selected sub-sectors have been reviewed across the value chain, including agri-inputs, extension services, seed and nursery management, agricultural productivity, access to market and value addition.

The manufacturing, trade and commerce sector includes an analysis of three key sub-sectors; cotton ginning, livestock and dairy; and handicrafts, covering the sector specific challenges and problems. However, besides these sector-specific issues, the work also includes a brief overview of the local business environment, government's institutional interface with the private sector, local bottlenecks, etc.

The district economic development strategy, besides setting the medium-to-long term goals for the Bahawalpur, also includes a detailed resource analysis, estimating the resources required for implementing the DEDS. The resource assessment exercise has taken into account the projected public resources, identified the resource gap and presented some resource- mobilization strategies/recommendations. The chapter on resource envelope of the district examines the income and expenditure patterns during the last three years. Data shows that vertical transfers from the provincial government under the Provincial Finance Commission (PFC) award comprise the major income source for the district and the tehsil municipal administrations. The criteria for PFC are briefly examined to underscore the need to increase weightage of factors other than population in the distribution of provincial allocable fund. In order to reduce district's dependence on vertical transfers and to identify new sources of income, the district/tehsil own source revenue (OSR) is examined in detail. The legal and institutional framework under which the district/tehsil collects various taxes, fees and rents is examined and many areas of reform are identified. The business processes for the levy, assessment and collection of these taxes and fees are also examined. A number of proposals are formulated to simplify these processes (including abolishing certain low-yielding fees). It is hoped that these legal and institutional reforms will help the district increase its local resource generation, which can then be used to implement some of the strategic recommendations contained herein.

DEDS lays out a path for Bahawalpur to streamline and crystallize local economic development agenda, align it with provincial and national priorities and devise recommendations keeping in view the local, national and international market conditions. DEDS focuses on enhancing the local economic capacity of the Bahawalpur, improving the investment climate and increasing productivity and competitiveness of local enterprises and labor force, while identifying how new economic opportunities can be created in the local economy. The DEDS present a unique developmental paradigm in a way, that unlike previous developmental efforts, it assesses the local conditions that have been promoting or impeding or have the potential to promote or impede the local development. Such conditions include the local comparative advantages, local economic, social and physical attributes, capacity of the government machinery and existing development agenda. This localized insight has then guided the design and approach to implementation of the district economic development strategies

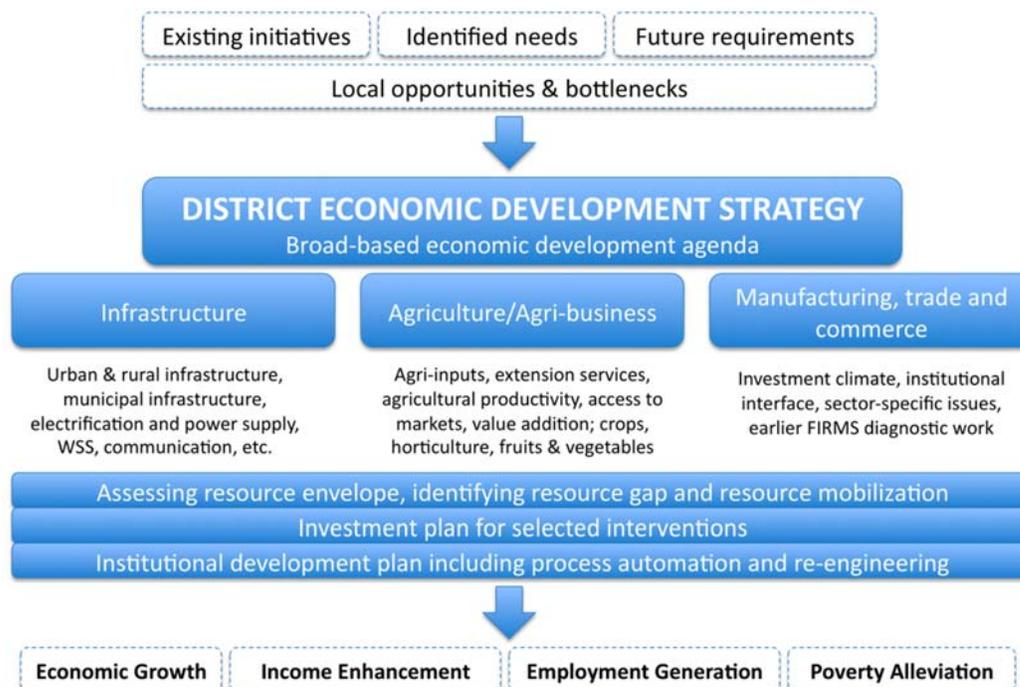


Figure 2 Conceptual Framework for DEDS

2. Bahawalpur - Past, Present and Future

2.1 Rich Historical Background

The district of Bahawalpur has a very rich and vibrant history that dates back thousands of years. Founded by Nawab Muhammad Bahawal Khan Abbasi I in 1748, the princely state of Bahawalpur was ruled by the Abbasi family for over two centuries, before merging with Pakistan in 1955. Nawab Sadiq Khan signed the accession documents in 1947 and the State was formerly incorporated in Pakistan on 14 Oct. 1955. The present district of Bahawalpur was the capital of the former Bahawalpur State and now serves as the district and regional headquarter of the Bahawalpur Division.

Bahawalpur State was formerly included in the Rajputana States (which presently constitute Rajasthan State in India) and was considered to be one of the largest states of British India, with over 451 km in length. Before Sikh rule in Punjab, it is believed to have incorporated certain adjoining areas of Sukkur, Multan, and the entire Dera Ghazi Khan area.¹ The Nawab rulers of the State contributed much to its earlier development. The State was home to some of the most important landmarks of the Delhi Sultanate and the Indus Valley Civilization, such as the Noor Mahal Palace and the ancient cities of Uch and Harappa, which hold significant cultural importance at present. The State was recognized as a region that was dedicated to education and learning, by paying homage to some of the most notable educational institutions, such as Aligarh University, during its early years. Bahawalpur used to export food grain to food deficit areas of India, as well as Europe. The agriculture sector of the State got a significant boost after the completion of the Sutlej valley project (1920-33), which established new canals for the region.

2.2 Culture and Heritage

The district of Bahawalpur hosts a notable number of cultural relics and icons from its rich past. Mosques, huge palaces and other monuments that were built during the ruling Nawab times attract a number of tourists. The district is also credited with being home to one of the few natural safari parks in the country, with an impressive wildlife reserve. The Bahawalpur Zoo is another recreational facility, featuring a large variation of animals. In the cooler months, authorities arrange a Desert Jeep Rally in the Cholistan Desert as a tourist attraction, for which a camp city is erected near the Fort Dewar to house the participants and observers. The Fort Dewar is another ancient landmark that is located in the Cholistan Desert bordering India. It was established in the 9th century, and appears to have deteriorated considerably, due to a lack of maintenance.

The Lal Sohanra National Park is essentially a British timber forest spread over an area of 77,500 acres on both sides of the Bahawal Canal. There are a number of tourist huts, rest houses, camping grounds and treks for the visitors. The wildlife featured in this park includes antelopes, jackals, hares, porcupines, fox, mongoose, larks, owls and hawks, to name a few.

Some of the prominent historical palaces include Noor Mahal, which was built in 1872 by Nawab Sadiq Muhammad Khan IV, and modeled according to neoclassical architecture. The Sadiq Garh Palace is situated at Dera Nawab Sahib in the Ahmedpur East tehsil and was originally the headquarters of the former Bahawalpur State. The Central Library and the Bahawalpur Museum are the custodians of much of the region's history and cultural heritage. Built in classical Italian style architecture, the construction for the library started in 1924, to mark the coronation of Amir of Bahawalpur Nawab Sir Sadiq Muhammad Khan Abbasi the 5th. The Library has undergone

¹ The Biggest Bahawalpur City Information Portal - Bahawalpur, Pakistan. Web. 10 Apr. 2010. <<http://www.mybahawalpur.com/>>

various expansion projects since its establishment and has a considerable volume of literature to its credit. The Bahawalpur Museum is a small building but has an interesting collection of vestiges from Bahawalpur's ancient past, such as manuscripts documents, woodcarvings and historical models, which date back to the Mughal and pre-Mughal decades. Rare copies of the Holy Quran are also displayed which serve as a pivotal point of interest for most visitors.

Other attractions in the district include the town of Uch Sharif which is located some 75 km from Bahawalpur City and believed to have been in existence since 500 B.C. Modeled along the lines of classical architecture, the present Uch Sharif is divided into three sections, named after Sufi saints and the Mughal rulers. Located 12 km away from Uch Sharif, the Punjnad Head Works marks the place where all five rivers of the Punjab meet at a common ground. Utilized mainly for picnic spots due to the surrounding natural beauty, it is an important part of the district's tourist attractions.²

2.3 Geography

Bahawalpur District, considered to be the center of Southern Punjab, is situated almost at the center of the country at the eastern border, at an elevation of approximately 152 meters from mean sea level. Bahawalpur city, the district capital, lies south of the Sutlej River. The district can be divided geographically in three distinct categories: riverine area, plains (or green area); and desert.

The district shares its borders with Multan, Lodhran and Vehari districts in the north, Bahwalnagar in the east and Rahim Yar Khan and Muzaffargarh in the west. The district also lies on the international border with India.

The overall terrain is low-relief with gradually sloping landscape. The Pat (or Bar) is a tract of land located east of Bahawalpur, which is considerably higher than the adjacent valley. The territory of Bahawalpur district lies between the latitudes of 27° 48' to 29° 50' north and between longitudes 70° 54' to 72° 50' east. The average length from north to southeast is about 178 km and breadth from east to west is around 139 km. The district is located at a critical communication juncture, as the main railway and national highway tracks

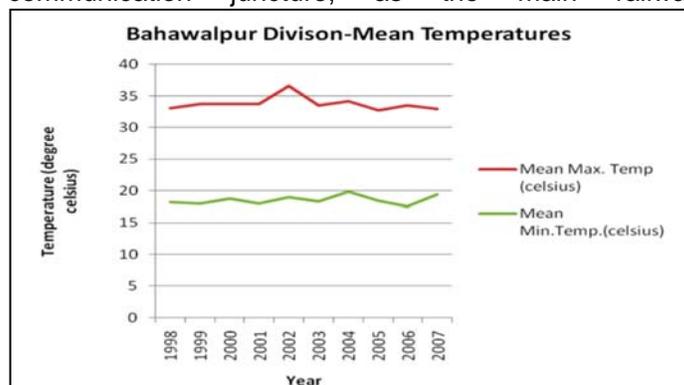


Figure 3 Mean Temperature for Bahawalpur Division 1998-2007

Source: Punjab Development Statistics, 2009

linking Karachi and Peshawar pass through the district. The district is about 90 km away from Multan, 420 km away from Lahore, 270 km away from Faisalabad and nearly 700 km away from the federal capital Islamabad. The vast Cholistan desert extends from the east of the district and is bounded on the north and the west by the Hakra Depression.³

http://www.thebahawalpur.com/important_places/lal_suhanra_national_park.php,

<http://www.tdcp.gop.pk/tdcp/ExplorePakistan/AboutPunjab/MajorCities/Bahawalpur/WheretoGo/tabid/603/Default.aspx>

³ "Explore Pakistan: Bahawalpur." *Yellow Pages of Pakistan: Business/Trade Directory*. Web. 2 May 2010. <<http://www.findpk.com/cities/Explorer-pakistan-Bahawalpur.html>>.

The overall area of the district is around 24,830 square km, claiming 12.10 % of the total area of the Punjab province, making Bahawalpur the largest district of Punjab area-wise, with area exceeding those of the whole districts of Rawalpindi, Faisalabad, Gujranwala, Lahore and Multan⁴. Around 16,113 square km of this area (almost 65%) is covered by the Cholistan desert, while the remaining 8,717 square km (35%) constitutes settled area.

2.4 Climatic Conditions

Climatically, the Bahawalpur district falls in the semi-arid continental region and exhibits seasonal fluctuations in temperature and rainfall. The climate of Bahawalpur is mostly hot and dry, due to its proximity to the Thar-Cholistan desert. As a result, summer and winter temperatures tend to be on the extreme side. Summer day temperatures have been recorded to be as high as the late 40s (degree Celsius), while night temperatures are a few degrees cooler. The average mean maximum temperature recorded at Bahawalpur division over the ten year period of 1998-2007 was around 33.7 0C, while the average mean minimum temperature hovered around 18.5 0C.

The region has historically received scanty rainfall, wherein the average annual rainfall recorded at Bahawalpur division within 1998-2007 was nearly 151 millimeters. Rainfall, as low as 42 mm has also been recorded, during the year 2002. The most plentiful rainfall months are usually July to September, while the months of October to January receive the least rainfall.⁵

Table 1 Number of Union Councils in Various Tehsils in District Bahawalpur

Division/District/ Tehsil	Number of Union Councils		
	Total	Urban	Rural
The Punjab	3464	974	2490
Bahawalpur Division	347	77	270
Bahawalpur District	107	29	78
Bahawalpur Saddar	15	1	14
Ahmadpur East	31	5	26
Bahawalpur City	21	18	3
Hasilpur	14	3	11
Khairpur Tamewali	8	1	7
Yazman	18	1	17

2.5 Administrative Structure and Demographics

The district Bahawalpur is further sub-divided into six tehsils and 107 Union Councils (UCs), 78 of which are rural, making the district predominantly rural. Bahawalpur district constitutes 3.43% of the total population of Punjab. Yazman is the biggest tehsil area-wise claiming more than 70% of the district area.

As of 31 December 2009, the estimated population of Bahawalpur stands around a whopping 3.1 million, with 2.29 million rural population. The population density of district Bahawalpur increased by 39 persons per sq. km between 1981 and 1998, the two district census periods, while during the same period the increase in district population was around 67.4%.

⁴ <http://www.bahawalpur.pk/index.php/bahawalpur-areas/geography-economy-and-culture>

⁵ <http://www.world66.com/asia/southasia/pakistan/bahawalpur/lib/climate>

According to the 1998 District Census, the urban population was 27.4% of the total population while the majority (72.6%) resides in rural areas. The most populous tehsil - Ahmadpur East - constitutes 29% of the district's population. The highest urban population is concentrated in Bahawalpur City tehsil, which has an urban population of 87.4%. In contrast, Yazman is the least urbanized tehsil, with merely 5.1% urban population.

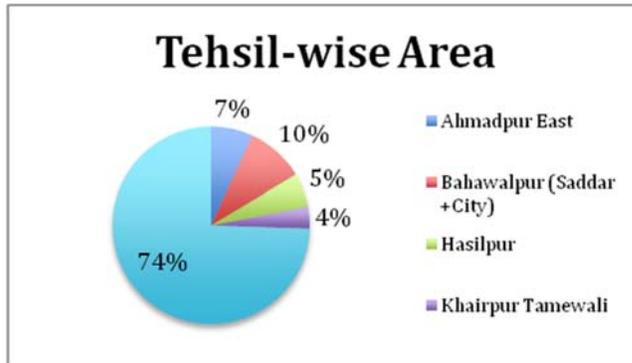


Figure 4 Tehsil Wise Area of District Bahawalpur

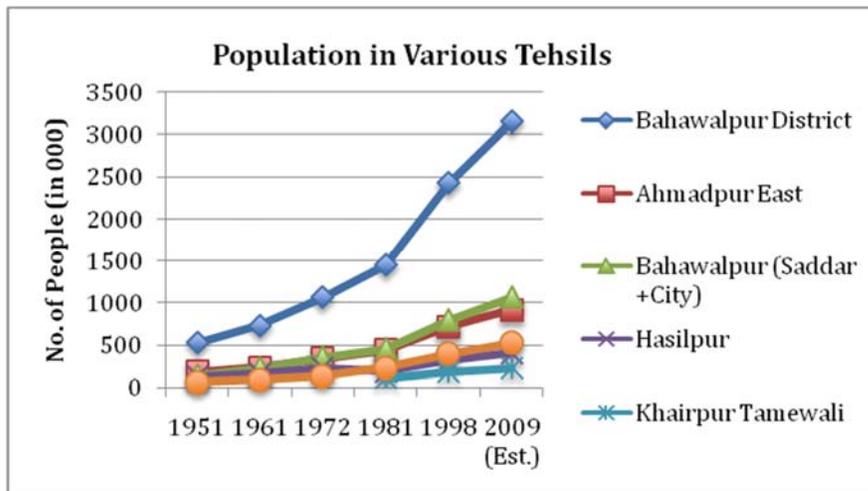


Figure 5: Tehsil-Wise Population of District Bahawalpur 1951-2009

Bahawalpur District does not have any substantial differences in male and female ratios, in fact the sex ratios have been fairly equal in the population and even improved slightly from 1981 to 1998. As per the district census of 1998, the sex ratio for Bahawalpur district stood around 111 males per 100 females, as against 113 in 1981. In 1998, the ratio was highest for Bahawalpur tehsil (including both Bahawalpur City and Bahawalpur Saddar) - 115 males per 100 females - and lowest (106) for Hasilpur.

Almost 45% of the district population falls in the age bracket of 15-49, while the age bracket 15-64 constitutes around 52.3% of the total population. The age dependency ratio is quite high for both sexes, and is around 15 points higher for the rural population.

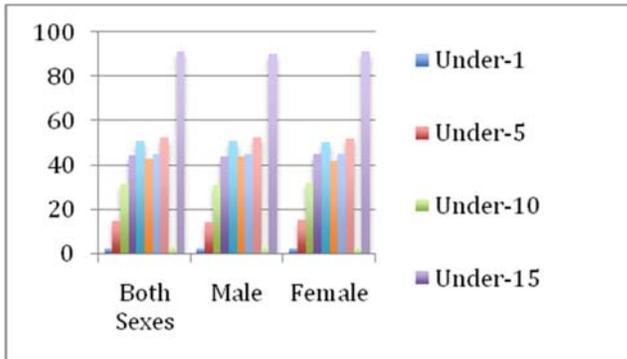


Figure 6: Gender-wise Population Distribution Across Various Age Groups

As per the district census of 1998, approximately 49% of the male population is economically active⁶, whereas for females, this percentage is abysmally low at 1%, indicating the glaring disparity between economic opportunities available to males versus females in the district. Within the 51% inactive male population, almost 30% are children under 10 years, 10% are students, 1.6% are domestic workers, while close to 8% are landlords, retired and disabled. The participation rate is higher in urban areas as compared to rural areas.

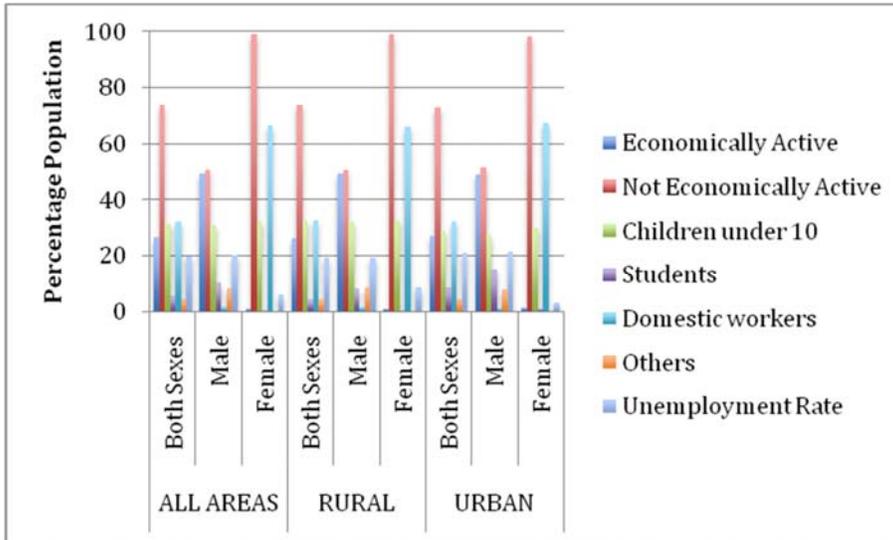


Figure 7: Population Distribution across Various Employment Categories

2.6 Employment and Skill Development

In 1998, the unemployment rate stood at 19.8% for all areas and both sexes for the district, which increased to around 21.1% for urban localities. The latest figures⁷ however, reveal a healthier picture with unemployment rate (people who are unemployed and are actively seeking jobs) standing around 5% for Bahawalpur District as a whole. On the tehsil level, Hasilpur has the highest unemployment rate, at 6.9%, while Yazman has the lowest at 2.4%. Rural unemployment rate stands at 4% while the urban rate is 7.8%. Within various age brackets, the age group 15-24 has the highest unemployment rate at 15%, highlighting the untapped potential in the youth population.

⁶ The economically active population includes people who are working a majority of their time during the year, are either looking for work, or are laid off, as well as unpaid family helpers assisting their families.

⁷ Multiple Indicator Cluster Survey 2007-08

Most of the employed in Bahawalpur district are working in agriculture or low skills occupations. The following table shows the percentages of the employed population in various occupations.⁸ The figures depict the constricted occupational categories that exist in the district, with only a small proportion of the population working in the government and private sector.

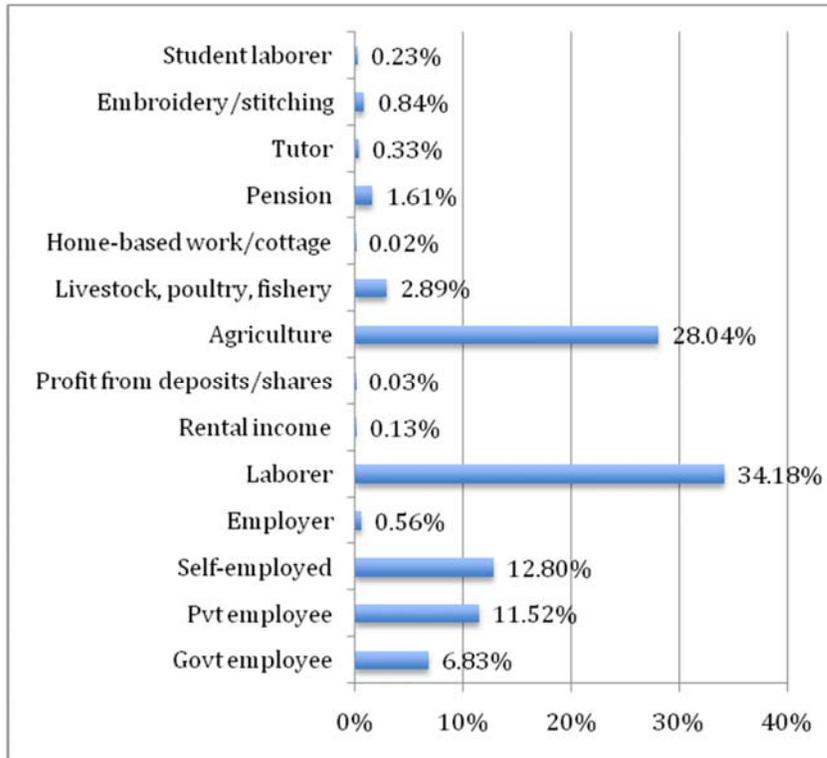


Figure 8: Percentage Employment Across Various Professions

A comparison of profiles for unemployed versus employed population reveals some interesting patterns. About 60% of the unemployed never attended schools, as compared 40% for those, who were employed. However in case of land and livestock ownership, there is not a huge difference amongst the two populations.

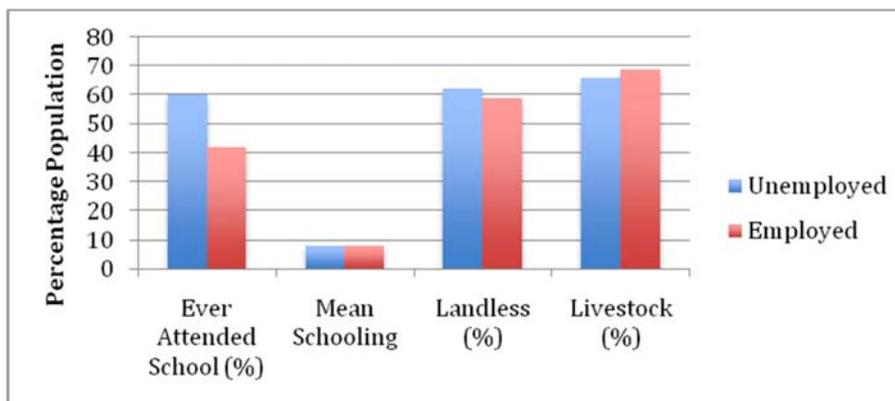


Figure 9: Profile of Employed Versus Unemployed

2.6.1 Technical and Vocational Training

TEVTA and PVTC, the two leading public sector technical and vocational training agencies are also present in Bahawalpur. TEVTA has the largest public training institute in the district, with

⁸ Center for Economic Research Pakistan (CERP). *Skills, Poverty and Income Indicators for South Punjab: A Baseline Report*. Rep.

around half of its capacity geared towards commerce training. The general perception in the district is that public sector institutes are generally not aligned with the industry demand and most of the courses offered are outdated and out of demand. Under TEVTA, a total of 19 institutes are working in the district with a total current enrollment of 5,776, as of March 2010. Out of these enrolled trainees, 1,617 are enrolled in the commerce stream, 3,101 in the technical stream and 1,058 in the vocational stream.⁹ PVTC is the second largest skills training provider in Punjab, imparting training to Zakat recipients. The maximum capacity of PVTC, like TEVTA, is insufficient to cater to the target population of underprivileged and unemployed or underemployed youth in the district. Only four institutes are working under PVTC in Bahawalpur district, out of which two are for male students, while the other two are for females.

Amongst other districts in southern Punjab, including Muzaffargarh, Lodhran and Bahawalnagar, the institutes in Bahawalpur are the only ones that offer high-end technology courses through a three years diploma DAE (Diploma Associate Engineer). High-end skill courses include courses in the civil, mechanical and electrical engineering fields along with dress designing and farm machinery. Mid-range skills training is also offered through a two years degree such as B-Tech in mechanical, auto and diesel technologies and diploma in vocational training. The number of short-term, low skill courses is very few in the district, with only a couple of courses being offered in computer application, wireman and quantity surveyor. Looking at the demand of female-oriented courses, it appears that beautician courses are highly popular in the district, followed by clinical assistants. When looking across different tehsils, it is observed that overall computer-related courses have the highest enrolment. In Yazman and Ahmedpur East tehsils, computer operator/office assistant courses are also quite popular.¹⁰

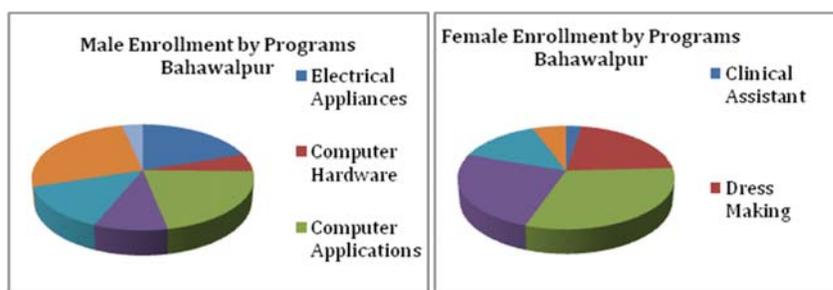


Figure 10: Male and Female Enrollment in PVTC Institutes in District Bahawalpur

Source: Center for Economic Research Pakistan (CERP)

Skills, Poverty and Income Indicators for South Punjab: A Baseline Report

2.7 Poverty and Income Levels

Bahawalpur district is characterized by high poverty levels, as depicted by its poverty indicators. The district had an overall headcount ratio¹¹ (HCR) of 54.58 and an overall poverty gap ratio (PGR) of 17.3¹². These indicators are higher for rural areas with HCR as high as 71.66, compared to urban HCR, which is around 33.7. Similarly the rural PGR stands around 23.6. Poor households have been categorized in the Poverty Reduction Strategy Paper (2003) as per their distance below the poverty line¹³, creating the following three categories: 1) extremely poor: those living below PKR 374 per capita per month; 2) chronic poor: those living below PKR 562 per capita per month; and 3) transitory poor: those existing below PKR 748 per capita per month.

⁹ TEVTA; www.tevta.gov.pk

¹⁰ Center for Economic Research Pakistan (CERP). *Skills, Poverty and Income Indicators for South Punjab: A Baseline Report*. Rep.

¹¹ The Headcount Ratio measures the percentage of households that fall below the poverty line, while the Poverty Gap Ratio measures the depth of poverty i.e., the mean distance from the poverty line, expressed as a percentage of the line.

¹² Multiple Indicator Cluster Survey 2003

¹³ The poverty line was marked at PKR 807.53 per capita per month for 2003-04 and PKR 957.3 per capita per month for 2007-08.

According to some estimates¹⁴, in Bahawalpur district, approximately 8.13% of the population is extremely poor, 23.6% chronically poor and 21.83% falls in the category of transitory poor. When compared with other districts in Southern Punjab, Bahawalpur is one of the poorest districts, second only to Rajanpur and Muzaffargarh.¹⁵

Unfortunately, more recent data¹⁶ depicts that over the last few years, incidence of poverty has in fact increased in Bahawalpur, with PHR increasing to 55.07. At the tehsil level, Bahawalpur City has the lowest poverty rate at 41%, whereas Ahmadpur East has the highest poverty rate of 62.09%.

A comparison between the poor and the non-poor populations in Bahawalpur indicate that unemployment rate is double for poor, while there is a considerable literacy rate gap of 15% between the two groups. Poor households generally have a higher proportion of livestock ownership compared to non-poor households, due to livestock being the most important and affordable asset. A higher population of the non-poor resides in urban areas, compared to the poor.

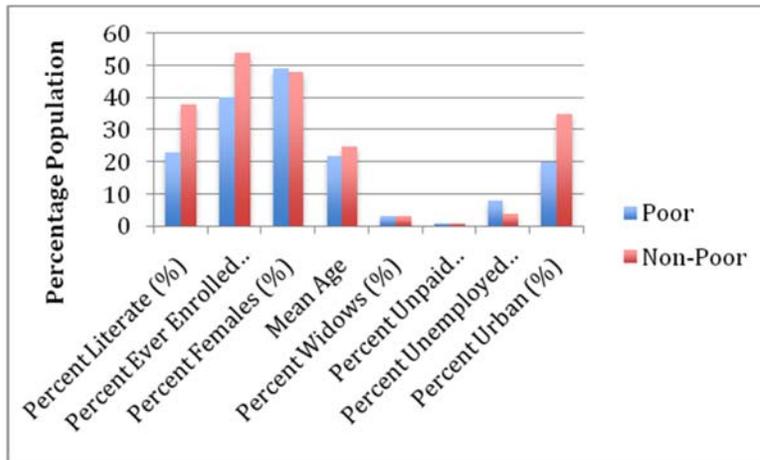


Figure 11: Profile of Poor Versus Non-poor

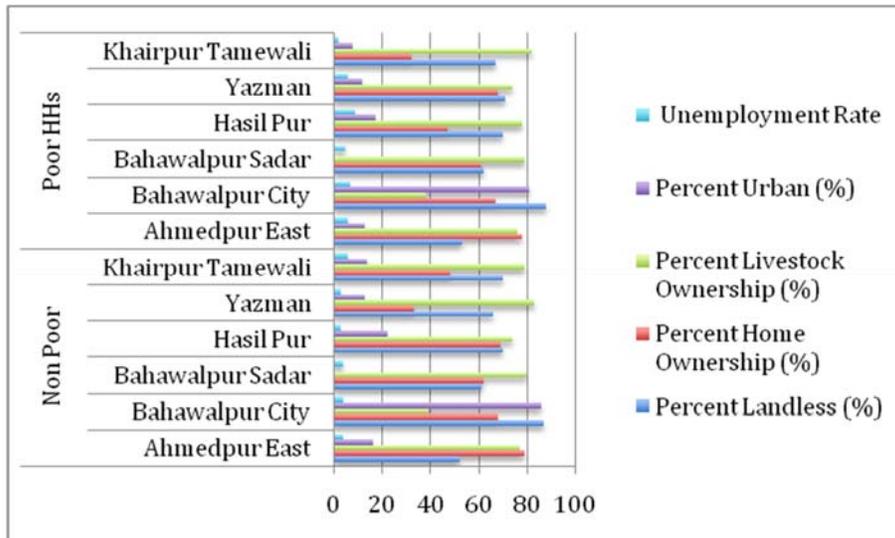


Figure 12: Profile of Poor versus Non-poor Households across Tehsils

¹⁴ Multiple Indicator Cluster Survey 2003

¹⁵ Omar, Salma, and Lyyla Khalid. *Punjab Poor Districts Development Programme :Social Assessment Of Punjab Districts*. Draft Paper

¹⁶ Multiple Indicator Cluster Survey 2007-08

2.7.1 Income Level

When looking across all households in the district, it appears that over the time period 2003-07, the nominal yearly growth rate in average household income has been significant. However, when factoring in inflation over the time period, the real growth rate¹⁷ stands around 19%, reducing the nominal growth by nearly half. Moreover, when looking at the poor households, it is unfortunate to note that there has been no registered yearly growth in the income during the time period 2003-2007. A similar pattern is observed at the individual level, albeit worsened, whereby the employed poor actually saw a negative real yearly growth. It appears that employed non-poor individuals enjoyed a gain in their income over the time period, while the employed poor saw a loss in their real income. This could very well be a result of the difference in skill set between the two categories, as technical/professional skills are likely to have more upward mobility in income growth.¹⁸

Table 2 Income Levels across Various Categories

	All Households	Poor Households	Employed Individuals	Employed Poor Individuals
Average Income - Year 2003 (PKR '000)	3.33	2.84	2.24	1.49
Average Income - Year 2007 (PKR '000)	9.63	4.11	4.6	1.99
Nominal Growth	30%*	10%*	20%*	8%
Real 2007	6.78	2.89	3.24	1.40
Growth Four-Year	1.03	0.01	0.445	-0.051
Real growth-yearly	19%*	0%	10%*	-2%

Source: Multiple Indicator Cluster Survey, Punjab 2007-08 & 2003-04¹⁹

*Growth rate is significantly different than zero

2.8 Literacy and Education

Bahawalpur is still struggling with overcoming the challenge of low literacy levels. According to the 1981 Census, the overall literacy ratio for the district was around 20.4, which significantly increased to 35 in 1998. In 1998, the urban literacy ratio stood around 57, while for rural areas it was a dismal 26.3. When compared between the two genders, there was found a vast gender gap in literacy levels, where the literacy ratio for males is around 45 and for females around 24.

¹⁷ Real growth rate is the nominal growth rate adjusted for the inflation that occurred between the years 2003 and 2007. The CPI as reported in the Economic Survey of Pakistan, was 111.63 for 2003-04 and was 158.9 for 2007-08. Base year for both numbers was 2000. Consequently, inflation between the four years was calculated as being approx. 42%. (Center for Economic Research Pakistan (CERP). *Skills, Poverty and Income Indicators for South Punjab: A Baseline Report*. Rep)

¹⁸ Center for Economic Research Pakistan (CERP). *Skills, Poverty and Income Indicators for South Punjab: A Baseline Report*. Rep.

¹⁹ Center for Economic Research Pakistan (CERP).

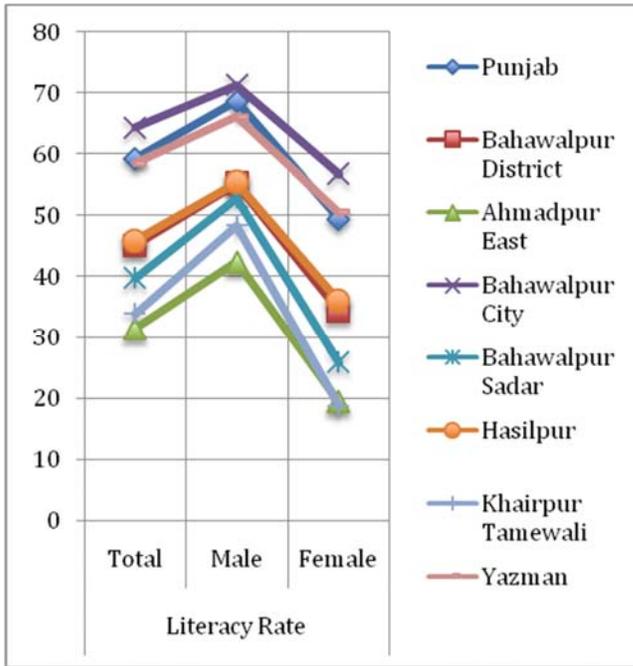


Figure 13 Male & Female Literacy Rates across Tehsils

When looking across various tehsils, it is evident that Bahawalpur City leads with the highest literacy rate, while Ahmedpur East has the lowest rate at 31.4. The gender gap in literacy ratios appears to be the highest in Khairpur Tamewali and the lowest in Bahawalpur City and Yazman.

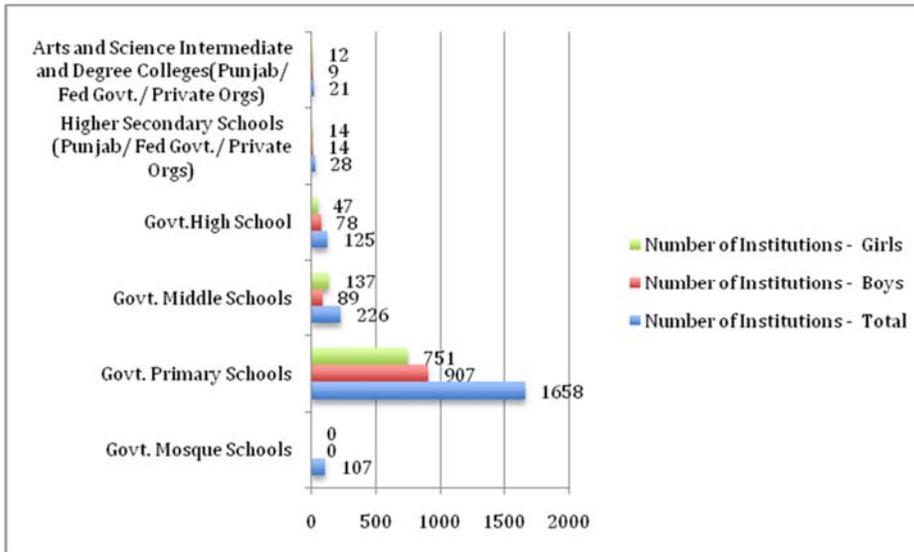


Figure 14: Number of Category-Wise Educational Institutions in District Bahawalpur

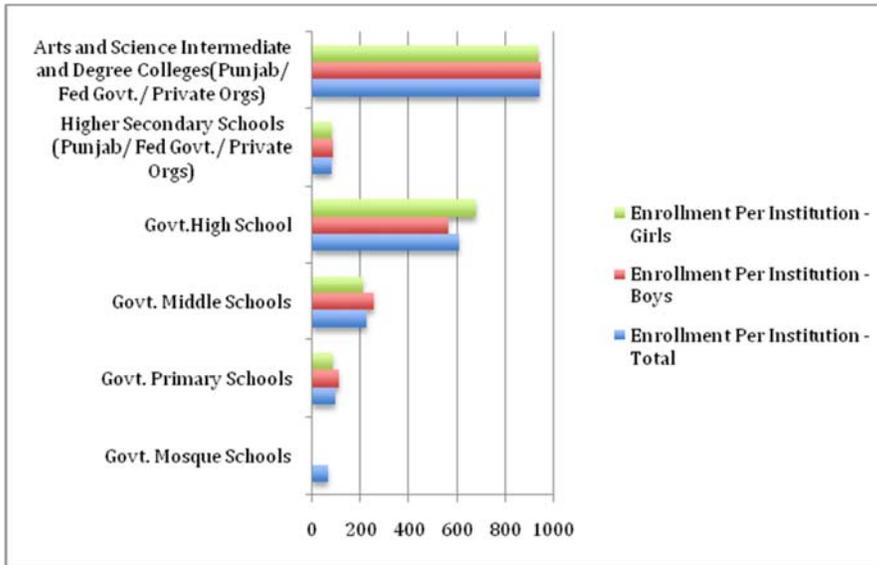


Figure 15: Category-Wise Enrollment per Institution in District Bahawalpur

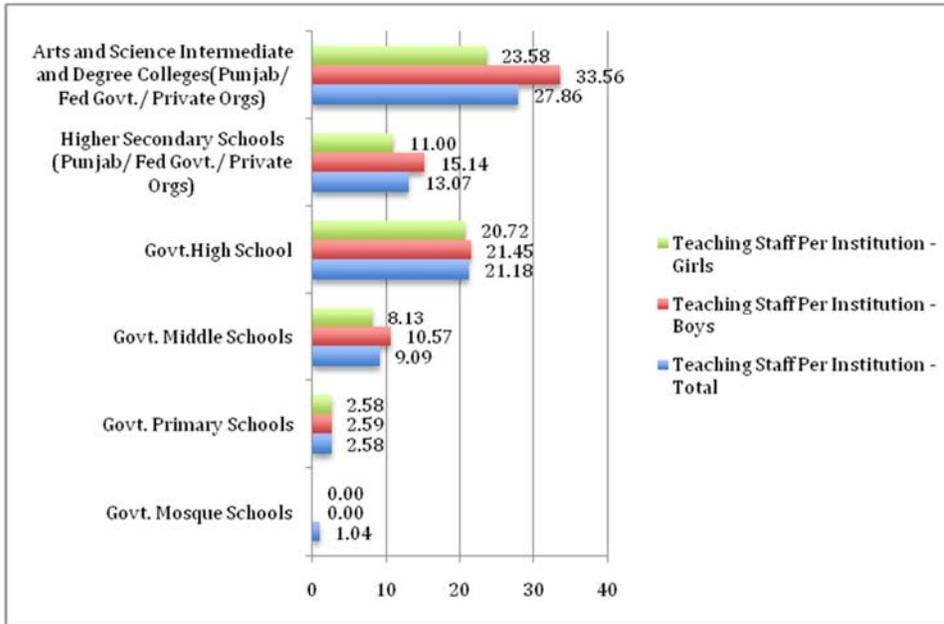


Figure 16: Category-Wise Teaching Staff per Institution in District Bahawalpur

Sources: Punjab Development Statistics, 2009

In contrast to extremely low literacy levels, Bahawalpur must be given credit for having one of the leading schools in the province - Sadiq Public School. Besides Sadiq Public School, there are a number of educational institutions in district Bahawalpur. Amongst them, government primary schools appear to be the most prolific, with around 751 schools for girls and around 907 for boys (Figure 14). Given the high number of students enrolled in a few institutions in Arts and Science Intermediate and Degree Colleges, these institutions have high enrollments, at an average of around 940 students per institution (Figure 15). Government mosque schools have the lowest enrolment per institution ratio, however the data may not account for a number of unregistered mosque schools (madrassahs), which are not registered. In primary schools, the paucity of teaching staff is clear with extremely low teaching staff per institution ratios with an average of 2.59 teachers for each boys' school and 2.58 teachers for each girls' school (Figure 16).

2.9 Health

It is estimated that around 20 percent of the district's population is utilizing the public health facilities²⁰, indicating substantial room for improvement in both access and quality of healthcare services. Bahawalpur District had a total of 13 hospitals, out of which twelve are government hospitals. Last year, these 13 hospitals treated a total of more than 3 million patients. The total number of hospital beds was around 1,810 in the government hospitals, while there were 40 in the single private hospital. In 2008, more than three million patients were treated in public hospitals, while around 20,000 were treated in the private hospital. The following table gives a breakdown of the characteristics of the different health institutions in Bahawalpur district.

Table 3 Category-wise Number of Healthcare Institutions in District Bahawalpur

	No.	No. of Beds	No. of Patients Treated ('000 in number)
Total Hospitals	13	1,850	3,051
Govt.	12	1,810	3,031
Private	1	40	20
Dispensaries	70	4	-
Rural Health Centers	11	202	-
Basic Health Units	80	148	-
TB Clinics	3	-	-
Maternity & Child Health Centers	10	10	-

Source: Punjab Development Statistics 2009

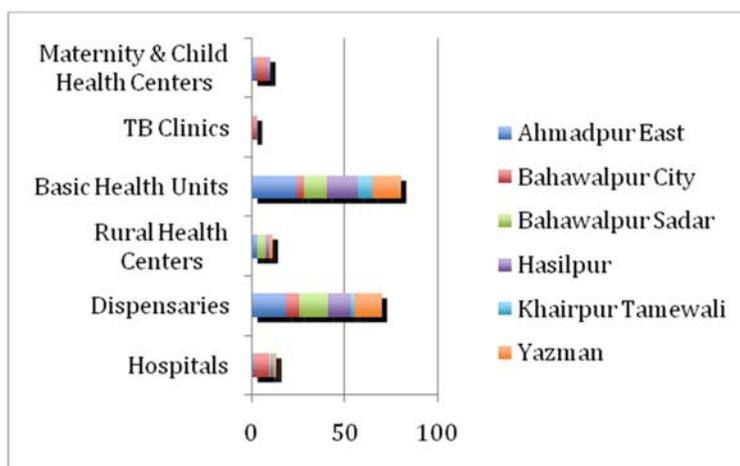


Figure 17: Category-Wise Healthcare Institutions Across Tehsils

2.10 Access to Water and Sanitation²¹

As per some estimates, hand pump is the most utilized form for all households in Bahawalpur district, amongst the improved sources of drinking water. On an average, only about 2% of the district's population applies proper water treatment methods to all sources of drinking water, while for Bahawalpur City, this average stands around 7%. In contrast, for rural areas the same average hovers around a dismal 0.5%. The percentage of the district's household population that is using both improved sources of drinking water as well as using sanitary means for waste disposal is

²⁰ Health Department. District Government Bahawalpur. Web. <<http://www.bahawalpur.gov.pk/health.htm>>.

²¹ Source: Multiple Indicator Cluster Survey 2007-08

around 54%. For all rural areas, this figure drops to around 39.3%, while it is as high as 93.5% for all urban areas. Around 30% of all households use proper disposal mechanisms for waste water, while only 8% use proper methods for disposing solid waste. The latter number drops to a grim 0.2% for rural areas, while jumping drastically to a 31.7% for all urban locations. There is much work that still needs to be done to rectify the condition of urban services in the district.

2.11 Key Sector Profiles

2.11.1 Infrastructure

The district has metalled road-length of around km, connecting it to its neighbouring districts of Lodhran, Bahawalnagar Vehari and Rahimyar Khan as well as the rest of the country. The main Peshawar-Karachi railway line passes through the district as well, making it an important rail centre. During recent years, a number of projects have been initiated to address rural and urban infrastructure issues, such as the Southern Punjab Basic Urban Services Project, the Bahawalpur Community Development project and the Bahawalpur Rural Development Project. The Multan Natural Gas Power Station provides electric power for the Bahawalpur district, through a 220KV power feeder. There are 11 grid stations in the district, ranging in capacity from 66 KV to 220 KV. Multan Electric Power Company (MEPCO), the authorized distribution company of WAPDA, is responsible for distributing electricity in the Bahawalpur district. The main sources of irrigation in the district are the Lower Bahawal canal, Punjad canal, Abbassia canal and Upper Qaim canal. After decentralization and institutional reforms of the Punjab irrigation system, the newly established Punjab Irrigation and Drainage Authority (PIDA) has transferred the control of the Sulemanki and Islam head-works to the Bahawalpur Zone. Bahawalpur has been suffering from a lack of access to good quality water supply, which has resulted in a number of projects being designed and implemented to rectify the situation. The district infrastructure is discussed in greater detail in the following section.

2.11.2 Agriculture

Agriculture is the mainstay of Bahawalpur's economy, with a majority of the populace engaged in agricultural related activities. It is the main source of earning for almost 78% of the rural population, directly or indirectly. Located in the fertile southern Punjab, the district claims 14% share in Punjab's total cotton production and 4% of wheat production. Rice, sugarcane, gram and pulses comprise some of the other major crops of the district. The district also has the highest rapeseed and mustard production in Punjab, producing around 18% of total rapeseed and mustard production of Punjab.

The district of Bahawalpur is also known for its horticulture. Bahawalpur division is the 2nd highest mango producing division of Punjab while Bahawalpur district is the 5th highest mango-producing district in Punjab. Bahawalpur is the 5th highest date producing district in Punjab, while for water & muskmelon production, it is the top most district of Punjab. More notably, the district is also recognized as being the highest lemon-producing district in the Punjab. Some other key vegetables produced in the district include onions, tomato, potatoes, bringal, and carrots. The agriculture sector is discussed in more detail in the subsequent sections.

2.11.3 Manufacturing, Trade and Commerce

Owing to its vast agricultural base, much of the industry in the district is agro-based. Cotton ginning is one of the most prominent manufacturing activities, due to the district's position of being one of the largest cotton growing regions in Punjab. The district has a large number of cotton ginning factories, second only to Rahim Yar Khan in Punjab. The region also has a long standing history of producing unique arts and crafts, which constitute cottage industries such as calico printing, ban and rope-making, hand-weaving and different types of traditional clothing gear. Handicrafts provide employment to a wide range of people, who are mostly located in rural villages and work at very low wages.

Bahawalpur also has a very large population of livestock, underscoring tremendous livestock potential in the district. Unfortunately much of this potential is untapped, owing to negligible value addition. Goods moving out of the district mainly include low value added products such as raw

or ginned cotton, mud pottery and sheep and camel wool from the animals residing in the Cholistan region.

The details on manufacturing, trade and commerce are dealt with separately in a subsequent section.

2.12 Cholistan Desert

The potential of district Bahawalpur cannot be fully assessed, without taking Cholistan into account. The Cholistan Desert, located in Southern Punjab, is one of the largest deserts in the Indian subcontinent. It continues as the Thar Desert in the eastern part of Sind. Over 10,000 square miles in length and located 20 miles from Bahawalpur, the desert is home to more than 150,000 people whose nomadic lifestyle involves herding and trading in camels and other livestock. The ancient culture of the desert is kept alive with various types of desert festivities and is reflected in the attire of the locals, comprising uniquely embroidered shirts, skirts and robe coats that retain traditional designs and stitching.²² The Desert stretches across the three districts of Bahawalpur, Bahawalnagar and Rahimyar Khan. The temperature varies greatly, from as low as 6 degrees to as high as 50 degrees Celsius. Nearly 65% of Bahawalpur District is covered by the Cholistan Desert, with most of it falling in the Yazman tehsil. The population density is around 6.5 person per sq. km. The livestock population in the desert is around 1.258 million.

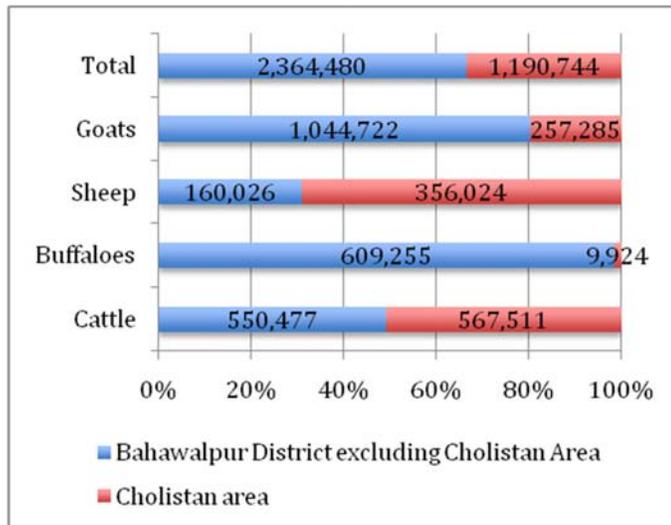


Figure 18: Livestock Population in Bahawalpur versus Cholistan

Source: Livestock Census Report, 2006

The desert was never given any administrative priority, under the state administration till about 1945, until a separate Cholistan Development Branch was created in the Agriculture Department of the State. The initial functions identified for the branch were conservation and improvement of water sources, improvement of sheep breeding and promotion of the wool industry, as well as the development of cottage industries, particularly woolen handlooms. The next milestone in Cholistan's administrative history was the enactment of Cholistan Development Authority Act 1976, creating the Cholistan Development Authority (CDA). With renewed administrative focus, development funds also started flowing in from the late 1980s. The members of CDA include experts from agriculture and livestock sectors, Managing Director Tourism Development Corporation of Punjab and the Dean of Social Sciences for Islamia University Bahawalpur, besides other official members.²³

²² http://www.pilotguides.com/destination_guide/asia/pakistan/cholistan_desert_trek.php

²³ CDA <http://www.cholistan.gov.pk/index.php>

A total of more than two billion rupees have been allocated to CDA over the years 2000-2008 for development expenditure. CDA currently has two big projects that are currently underway, including: Cholistan Livestock Development Project; and Literate Cholistan Project.²⁴

The Cholistan Livestock Development Project (worth PKR 300 million) is an integrated livestock project, which aims at projecting Cholistan as an Organic Food Production Zone, while providing health services in the area through mobile dispensaries and setting up community based extension delivery services and milk collection centers. Cattle *mandis* are being looked into, together with efforts to concentrate on the human resource development of the locals. The CDA has also proposed the idea of corporate farming by establishing potential zones, which can be leased to corporate farmers.²⁵

On the Tourism front, PTDC currently arranges desert rallies and camel tours, which involve camps near the historical Fort Derawar. Acknowledging the dilapidated condition of the crumbling Fort, proposals for restoration and maintenance are being seriously looked in to by the CDA.

2.13 Bahawalpur District – SWOT Analysis

Based on a comprehensive situation analysis, the SWOT analysis for Bahawalpur district has been conducted crystallizing the strengths and weaknesses of the district as well as identifying opportunities and threats. The following matrix presents the findings of the SWOT analysis:

2.14 Way Forward

Bahawalpur is a major district in Southern Punjab, which can play a critical role in the economic development of the region. Such economic development can only result from a concerted effort from both public and private sectors. This concerted effort in turn would be a function of a comprehensive well thought out strategy, addressing the weaknesses in the social and economic base of the district and capitalizing on its strengths. This strategy should also focus on the available opportunities, while adopting a well-tailored mitigation strategy for potential risks and threats. This document presents such a strategic framework for achieving medium to long term economic development of the district, after taking a detailed account of the key economic sectors, including infrastructure, agriculture and manufacturing, trade and commerce.

²⁴ Cholistan Development Authority, <http://www.cholistan.gov.pk/index.php>

²⁵ Cholistan Development Authority.ppt

<p>STRENGTHS</p> <p>Wide agricultural base</p> <p>One of the largest cotton-producing regions of the province, significant producer of other cash crops as well as certain horticulture. Bahawalpur has an enormous capacity for agricultural production</p> <p>Large livestock population</p> <p>Highly conducive conditions for rearing livestock, and over 2,364,480 livestock species (excluding the Cholistan desert). Majority of the population owns more than one animal.</p> <p>Huge labor force: As per 1998 Census, nearly 26.4% of the entire population was economically active.</p> <p>Major urban centre in southern Punjab</p> <p>Bahawalpur City is a burgeoning urban city which can be developed in to the main central urban town amongst the bordering districts of Lodhran, Vehari, Bahawalnagar, Rahim Yar Khan and Muzaffargarh</p>	<p>WEAKNESSES</p> <p>Limited capacity of public sector</p> <p>Lack of capacity, out-dated management practices and absence of technology</p> <p>Disorganized private sector</p> <p>Industry associations and chambers of commerce not very effective in lobbying and advocacy</p> <p>Low skill levels: Large part of the population lacks access to high-end skills and is hence stuck in low value occupations</p> <p>High unemployment and underemployment: Latest figures of 5% unemployment rate for ages 15 years and above. In 1998, rural unemployment rate was 19.3 and urban rate was 21.1.</p> <p>Weak and primitive agricultural markets: Lack of modern infrastructure and business practices</p> <p>Limited role of women in mainstream activities: Women have been largely absent from the economy, and have not successful in becoming social entrepreneurs or advocating a prominent role in development projects</p> <p>Low literacy levels: 45.1% total, with 55.2% for males and 34.4% for females (2007-08)</p> <p>Low level of industrialization</p> <p>Manufacturing sector is largely underdeveloped, with high value addition activities taking place outside the district. The biggest industry, cotton ginning, is still running on obsolete methods of production.</p>
<p>OPPORTUNITIES</p> <p>Potential Agricultural Hub</p> <p>Ideal geographical location, climate and presence of a bountiful livestock and cash crops can turn the District into an agri-business hub for the province</p> <p>Linking skilled workers with employment opportunities outside the district: With economic</p>	<p>THREATS</p> <p>Constraining fiscal space</p> <p>The district govt. has insufficient finances to fund new development projects.</p> <p>Worsening law and order situation</p> <p>The security situation is likely to adversely impact any economic development strategy.</p> <p>Lack of sustained ownership:</p>

<p>growth in the district, the population can be linked to opportunities outside the district</p> <p>Increased donor focus</p> <p>Southern Punjab is on the priority agenda for donors. The subsequent flow of funds can be utilized effectively for realizing the potential of the District.</p> <p>Value addition</p> <p>Great potential to add higher value in various agri-business stages in different sectors.</p> <p>Room for enhancing women's participation: As women form nearly half of the population, integrating them in the economy will have a far-reaching impact</p> <p>Enhancing productivity and tapping potential of livestock: Current low levels of animal productivity and yield signify potential of creating greater returns in the future</p> <p>Access to markets to local skilled workers: Local skilled workers in the handicrafts industry can reap benefits from gaining access to markets</p>	<p>Frequent turnover of govt officials as well as the possibility of a lack of continuity of the local govt. structure can negatively affect ownership of the strategy.</p> <p>Local government's shrinking role;</p> <p>Any future decision of the govt. to repeal the local govt. structure can impact the district's strategy.</p>
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3. Bahawalpur: Infrastructure Sector

The potential significance of infrastructure in facilitating economic growth and poverty alleviation has long been recognized all over the world. By ensuring availability of energy, lowering the cost and reducing the time of moving goods and services (to where they can be used more efficiently and/or fetch a higher price), provision of other essential services to the consumers, infrastructure development adds value and spurs economic growth. Over time this process results in increasing the size of markets, which is a precondition for realizing economies of scale at the level of a business enterprise. This, in turn, attracts private investment, fostering private sector development. If however, infrastructure is not developed at the requisite pace, sustained economic growth is threatened by inadequate coverage and poor quality of infrastructure services that manifest themselves in power shortages, traffic congestion, high transport costs and other infrastructure bottlenecks. A key consideration highlighting the need for adequate infrastructure investments is the rapid increase in the level of urbanization of Punjab. This has increased from 17.4% in 1951 to 31.36% in 2006²⁶. In 2006, the urban Punjab had a population of 27.4 million out of a total of 87.5 million²⁷. This increase in urban population has further underscored the need to invest in urban services infrastructure such as water supply and sanitation, urban transportation, etc. The infrastructure development at the district level, therefore, forms the crux of the district economic development strategy. This chapter discusses four selected sub-sectors of the infrastructure, including power generation and distribution, irrigation, urban services and transport, taking into account the holistic and well-rounded picture of each sub-sector sector,

²⁶ Punjab Economic Report 2007, Punjab Economic Research Institute

²⁷ Ibid

existing initiatives to address the problems in the respective sub-sectors and some suggestions on how these sub-sectors can be improved at the district level.

3.1 Power and Electricity

Falling in the district of Bahawalpur, there are 11 grid stations ranging in capacity from 66 kV to 220 kV. There are 160 distribution transformers. The average power inflow into the district through these grid stations is 1,200 MW in summer and 900 MW in winter.²⁸ MEPCO, the Multan Electric Power Company, is the biggest distribution company of WAPDA and its area of operation ranges from Sahiwal to Sadiqabad, Bahawalnagar to Bahawalpur and Touunsa to Rajanpur , bordering with Sind, Baluchistan and NWFP. Bahawalpur circle of MEPCO operates in Bahawalpur district with 5 Divisions and 30 Sub-divisions.

Power for Bahawalpur comes mainly from the Multan Natural Gas Power Station through a 220kV feeder. The feeder passes through Basti Malook and Lodharan. At Bahawalpur, three branches emerge, with one of them leading to Lalsohano, second to Yazman and further on to Merot, while the third one going to Ahmadpur East, connecting Samasata on the way. From Ahmadpur East, two further branches emerge, with one going to Alipur and Uch Sharif and the other one to Liaquatpur. Liaquatpur continues to act as a national link to Khanpur and further down to Sadiqabad.

3.1.1 Supply Demand Gap

On a typical summer day, and a typical winter day, in the year 2009, the category wise supply and demand comparison is as given in Figure 19 and Figure 20,²⁹ Indicating that MEPCO is able to supply only about 66% of the power demand in summer and 64% in winter. Although the capacity to distribute power is much larger, being of the order of 4800 KW, there is simply not adequate supply to distribute.

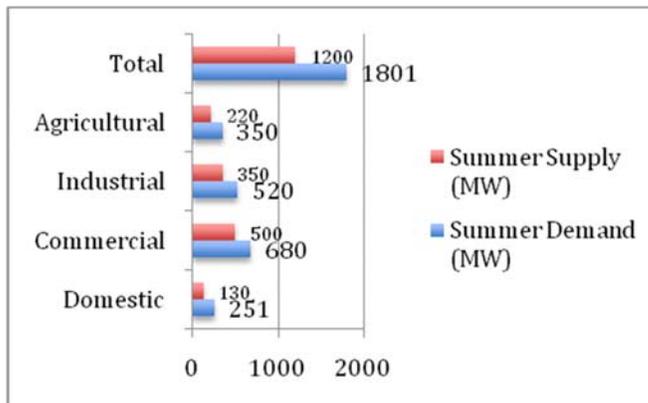


Figure 19: Demand Supply Gap MEPCO Bahawalpur Zone in Summer

²⁸ Information derived from MEPCO daily load records of 2009

²⁹ Information derived from the load sheets of MEPCO offices

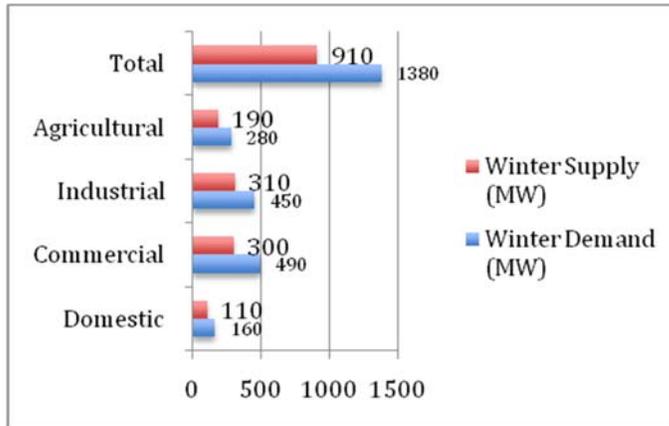


Figure 20: Demand Supply Gap MEPCO Bahawalpur Zone in Winter

When looking across power consumption across various tehsils, it is evident that about 40% of power is consumed in Bahawalpur City and Saddar, 30% goes in Ahmadpur East and the remaining 30% to Hasilpur, Khairpur Tamewali and Yazman. This pattern of distribution indicates the heavy consumption by urban, commercials and industrial areas and far less consumption by agricultural areas (**Error! Reference source not found.**).

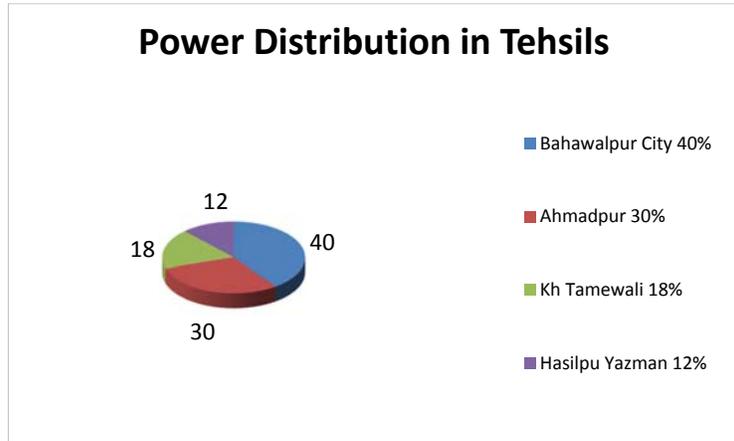


Figure 21 Power Distribution in Tehsils of Bahawalpur

3.1.2 Problems and Issues

Other than inadequate supply to meet the demand, MEPCO is running into a number of problems and issues. Some of the most dominant ones are given below³⁰:

3.1.2.1 Line Losses

As per the information provided by the MEPCO offices, the line losses range from 10-15%. These are due to impedance losses in the transmission, power factor losses, losses due to low efficiencies of the transformers and the switch gear. Some of the losses also occur because of substandard motors used at the tubewells resulting in poor power factor.

The Prime Minister under his special package for MEPCO has extended a grant of PKR 1 billion for the power sector. In addition the World Bank and Asian Development Bank have provided financial assistance for establishing Power Management Units and for procurement of necessary equipment and materials required for these units A 'project management unit' under the Chief Engineer Development has been established. It is hoped that with better management practices, the existing problems and issues in the power sector can be adequately addressed.

³⁰ The following information was obtained from meetings that were held with MEPCO

3.1.2.2 Power Theft

Power theft is quite prevalent and accounts for losses of nearly 5-10% so far (until October 2009). Many cases of thefts have been caught but only a few FIRs have been lodged till date. Moreover, small users below 5 KW do not even have meters and are increasing in number by an alarming extent.

3.1.2.3 Recoveries

One of the critical problems is non-payment of bills by the users. A number of users, specifically public departments, do not pay the bills fully even when they are provided with the facility of paying bills in smaller installments. Tubewell subsidies are also partially paid. Many cantonments do not even have meters, while electric subsidies up to 40% have been provided to the army.³¹ The recovery system goes through the land revenue staff, including tehsildars, which is not very effective means and recovery from penalties imposed for various offenses is a tedious process.

3.1.2.4 Legal, Policy and Institutional Regime

Production, transmission and generation of electricity are governed by the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (as amended from time to time). Of particular relevance are clauses 15, 16 and 20, which are reproduced below. These provisions are inhibitive towards free generation, transmission and distribution of electric power, as they disallow any party to perform these functions without license from a federally controlled authority, the National Electric Power Regulatory Authority (NEPRA).

15. Generation license.— (1) No person shall except under the authority of a license issued by the Authority under this Act and subject to the conditions specified in this Act and as may be imposed by the Authority, construct, own or operate a generation facility.

16. Transmission license. — (1) No person shall except under the authority of a license issued by the Authority under this Act and subject to the conditions specified in this Act and as may be imposed by the Authority, engage in the transmission of electric power.

20. Distribution licenses.— No person shall, except under the authority of a license issued by the Authority under this Act and subject to the conditions specified in this Act and as may be imposed by the Authority, engage in the distribution of electric power.

An extensive set of Rules and Regulations was framed under this Act to govern conduct of business in the power sector. These are:

- Tariff Standards and Procedure Rules, 1998.
- Licensing, Application and Modification Procedure Regulations, 1999
- Licensing (Distribution) Rules, 1999
- Licensing (Generation) Rules, 2000
- Fees and Fines Rules, 2002
- Consumer Eligibility Criteria (Regulations), 2003
- Resolution of Disputes between IPPs and other Licensees, 2003
- Performance Standards Distribution Rules 2005
- Performance Standards Transmission Rules 2005
- Interim Power Procurement (Procedure and Standards) Regulations, 2005

³¹ Source: Pak Spectator Dec 2009

Recently, NEPRA has taken a few initiatives to facilitate private sector participation in power generation and distribution. For example, it has allowed Captive Power Plants to sell surplus power to the national grid or to distribution companies (such as MEPCO) with rates negotiated mutually. A flexible tariff setting mechanism for private sector hydro power projects has also been prescribed.

In 1994, the Government also created a Private Power and Infrastructure Board as a one-window operation to facilitate independent power plants. In 2002, a Policy for Power Projects was also announced, which focused on exploitation of indigenous resources for power generation and which provided a number of incentives to attract private investment in this sector.

These initiatives will help to some extent, but fall short of a comprehensive reform of the legal framework. In the wake of the acute shortage of power, a facilitative legal framework is warranted, which enables market forces to produce and distribute power more economically and efficiently. If power sector is decentralized and deregulated, it will attract innovation and investment, particularly in small-scale production, which can be distributed locally without incurring transmission costs and associated losses. Similarly in the present legal framework, self-generation and cogeneration is permitted, but only within individual private sector units. These units have no incentive to make their surplus power available to others. The legal framework needs an overhaul to become private sector friendly.

Under the constitution, both federal and provincial governments can generate power, however, it is the sole prerogative of the federal government to seek private participation in power generation. Under Power Policy 2002, however, the federal government has delegated the authority to provincial governments to implement private sector power projects up to 50 MW. A number of agencies and organizations are involved at both federal and provincial level for power generation/distribution as well as its regulation across the country. Some of these organizations include WAPDA, PEPCO, DISCOs, NEPRA, PPIB, AEDB, etc at the federal level and PPDB and PPDCCL at the provincial level (Punjab). While most of the issues in the policy, legal and institutional regimes can be best dealt at the federal or provincial levels, at the district level, some ideas can also be explored.

3.1.2.5 Private Participation in Power Generation

The Policy for Power Generation Projects 2002 calls for Private Power & Infrastructure Board to provide one window support at federal level for projects above 50 MW. It also supports the provinces being the main drivers and catalyst for marketing and coordinating projects of less than 50 MW. Furthermore, the federal government is also drafting a PPP policy to enhance private sector participation.

At the provincial level Punjab Power Development Board has developed micro-hydel inventory and is seeking private sector's proposals to finance and construct some micro-hydel power plants. Punjab Power Development Company Limited, on the other hand, is exploring the options of undertaking power projects of more than 50 MW in joint venture mode.

Bagasse, the residue of cane at the sugar mills, has a calorific value of 2000 kcal/kg and as such is a potential source of power. Cogeneration from bagasse produces electricity in addition to heat that is required for the process. There are 83 sugar mills in the country, which have the capacity to produce a total of 3000MW of electricity.

While these private and JV projects are being handled at the provincial level, the idea of captive power plants³² can be explored at the district level.

The National Policy for Power Cogeneration by Sugar Industry encourages sugar mills on cogeneration of electric power. The following incentives have been provided:

- The tariff is levied for 30 years for a unit producing more than 60 MW at a minimum net thermal efficiency of 28%.

³² NEPRA has allowed Captive Power Plants to sell surplus power to the National Grid or Disco with rates negotiated mutually

- To accommodate crushing seasons, liquidated damages will be waived off to sugar mills, for supplying power to national grid below capacity.
- After the tariff is determined by NEPRA, a letter of support will be issued by PPIB.
- The Sugar Mills Association will propose tariff on the basis of a feasibility study.
- The standard power purchase agreement will be modified to accommodate cogeneration.
- The incentives available to independent power plants will be given to cogeneration plants.

3.1.3 Recommendations

Following are some of the recommendations to improve the shortfall in electricity supply and demand in the Bahawalpur Circle. It is important to note that only a few of these can be implemented at the local level and most of them can only be implemented at the provincial or federal level.

- An enabling legal framework should be created to allow decentralized power production and distribution, especially at a small scale. The current reform initiatives mainly aim at organized private power production at large scale. They are geared more towards incentivizing foreign capital investment, rather than encouraging local initiative at the small scale. A decentralized and deregulated regime would allow local production and consumption, which, *inter alia*, will save transmission costs and losses. It is proposed that a comprehensive analysis of the existing legal framework be commissioned and proposals for legal reform be formulated with the express mandate of incentivizing small-scale production from conventional and non-conventional sources.
- In the aftermath of such legal reform that facilitates small-scale power generation and distribution, Bahawalpur Circle can take the lead and advertise request for proposals for innovative small-scale power generation projects. These proposals should be evaluated locally and the more promising ones should be supported from a fund specially created for this purpose.
- Alternate energy production should be encouraged. Use of solar panels for domestic consumption can be demonstrated as part of a pilot project.
- Other avenues of electricity generation also need to be explored to reduce the supply-demand gap insofar as possible. For example, solid waste can be used as a raw material to fuel the generation process. Bahawalpur district produces around 600 tons of solid waste per day. A feasibility study should be urgently conducted to assess the comparative viability of power generation through this method.
- Serious efforts should be made to bring down transmission and line losses and to check power theft. It may not be possible to eliminate either the line losses or the power theft, but it is quite possible to bring these down drastically. For this, MEPCO's Bahawalpur Circle will have to put its house in order and invest in infrastructure improvement.
- Innovative arrangements to involve consumer organizations in power distribution need to be examined. The possibility of bulk provision to industrial estates and other localities may be explored. This would make the distribution system more responsive to consumer needs and would give the consumers greater flexibility to internally adjust demand and supply
- Bahawalpur has an extensive irrigation network. The Irrigation and Power Department has identified a number of locations where sufficient slope is available for installation of a small turbine. Small hydroelectric turbines can be installed on such locations on canals and distributaries to produce electricity for consumption in nearby villages and towns, and for addition to the national grid. This shall be an environment friendly and sustainable system of power generation.

3.1.4 Proposed Development Projects

3.1.4.1 Energy Conservation

Along with beefing up the power supply, the demand for power also needs to be rationalized. This can be done at the local level. Multiple steps can be taken to conserve power and rationalize demand, such as:

Awareness Campaigns: The district government can initiate awareness campaigns to rationalize demand. These campaigns can be focused on traders and retailers. Subsequently mass awareness campaigns can also be developed.

Energy Audits³³: The government needs to promote energy audits for various industrial entities. This can be done through collaboration with one of the donor-funded projects, focused on energy sector, by which government or donors can subsidize energy audits as well as link the clients with quality auditors.

District Energy Conservation Plan: The district government should develop a district conservation plan to take all possible measures at the district level to conserve energy. Such an initiative at the local level is likely to have a more meaningful impact at rationalization energy utilization.

Establishment of District Energy Office: The district government may also consider a dedicated energy office/cell at the district level to institutionalize the conservation measures.

Use of CDM and Carbon Credits: The district energy office/cell may look at undertaking projects for power generation and conservation through partnership with the private sector and exploring Clean Development Mechanism (CDM), whereby some of the project costs can be offset by carbon credits.

3.1.4.2 Waste-to-Energy

The National Institute for Biotechnology and Genetic Engineering, Faisalabad, School of Biological Sciences, Lahore, Institute of Biotechnology, Lahore, Biotechnology and Food Research Centre, Lahore and Shakarganj Sugar Mills Ltd Jhang have pooled themselves up to act as the executing agency on a 'power from industrial and agricultural waste' project sponsored by the Ministry of Science and Technology. Under the project, additional laboratories would be established which will be properly equipped at the respective campuses of executive agencies. It has been planned to produce power by utilizing residues like wheat straw, rice husk, cotton sticks, corn cobs, kallar grass and other salt tolerant plants. The project is proposed to be completed during 2007-2010, with an estimated cost of PKR 295.4 million.

There is plenty of garbage in the urban areas of the district from which power can be produced. Plasmafication is a method of waste management that uses AC and DC currents on plasma torches to create an electrical arc that demolecularizes matter. Plants use a plasma arc reactor as the central part of the waste disposal process. The thermo-chemical processes generate hydrogen gas, recoverable metals, glass, carbon black, and a synthetic gas mixture of H₂, CO, and N₄, which can all be captured and resold.

The Plasma Arc reactor totally destroys all waste entering into the system. It burns clean and leaves no waste, therefore does not have residues to be disposed of in landfills. The process produces recyclable, saleable, non-hazardous elemental end products.

A unit with 100 tons of garbage input of suitable mix can produce a power up to 12MW. As a rough cost, a plant of this capacity may cost USD 15 million excluding land cost. Multiple modular

³³ An energy audit is an inspection, survey and analysis of energy flows for energy conservation in a building, process or system to reduce the amount of energy input into the system without negatively affecting the output(s).

projects in different localities of the urban areas of Bahawalpur district can be proposed with a project summary given in box below:

Table 4 Power from Garbage Project Summary

Project Title: Power from Garbage	Rationale: Garbage has adequate calorific value from which power can be accrued
Location: Urban units of Bahawalpur District	Implementation Agency: TMAs
Duration: 6 months	Legal/Institutional: Permission from NEPRA
Expected benefits: 12MW per unit	Approx cost: USD 15 million

3.2 Irrigation

Pakistan has diverted water from its western rivers to replace reduced flows in the Sutlej valley region. A number of new link canals and barrages have been built by the Pakistan Water and Power Development Authority. The biggest of these link canals is the Chashma-Jhelum link joining the Indus River with the Jhelum River, with a discharge capacity of some 21,700 cubic feet (615 cubic metres) per second. Water from this canal feeds the Haveli Canal and Trimmu-Sidhnai-Mailsi-Bahawal link canal systems, which provide irrigation to the Multan and Bahawalpur divisions in the lower Punjab. The main source of irrigation in the district of Bahawalpur is Lower Bahawal canal, Punjnad canal, Abbassia canal and Upper Qaim canal.

The total reported area in Bahawalpur is 1.31 million (Figure 22 and **Table 5**), with bulk of it being cultivated. Almost 82% of cultivated land falls within brackish water area, whereas almost 57% of the land is irrigated by canals.³⁴

3.2.1 Supply Demand Gap

The supply and demand situation on a typical day for the year 2008-09, in Bahawalpur district is given at

³⁴ Source: Bahawalpur Portal 2009

Annex -3 . Both branch canals (BC) and distributaries (D) are indicated, as well as a distinction between their being perennial (P) or non-perennial (NP).³⁵It also shows that the Irrigation Department is able to provide only 40% of the designed water in their branch canals and distributaries.

Area Type	Acres
Total reported area	1,316,202
Cultivated area	991,815
Uncultivated area	324,387
Forest area	12,064
Irrigated Area	
Irrigated by canal	277,518
Irrigated by tubewells	210,527
Canal and tubewell	503,773
Brackish Area	
Area in sweet zone water	176,815
Area in brackish zone water	815,000
Total cultivated area	991,815

Table 5: Irrigated Areas of Bahawalpur

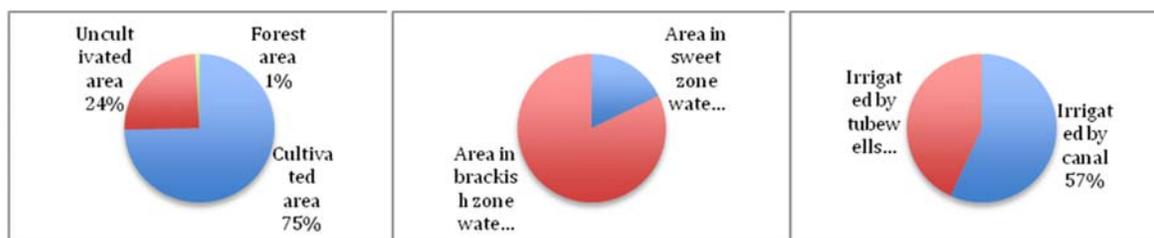


Figure 22: Irrigated Land of Bahawalpur

3.2.2 Irrigation Department

The Irrigation and Power Department of the Punjab is an age old organization, which has been using one of the largest irrigation system established by the British and has been meeting the province's ever growing demand since the beginning.

The management of provincial water resources is governed by a set of laws first promulgated as the Northern India Canal & Drainage Act, 1873. Even with various amendments, addendums and deletions this Act has survived through the last century under different sets of statutory arrangements – Government of India Acts, provisional constitutions in Pakistan, and constitutions of 1956, 1962 and 1973. This Act and its amendments lay down the fundamental principle of access to irrigation water as a matter of right, not as a marketable commodity. Owning land in a location which has access to canal water (commanded area) automatically entitles a land owner to canal water in lieu of water rates (a service charge) that is collected as part of the land revenue. The charges for supply of irrigation water are highly subsidized by the government from earliest days until today. Over time, subsidized water as a matter of right and exemption from income tax

³⁵ Source: Punjab Irrigation Management Unit

on agriculture incomes became so strongly entrenched into the psyche of the system that it took the World Bank and IMF no less than a decade to goad the government of Pakistan into abolishing the land revenue charge by replacing it with a presumptive income tax on agriculture. The Act is an airtight set of rules and regulations for management of barrages, canals, manors head works, water outlets and farmers' water courses. The powers and functions of the Provincial Irrigation Departments are derived from this Act.

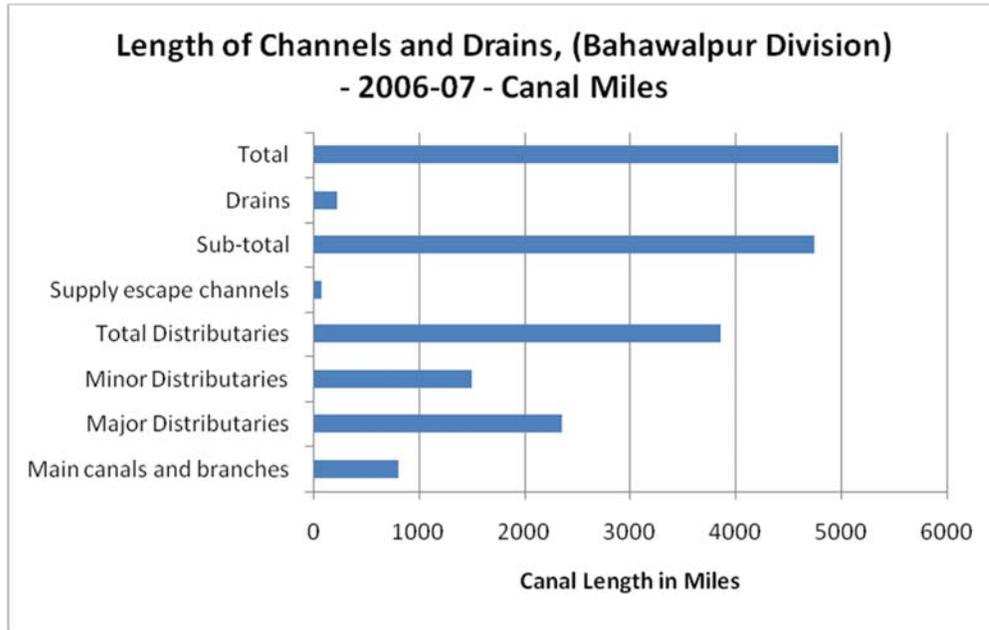


Figure 23: Length of Channels and Drains in Bahawalpur Division (2006-07)

To effectively manage the irrigation infrastructure of Punjab, institutional reforms were introduced in the irrigation system under the Punjab Irrigation and Drainage Authority Act in 1997, focusing on decentralization, participatory management, improved services and sustainability of the infrastructure. Loans for these reforms were provided by the World Bank. The management functions of various entities were imparted to newly established institutions including Punjab Irrigation and Drainage Authority (PIDA) at provincial level (representation of farmers and the government); Area Water Boards (AWB) at canal command level; Farmer Organizations (FOs) at distributaries level; Khal Panchayats (KP) at watercourse level and Punjab Irrigation Department (PID) for overall policy regulation and overseeing of reforms.

A legal framework was provided constituting various bodies and rules including the Punjab Irrigation & Drainage Authority, Act 1997; The Area Water Board (Rules) 2005; Farmers Organizations (Rules) 1999, replaced with new Rules, 2005; FOs (Elections) Regulations 1999; FOs (Registration) Regulations 1999; FOs (Financial) Regulations 2000; FOs (Conduct of Business) Regulations, 2000; and Irrigation Management Transfer Agreement between FO and AWB/ PIDA.

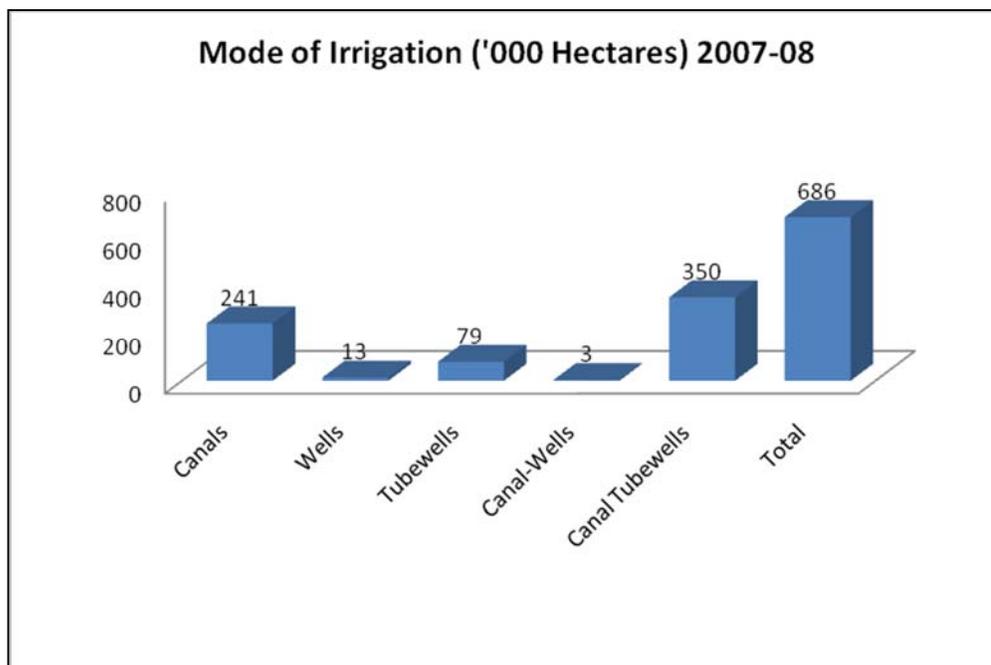


Figure 24: Mode of Irrigation (2007-08)

After implementation of the above reforms, PIDA took over the assessment and collection of Abiana (water charges), with a purpose of making the system self-sustaining. The Area Water Boards took control of the canal command level and also started implementation of the programs. Farmer Organizations started to operate the distributaries in their jurisdiction, to distribute waters equitably, to undertake repairs and maintenance, and resolve water related disputes by themselves. Khap Panchayats started similar functions at the water courses level. However, despite all these apparent efforts, 13 years later, problems of the irrigation sector appear to have worsened, rather than improved.

3.2.3 Problems and Issues

For the last one decade, Bahawalpur has been receiving only 40 percent of its share of water. The local landlords have increasingly sunk tube-wells to keep their business afloat. As the water quality deteriorated, resulting in low per acre yield, farmers turned toward the use of fertilizers and pesticides to sustain their profits.

3.2.3.1 Planning Misalignment

It is pertinent to note that, originally, the purpose behind the development of a canal irrigation network was to spread the available fresh water as thinly as possible over the largest possible area with the specific purpose of providing subsistence agriculture and preventing famines caused by droughts in Northern India. The planning and spread of irrigation infrastructure was not designed to meet the requirements of a dynamic and commercial agriculture industry; only to provide for subsistence agriculture.

3.2.3.2 Water as Commercial Commodity

Since canal water is a matter of equity, not market driven, and its distribution is bound by a strictly adhered to weekly schedule or timetable, there is no exchange of water as a commodity. But since the use of tube wells, wherever installed, has been quite extensive, its water is being sold and bought within the command area of the tube well at commercial rates. The prevalent rate of ground water from a 1 cusec output tube well is around PKR 200.00 per hour for an electric driven installation. For diesel engine or tractor driven tube wells the rates are much higher and mostly unaffordable by farmers unless they are desperate for subsistence e.g. water for growing fodder for their animals or wheat for self-consumption. It can be assumed, therefore, that a large scale,

market driven, water market does not exist and that is a constraint for development of high-value, commercially driven agricultural productivity.

3.2.3.3 User Governance

PIDA, originally funded by the World Bank, was formed to bring the entire canal system under the control of farmer organizations to eliminate the bureaucratic interference of the Irrigation Department. However, PIDA has not been able to achieve this task effectively and the role of farmer organizations still needs to be institutionalized.

3.2.3.4 Other Constraints

Additional constraints that continue to inhibit growth in the irrigation sector include:

- Lack of capital assets and finance
- Lack of potable or piped water
- High electricity prices and interrupted supplies
- Cost, quality and access to agricultural and non agricultural inputs
- Transportation problems in more remote outlying areas
- Outdated machinery
- Uncertainty of Govt. Economic Policies

Recently, the costs for rehabilitation and improvement of the irrigation system in Punjab were spelt out³⁶:

³⁶ Source: www.punjab-prmp.gov.pk/.../Presentations%20by%20departments/I&P.ppt

Table 6 Estimated Costs of Rehabilitation and Improvement of Irrigation System

Head	Cost (PKR in billions)
Canal Remodelling / Modernization	50
Renovation of Structures	20
Barrage Remodelling / Modernization	30
Selective Canal Lining in SGW Areas	10
Communication / MIS	1.5
Training and HRD	0.5
Drainage Rehabilitation	20 – 30
Flood Protection	10 – 20

3.2.4 Current Initiatives

3.2.4.1 Institutional Reforms in Irrigation

Decentralization and transformation of Punjab's colossal irrigation system has been undertaken through certain institutional reforms, with the promulgation of the Punjab Irrigation and Drainage Authority Act, 1997. The World Bank has provided loans for the reforms. Since then, the irrigation management transfer reforms are being managed by the Irrigation Department i.e., under public sector infrastructure. The reforms in irrigation management mainly focus on decentralization, participatory management, improved services and sustainability of the infrastructure. Under the implementation of reforms process, the management functions of various entities have been transformed and functions of Irrigation

Punjab Irrigation System Improvement Project 2009-2013

With the presently formed water resources management strategy, policy and institutional improvements, a project has been launched comprising of lining, rehabilitation and up-gradation of distributaries and minors in three irrigation zones of Bahawalpur, DG Khan and Faisalabad. The project is in line with the medium term irrigation sector reform program which aims "to improve the management and maintenance of irrigation system ensuring physical and financial sustainability". Major components of the Project are as follows:

- Sub Project I – Bahawalpur Irrigation Zone
- Sub Project II- D.G. Khan Irrigation; and
- Sub Project III-Faisalabad Irrigation Zone

Civil works comprises improvement of 236 Distributaries and Minors inclusive of 1162 km & 887 km rehabilitation / up-gradation of Channels.

JICA has financed this project in the three irrigation zones. This project is expected to be completed in June 2013 at a cost of PKR 6260 million. Punjab Government is contributing 12% share and it is expected that 6,552,40 hector CCA will be benefited by this project

Department are shared by newly established institutions viz. Punjab Irrigation and Drainage Authority (PIDA) at provincial level (representation of farmers and the government), Area Water Boards (AWB) at Canal Command level, Farmer Organizations (FOs) at Distributaries level and Khal Panchayats (KP) at Watercourse level. Keeping in view the importance of irrigation sector in the overall economy of the country, and the role played by the IPD, various international donor agencies like World Bank, ADB and JICA are also funding irrigation projects.

3.2.4.2 Transfer of Control of Head Works

The Punjab Irrigation Department has transferred control of Sulemanki and Islam head works to Bahawalpur zone and Sidhnai-Mailsi Link Canal to Multan zone.

It has been decided to form committees, comprising two local MPAs and representative of district Nazim, to ensure supply of water at tailends of canals and raid outlets for checking water theft.

These would meet every fortnight and review their progress. Raiding parties and the assistance of private security checks has been organized to check canal water theft. The department's vigilance director has been asked to conduct raids.

Deepwater Pumping by Solar Energy

The World Water Corp. has signed contracts with the Cholistan Development Authority (CDA) and the Punjab Rangers (Border Police) to establish drinking water stations in the six million acre area of the Cholistan to aid the herdsmen and cattle stranded under drought conditions. The work has started with hydro-geological studies followed by drilling.

Wells as deep as 1000 feet will be drilled and be equipped with powerful newly developed solar pumps over several hundred water stations in the next 24-36 months. The cost of one well is around \$12,500. The full effort will total several million dollars. The work with the Punjab Rangers also starts immediately, with 6 sweet water wells followed by at least 60 stations. Some desalination may be required if the water remains brackish. Each station will cater for some 500 herdsmen and their cattle. The overall project costs \$4 million over 2 years.

The officials decided to close down Scarp tubewells for six months in Bahawalpur where the water level had gone down. The farmers from area were also offered relief in abiana (water cess) because water was not provided to it through Awami Canal. The capacity of the Baloki-Sulemanki link canal has been increased from 18,000 cusecs to 22,000 cusecs to improve water supply to Bahawalpur zone. Similarly, the Marala-Ravi Link canal has been getting 22,000 cusecs instead of 13,500 cusecs. A sum of PKR 780 million has been spent on these projects.

3.2.4.3 Long Distance Pressurized Water Pipelines in Cholistan

In order to supply drinking water to the wandering population and livestock of Cholistan, long distance pressurized water pipelines have been laid of a total aggregate length of 270 km. A number of 18 tube wells (one cusecs each) have been sunk in the canal areas where sweet water could be available. These tube wells supply water to these pipelines under pressure including intermediate booster pumping and reservoirs. The water supply however, is very limited and does not meet the demand of the population and the livestock. It is very expensive and requires electric power to run the tube wells, which is often very short. Such a project though has a great survival value for the population and the livestock, but cannot be replicated on a larger scale.

3.2.4.4 Investments in Improvement of Irrigation Network

In recent past, there has been some emphasis on increasing the conveyance efficiency by brick lining as many water courses as possible. Government of Pakistan's On Farm Water Management Project (OWFM) is a case in point. Supported by the World Bank, the Asian Development Bank and the US Agency for International Development, the Project during its various phases has successfully brick lined a large number of water courses in various parts of Pakistan (28,000 water courses in Punjab, 29,000 in Sindh, 10,000 in Khyber Pakhtunkhwa, 16,463 in Baluchistan, and 3,537 in Pakistan-administered Kashmir by 2005-06).

Another major initiative towards achieving this objective is the Rs. 12 billion 10-year asset management plan of the Irrigation Department, Government of Punjab for phased implementation of a number of interventions to rehabilitate its water distribution system.

3.2.5 Recommendations

- Considering the success of the OWFM project in improving water conveyance efficiency at the water course level, it is recommended that the remaining water courses in the district be also brick lined through a separate project by the Government of Punjab.

- The irrigation network in the district needs major investments to become a modern and efficient water distribution system. There are a number of channels in Bahawalpur district that have not been included in the above mentioned asset management plan of the Irrigation Department. They may need one or more of the following: de-silting, concrete lining, and/or embankments. These left-over channels also need to be taken up as these are as much in need of investment/up-gradation as any other canal/distributary. The Government of Punjab needs to implement a separate project to do this.
- Water use efficiency needs to be improved. Even after the irrigation system is rehabilitated to carry and convey optimal level of discharge, it is unlikely to meet farmer needs if the current wasteful practices of flood irrigation continue. A massive program of farmer education needs to be implemented by OWFM to create awareness on modern and more efficient modes of irrigation, such as sprinkler and drip irrigation.
- There is a critical need to improve the financial sustainability of irrigation schemes³⁷. The first and foremost step in this regard is to introduce a gradual cost recovery regime, through an initial grace period to moving on to operation and maintenance costs borne by the beneficiaries. Later on, it can be explored to recover cost or even the total cost of the schemes, in line with international best practices. In addition, the users fee should also be ascertained keeping in view the cropping patterns and estimated farm-level profitability. Furthermore, collection of this user fees also needs to be improved. Once this regime for sustainability is introduced, the concept of efficiently working Water User Associations can take strong roots in the district and the Irrigation Department can move on to more innovative means, such as complete privatization of canals, etc. Also, in the longer term, once the WUAs are working efficiently and effectively, they must be supported through well-designed credit facilities and bank loans so that they can undertake small-scale irrigation schemes, as per the local requirements.

3.2.6 Proposed Development Projects

3.2.6.1 De-silting, Lining and Rehabilitation of Canals, Distributaries and Water Courses

There are a number of channels in Bahawalpur district that have not been included in the existing Irrigation Department's System Improvement Plans. These are indicated by '**' in

³⁷ The recommendations to improve financial and operational sustainability of irrigation schemes go hands in hands with complementary interventions in the agriculture sector (explained in subsequent sections). The user fees can be effectively recovered and willingness-to-pay can only be induced if the farmers are hedged against the market risks through appropriate price stabilization mechanisms. Effective extension services can also help these farmers in rationalizing their cropping choices and increasing productivity.

Annex -3 and their lengths have been shown in RDs. These channels fall under three categories; (i) those which need de-silting, (ii) those which need concrete lining, and (iii) those which need embankments³⁸.

A Project has been proposed with the parameters described below (Bahawalpur District Irrigation Channels Improvement Project):

Bahawalpur District Irrigation Channels Improvement Project

Purpose: To meet the shortage of water at the tail ends of the canals, distributaries and water courses.

Rationale and/or Criteria for Selection: Because of silting, damaged embankments, seepage and problems at the heads, the existing canals, distributaries and water courses are not being able to provide water to their end-users up to the designated design capacities, while the demand has risen beyond it. Originally foreseen cropping instantly has long been superseded.

Benefits from the Proposed Project: Water will be available to the end-users to the extent the existing canals, distributaries and water courses can provide after these are improved by de-silting, provision of lining, repair of embankment, and remodeling of their heads. When more water is available, 'abiana', the revenue to the provider, will increase. From the selected extent of the works, it is estimated that an addition to the revenue will be of the order of PKR 450 million per year.

Technology: There will be stretches of lengths where de-silting will be done. At other places, where water gets lost by seepage to underground, the beds and the sides will be lined with brickwork or concrete. In certain portions, where the embankments are damaged, they will be repaired. There are other places, where the heads have become inadequate due to level difference, or are choked. At these places, re-modeling may be carried out.

Activities to be Carried Out A 10 years major rehabilitation program under Irrigation Departments System Improvement Plan costing PKR 12 billion is already being executed. Some canals in Multan zone are included in this Plan, but many others are excluded. In this proposed project those canals, distributaries and water courses have been selected which are not presently a part of the existing Plan and whose improvement is do-able. Participation will be the basis of this project. There will be three main partners in this Project: The Irrigation and Power Department, which will survey the system, identify the needs and do engineering; execution agencies who will provide civil works on build operate and transfer basis; and end-users who will take over the surveillance and maintenance. FIRM's or USAID funded CRISP's funds may be provided on matching grant basis; to cover the tools, plant and machinery.

Project Location: All Canals, distributaries and channels in the district of Bahawalpur, that have so far not been covered in the ongoing rehabilitation program.

Approximate Cost: The approximate total cost of these works is over PKR. 731.5 million. Survey and engineering component will cost PKR 70 million approximately, civil works is PKR 500 million and the remaining PKR161.5 million are costs for tools, plant and machinery. The cost of operation and maintenance is estimated to be PKR 250 million per year. The expected revenue is PKR 450 million per year. Thereby the capital cost can be recovered in 5 years' time.

³⁸ The unit costs of these works have been estimated from the similar works being undertaken per foot RD as (i) Rs500 per Rft, (ii) Rs 750 per Rft and (iii) Rs 1000 per Rft respectively. On this basis the costs have been listed in

3.2.6.2 Solar Ponds Project for Cholistan

Pakistan is currently facing a dire shortage of water and power. The problems are going to grow in future years to come, unless checked in time. Neither the conventional commercial procurement nor usage of new technologies has produced any significant impact. Advanced technologies for addressing the shortage are available and have been successfully applied elsewhere in the world. But, before adopting such approaches in Pakistan and making them effective and sustainable, these need to be customized.

Cholistan is rich in a lot of different potentials, but has shockingly high poverty levels amongst a population of around 140,000, whose livelihood involves raising livestock and producing milk. Water shortage is an acute problem in Cholistan. The tail ends of canals and channels have some water in Kharif seasons but no waters in Rabi. In order to store waters in Kharif and to supply in Rabi, the government has constructed reservoirs called 'tobas'. There are about 200 tobas constructed by the government. Some tobas have been constructed by private people as well. A typical toba is a pond on one acre land and is in fact a 20 ft deep pit. It is lined with a layer of polyethylene sheet for water tightness. A toba costs about Rs 1m. Since the waters are short even in Kharif seasons now, most of the tobas remain empty, resulting in wastage of resources.

A solar pond is basically a pond of brackish water of the depth just about that of a typical 'toba'. All that is needed is a tube well installed nearby to fill the pond with brackish water. The gradient of solar radiation penetrating into the depths of water sets up an ionization process. It splits the water into a layer of sweet water, which being lighter comes to the top and a layer of concentrated brine water, which being heavier slowly settles at the bottom. From the top surface, sweet water can be pumped out and supplied to the fields. Care has to be taken in taking this water out that water should remain absolutely still. Any turbulence or eddy currents have to be restricted by providing floating membranes and finned outlets. Another interesting phenomenon sets in. The solar radiation, because of difference in refractive properties of the layers, starts getting trapped into the deepest levels. The temperatures there can rise as high as 80°C. The hot brine water is sucked smoothly and silently from the bottom layers. A minimum external heat is required to it to make it turn into superheated steam. The steam is fed to steam turbine generator set, to produce electricity. So there is double benefit from the solar pond: sweetened water and usable electricity. There is a third benefit as well. The brine solution is thrown onto drying beds. Salt is extracted from it by natural vaporization and can be used as a commercial commodity.

Underground water is available to the farmers at shallow depths. But it is so brackish that the TDS count can be as high as 27,000ppm. Farmers also have access to tube wells, which run on diesel, since there is no electricity. The diesel expenses are a big drain on their incomes, but they have no choice but to use them. The tube wells supply brackish water to the fields and cause the field to turn barren for the next 5 years. The crop grows just once and they move on to the next patch of uncultivated land. This is a colossal waste of resources but their survival depends on it. Incidentally, Cholistan is a place where sun is available all year round. Scorching heat can raise the temperatures as high as 52°C. Solar ponds technology is a good fit for this area. The technology has been successfully used in Egypt, Mexico, United States and more so in neighboring Rajasthan in India.

One tube well costs approximately PKR 150,000. Piping, channels, sweet water pump, brine water pump and a steam turbine may cost another PKR 250,000. One solar pond of one

The largest operating solar pond for electricity generation was the Beit HaArava pond built in Israel and operated up until 1988. It had an area of 210,000 m² and gave an electrical output of 5 MW. The first solar pond in India (6000 sq. meters) built at Bhuj, by the Ministry of Non-conventional Energy Sources, successfully demonstrated the expediency of the technology by supplying 80,000 liters of hot water daily to the plant. Thereafter a series of solar ponds have been built and operated in India. The 0.8 acre solar pond powering 20% of Bruce Foods Corporation's operations El Paso, Texas is the second largest in the U.S. It is also the first ever salt-gradient solar pond in the U.S.

acre size, developed on the existing *tobas*, will provide sweet water sufficient for about 10 acres of cultivation. In addition there will be electricity sufficient to run not only the tube wells, but to illuminate the nearby village around it.

Around 200 existing *tobas* can be converted into solar ponds in the shape of a project. Project parameters are described below (**Error! Reference source not found.**):

Bahawalpur Solar Ponds Project

Purpose: To convert existing storage pits called '*tobas*', into solar ponds for de-salination of groundwater and generation of electricity.

Rationale and/or Criteria for Selection: Cholistan is short of water and electricity. Ground water is available but is saline. Storage pits already exist which can be converted into solar ponds.

Benefits from the proposed Project: From 200 *tobas* working as solar ponds, some 200 cusecs of sweet water and 20MW of electricity can be generated. This alone is a source of about PKR 160 million of revenue per year.

Technology: There are over 200 *tobas* for storage of water already constructed but are mostly dry because of shortage of water at tailends. Groundwater is saline. If groundwater is pumped and stored in these *tobas*, brine water settles down and sweet water comes to the top. Sweet water is available for irrigation. Brine water comes to the top. Sweet water is available for irrigation. Brine water gets hot at 80°C because of trapped solar radiation. Heat can be utilized to produce electricity.

Activities to be Carried Out:

- Construction of 200 tube wells of 1 cusecs each
- Repair/refurbishing of existing *tobas*
- Outflow pump and water courses
- Brine water suction pump, boiler, steam turbo-generator.
- Distribution of electricity.

Project Location: Participation will be the basis of the Project. Proposed partners will be: Irrigation Department and Cholistan Development Authority who will provide *tobas* & manpower; A technology and training provider company; and landowners collectively who will run and operate the plants.

Approximate Cost: The approximate total cost of the Project is PKR 200 million. Civil work component will cost around PKR 60 million. Plant and equipment part is PKR 110 million. Working capital is PKR 50 million per year. Expected revenue is PKR 160 million. Thus the capital cost is expected to be recovered in 3 years' time.

3.2.6.3 Arid Aquaculture

Dry lands cover as much as 40 percent of the global land area and are home to nearly a third of the world's population, 90 per cent of whom live in developing countries. The U.N. Climate Panel has forecasted that global warming is likely to strain water supplies and cause deserts to spread in the coming years. Solar energy, ecotourism and even fish farms can create new jobs in arid regions of developing nations as global warming strains scant water supplies. A four-year study conducted by the UN University's International Network on Water, Environment and Health (INWEH), on the dry-lands in eight countries, ranging from China to Tunisia, showed that people could shift to less water-intensive farming and set up new businesses, if they are helped by technology and have access to micro-credit.

There are many successful arid aquaculture examples from around the world. A project in Tunisia is developing ecotourism on the fringe of the Sahara desert. In Jordan, people are making "dry-land soaps" based on olive oil and fragrances from local aromatic plants such as lavender, geranium, pomegranate and mint. In Egypt, solar panels are used to power a desalination plant, bringing drinking water from underground. As a spinoff, Egypt has started manufacturing solar-powered desalination units for use elsewhere -- along the coast, salty water from the Mediterranean often seeps into groundwater.

One project near the Cholistan desert in Pakistan showed that largely untapped brackish water could be used for farming fish, a new source of protein for local people that could also be sold in local towns. Ponds used for "arid aquaculture," using inland fish able to withstand high salt levels, produced more food than if the same volume of water was used to irrigate fields. Sludge from the ponds could be used as fertilizer. Some projects can be developed around the theme of arid aquaculture.

3.3 Municipal Services

3.3.1 Urban Water Supply and Sanitation³⁹

Supply of clean drinking water, has always been a critical issue faced by a major chunk of both rural and urban population, however, the severity of the problem is much more in rural communities, where many villages either have brackish water or do not have access to water at all. The communities close to industrial areas face the threat of contaminated water, which expose them to serious health risks. According to an estimate, approximately 47% of population of Punjab relies on unsafe and distant water sources such as wells, rivers, and rain-fed/canal-fed ponds⁴⁰. Poor sanitation facilities, mostly owing to low income or limited awareness of rural households, pose another major problem, responsible for various health-related hazards.

Ground water in the municipal area of Bahawalpur is generally saline except along the irrigation canals and the river. The depth of water table varies from 5.5 to 10 meters. Recharge from the canal and river is balancing the extraction presently. The river Sutlej is the main stream of the area, which flows from Northeast to the Southwest. It is the main sources of water supplies and recharge of the groundwater body (in addition to precipitation). The alluvial plain of Upper Indus Basin is also fed by an extensive canal irrigation system. Unconsolidated deposits are widely distributed in the form of alluvial fans. The alluvium is mainly composed of clay, well assorted sand and silt. Near Bahawalpur, the Thar desert with its finger-like projections of desert and alluvial plain adjoins. In such areas the alluvial projection has sweet water in so-called sweet water pockets. Sand is fine to medium grained. Recent hydrological studies have shown that highly permeable material serves as an aquifer, which is suitable for installation of more than one cusec capacity tube wells, however, water is saline at greater distances from the rivers. Presently there are two types of suitable sources for drinking water supply: 1) Seepage along the Bahawal canal; and 2) Sweet water tube wells along the river (between the river and the railway line).

³⁹ Much of the information in this sub-section has been extracted from Urban Water Supply and Sewerage Reform Strategy; Status Quo Report; The Urban Unit, Governemnt of Punjab

⁴⁰ ADB Completion Report; Pakistan: Punjab Community Water Supply and Sanitation Sector Project; June 2008

Hydrological maps show that there is enough water for the future. Seepage or recharge along the canal is also 0.46 maf per year (0.567 mill m³/yr). It is also a permanent source. In addition to the 1 cusec tube wells now operating in the area, additional tube wells can be installed to meet demand. A second option is direct supply from the canal and treatment of the water. Surface water could be available from the canal in quantities to be negotiated with the Irrigation Department, if need arises.

3.3.1.1 Key Issues

Some of the key issues in water supply and sanitation sector in Bahawalpur City include the following:

Unaccounted for Water: The TMA of Bahawalpur City estimates 40% unaccounted for water (UfW). However since there are no water meters, this figure has to be treated as approximate.

Sub-optimally functioning infrastructure: Many tube wells (more than 12) are also not operating in the Bahawalpur city. (Only 6 tube wells of 1 cusec (28 liters per second) capacity located at different sites in the city are operating) The total water production is 168 liters per second. The water is supplied for 8 hours and total water production is 1.5 MGD (6804 m³/day). The mostly commonly cited reasons for non-functioning of tube wells is that they are bore choked.

Low water quality: There are indications that the canal seepage water abstracted is contaminated with bacteria. Arsenic may also be a problem in this area. Users complain of poor water quality. Salinity may be high from some wells.

Lack of monitoring of water quality: Neither raw water nor drinking water quality is monitored on a regular basis in Bahawalpur.

Poor distribution network: Water is contaminated in the distribution network through contact with sewage and other pollutants. Water quality at the tap is not monitored regularly. The pollution with agricultural chemicals or heavy metals is not monitored.

Low service coverage 40% of the area is covered by the piped water system. With regard to the population covered, TMA says 10-15% population is served water through pipes. Another major problem of the town is the inadequate network of sewers, open drains and lack of facilities for disposal of effluent. The existing sewerage system (including the open drains) covers only 50% of the built area. The piped sewers have only been provided on the main roads, and most of the streets are provided with open drains only, which are connected to sewers. The total length of piped sewers is 175 km. The sewerage system has approximately 24,000 connections according to TMA information. There are 5 existing wastewater disposal (pumping) stations, which are periodically out of order.

No waste water treatment: At present there is no facility for treatment of the waste water. The wastewater pumped from disposal stations is utilized without any treatment by farmers for irrigation, presenting a potential health hazard. The excess wastewater from the disposal stations is pumped either into the Sutlej River or into canals.

Under-staffing: The total number of staff in the TMA is 1,113 and 245 in the Infrastructure and Services section. Almost 44 employees are working on water and sewerage. Per 1,000 connections, the TMA Bahawalpur applies 8 staff (assuming the unofficial number of water connections to be around 5,000). Based on the number of sewerage connections (24,000) the staff ratio would be much lower (around 2).

No preventive maintenance: No preventive maintenance program exists. The problems reported (complaints) are repaired within 2-3 days.

No focus on private sector participation: MA Bahawalpur claims to have contracted out billing collection in the past but it did not work satisfactorily because of the high charges they had to pay. Apart from this the city has not gathered any experience with private sector participation in

the water and sewerage sector. The TMA is of the view that the Punjab Government won't allow outsourcing or privatization of WSS services.

Illegal connections: More than 5,000 illegal connections exist in the TMA of Bahawalpur city.

Primitive tariff and billing structure: Household and commercial tariffs are a flat rate for all customers without distinction. Industrial tariffs are according to pipe size of the connection. Separate sewerage fees are charged. There is no established tariff calculation methodology to guide tariff adjustment procedures. The tariffs are set by political decision. No bulk or individual meters are installed on the system. Collection rate is also only 25% of the amount billed for water supply and sewerage.

3.3.1.2 Recommendations

Some of the recommendations to improve urban water supply and sanitation sector are as follows:

- TMA Bahawalpur is currently understaffed, especially in the water supply and sanitation sector and therefore should be supplemented with additional staff. It may also be explored to separate the WSS function and transforming it into an operationally, administratively and financially autonomous entity.
- The collection of data is important for the effective internal management as well as regulation of the water and sanitation services. Therefore, the TMA should have a system of regular data collection on its customers, commercial/business efficiency, income/expenditure and technical aspects of water supply and drainage. This data would help TMA set targets for service improvements and to monitor performance, set benchmarks of service delivery, determine fair tariffs that the market can absorb and provide incentives for good performance.
- To enable collection of appropriate technical data, the TMA will have to put insignificant preliminary effort, such as, the installation of bulk, zonal and some customer water meters, pressure monitors, and measuring flumes on sewers; the provision of equipment and trained personnel for water sampling and analysis and the establishment of data recording systems for principal operation and maintenance (O&M) activities plus recording of all interventions to repair broken or leaking pipelines and sewers. Finally there is a need to assemble and elaborate as appropriate, maps of the service areas and networks showing the location of all facilities and ideally information on their condition.
- The TMA Bahawalpur should prepare a short-term performance improvement plan to map out the service improvements and means of achieving full cost recovery of O&M costs within the targeted 5-year period. The improvement of the financial position can only be expected after noticeable improvements in service provision, mainly good water quality and improved sanitation, have been implemented. Furthermore, these improvements must be communicated to the customers.
- A drive must be launched to address the illegal connections in the city.
- Significant resources must be given to TMA to at least functionalize the existing assets such as tubewells, etc.
- Efforts should be made to trial outsourcing specific functions to the local private sector under O&M service contracts. A range of services can be included in the list for possible outsourcing, but an early candidate would be to outsource O&M of water pumping plant and sewerage disposal pumping stations.
- The reform process cannot lead to an improvement of services without the creation of training programs for WSS staff of the TMA. These training programs should cover a diverse range of service delivery aspects, such as, technical, commercial and financial management issues; customer relations; stakeholder consultation and communication; appraisal and evaluation of investment projects; and tariff review and approval.

3.3.2 Solid Waste Management

Solid waste management is another issue especially in the urban areas of Bahawalpur. The government has limited capacity in terms of staff, equipment and resources to effectively collect and dispose of urban waste. Moreover there is no formal landfill site and the government is using a few dumping sites for SWM. Some of the SWM problems include:

- There is no proper waste collection system.
- Waste is dumped on the streets.
- Different types of waste are not collected separately.
- There are no controlled sanitary landfill sites.
- Citizens are not aware of the relationship between ways of disposing off waste and the resulting environmental and public health problems.

Under Southern Punjab Basic Urban Services Project, there was a plan to upgrade the landfill site, which is still underway. There is a huge potential to develop formal landfill sites through private sector participation.

3.3.2.1 Recommendations

Based on the 2007 World Bank study to reform solid waste management in urban centers of Punjab,⁴¹ the following recommendations are offered to transform the present system into a dynamic, efficient and effective system of solid waste collection and disposal.

- A strong, capable solid waste management organisation on city level is a mandatory requirement not only for planning, monitoring and controlling of SWM activities but also for a successful involvement of the private sector. Hence, the SWM function should be assigned to an organisation specially created for this purpose. This organisation should be operationally, administratively and financially autonomous, and other than broad oversight by public officials, should be free to develop its own policies, procedures and priorities.
- Private sector participation in solid waste management operations needs to be increased. It is not being suggested that the public sector abandon its responsibilities altogether; rather it is proposed that a balance should be created between the respective roles of public and private sectors. This can be done by providing appropriate incentives and support to the private sector. Recent experience shows that the private sector has so far not entered this field with great interest. There are reasons such as social stigma and lack of trust by the private entrepreneur to enter in this sector. However there is a lot of potential for the private sector to benefit from the vast opportunities that are available provided that there is a level playing field and the legitimate concerns of the businesses be addressed.
- Community involvement in waste management operations should also be increased. Public at large is one of the key stakeholders in a solid waste management program. Therefore, community involvement from the beginning of the project would not only strengthen the private sector participation, it will also improve service delivery. Private sector participation is viewed sceptically if the public is not aware of the process. A strong support base through a campaign would educate the community about the objectives of the structural shift.
- At this stage, solid waste management system in Bahawalpur does not warrant high tech solutions. Huge facilities and latest equipment would call for heavy investments which the private sector may not be willing to make at least in the initial few years of its participation. Therefore, economical solutions which have low risk in investment costs and reasonable profit incentives would be the way to modernise the infrastructure in Bahawalpur.
- Effective and efficient cleaning of cities requires a shift from inefficient street sweeping to a door-to-door collection system. This will require a reorientation of the SWM staff and public education at the household level. Either directly or through a private sector entity, public

⁴¹ Ernst Basler+Partern Ltd. 2007. Punjab Solid Waste Management Reform, The World Bank.

awareness campaigns should be run so that households collect their waste in shopping bags, which are collected house to house every morning.

- It may not be possible to recover full costs of SWM services from the users. But an effort should be made to generate at least some revenue to meet the operational costs from operations themselves.

3.3.3 Proposed Development Projects

Arsenic Removal Project

Purpose: Arsenic beyond the limits specified by WHO has been found in considerable areas of ground water in Bahawalpur District. Arsenic is a public health hazard, due to which productive manpower is lost, and health overheads on product cost are increased. The purpose of this project is to provide insitu removal of arsenic in selected areas of Bahawalpur District.

Rationale and/or Criteria for Selection: The arsenic kits used by individual end-users are not reliable and do not cover any public level scale. It is recommended that arsenic treatment is done while water is in the ground. It may then be pumped and taken to existing overhead reservoirs.

Benefits from the proposed Project: There are 10 selected overhead reservoirs of 100,000 gallons each in the affected areas of Bahawalpur. These are presently supplied arsenic contaminated water through tube wells. The Project targets these locations. With the installation of the proposed plants, arsenic free drinking water will be supplied. The Project will cater for a population of about 200,000. Revenue will be collected by levying a surcharge tax to consumers, which will be of the order of PKR 150m per year.

Technology: Soluble Arsenic Reaction (SAR) insitu process developed at Queen's University Belfast has been recommended. The underground water is oxygenated and the aquifer is turned into a natural bio-chemical reactor that removes water-borne arsenic. The work is done by chemo-autotrophic microorganisms developed by the autocatalytic effect of the oxidation products.

Activities to be carried out: TMA Bahawalpur will give sites, and will provide survey, engineering and infrastructure. A technology provider company will be engaged who will procure and install plant and equipment and will provide training. The end-users collectively will provide operation and maintenance and will collect revenue. FIRM's funds will be provided as matching grant for plant equipment and training.

Project Location: 10 different locations at existing overhead reservoir sites in the affected areas of Bahawalpur.

Approximate Cost: Approximate cost of the project is PKR 240 m. PKR 40 m is infrastructure and engineering part, and PKR 200 m is plant equipment part. Operation and maintenance will be PKR 80 m per year. Expected revenue is PKR 150 m per year. Thereby the capital cost will be recovered in three years' time.

3.4 Transport

3.4.1 Roads

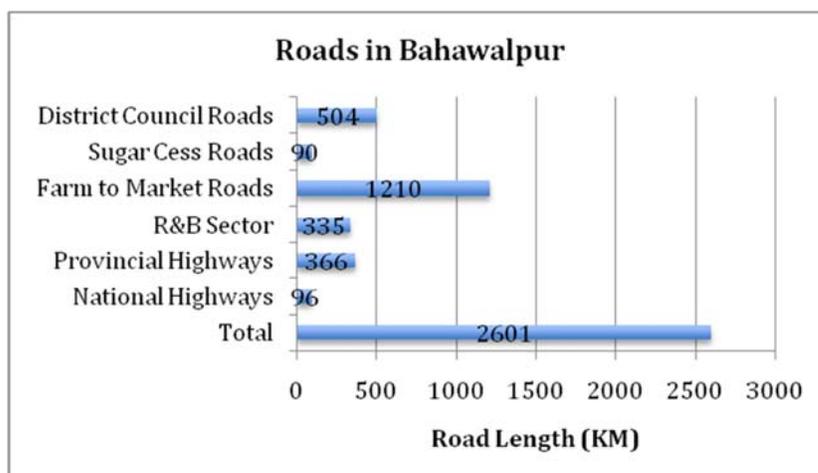
WOMEN AND INFRASTRUCTURE

Although all the tehsils of Bahawalpur are interconnected by road and there are around 1419 km metalled roads crisscrossing the district, there are no transport facilities for women. There is no government transport service or even any decent private bus service for the women. There is no provision of any space or stall for women farmers at the main vegetable market in Bahawalpur although it is newly constructed on one hundred acres of land in main Bahawalpur City. There is hardly any possibility of a woman farmer venturing out to the main market in the present situation when there are no provisions from the government to accommodate her. The infrastructure in the district is gender unfriendly if not actually “gender hostile”. The women are practically stranded in their respective localities. This has gravely reduced any chances of innovation and creativity for women’s economic development.

A number of agencies/government departments are responsible for the construction and maintenance of different categories of roads in the district. These include National Highway Authority (NHA) for national highways and strategic roads; Communication and Works Department for provincial roads; Bahawalpur District Office (BDO) for urban roads in Bahawalpur city; Town and Municipal Admin (TMAs) for roads in small towns and farm to market roads; and Bahawalpur Rural Development Agency for district rural roads.

The district has metalled road-length of 1,419 Kilometres. The district is linked with Lodhran, Bahawalnagar Vehari and Rahimyar Khan Districts through metalled roads. The average roads are 28’ metalled carriageways, designed for 32 tonnes standard truck trail, for design traffic volume of 3,000 vehicles per day. The road conditions, generally range from poor to fairly good condition. Figure 19 presents the length of various categories of roads in Bahawalpur.

Figure 25: Roads in Bahawalpur – Category-wise Length



Source: Punjab Development Statistics

Currently (2008-2009), the projects for construction and up-gradation of roads are listed in the Table 7 below:⁴²

Table 7: Mega Projects of District Government

⁴² Source: District Office Bahawalpur

PKR in Millions

Name of Schemes	AA Cost	Updated Expenditure	Percentage Utilization	Remarks
Dualization of road from DC Chowk to Islamia University Chowk	8.017	7.743	96%	Completed
Dualization of road from Sir Sadiq Muhammad Khan road to General Bust Stand	113.859	105.327	93%	Completed
Dualization of road from Library Chowk to old Chungi Yazman Road	147.840	105.474	60	Base, Sub-Base completed. Carpeting will be started on availability of Bitumen.
Dualization of road from Sir Farid Gate to Old Press Club Chowk	9.345	9.300	99	Completed
Dualization of road from BWP-YAZ Road to Air Port	65.473	24.596	40	Base, Sub-Base Completed. Except 1500 Rft of one side. Carpeting will be started on availability of Bitumen.

*Only road projects are included in the Table.

3.4.1.1 Problems and Issues

3.4.1.1.1 Heavy Traffic and Poor Condition of Roads

A survey of road conditions was carried out on motorways and other national highways from December 2005 to March 2006. It was discovered that 75% of the motorway network and 56% of the national highway network are in good or fair condition on the basis of the comparative 'International Roughness Index'. About 75% of the network is two-lane undivided roads that are 6–7 meters wide. Only 25% of the network is either four- or six-lane roads. Overall, average travel speeds are estimated to be little more than 25 km per hour (kph) compared with 75 kph in developed countries. Accident rates are estimated to be 10 times higher than in developed countries.

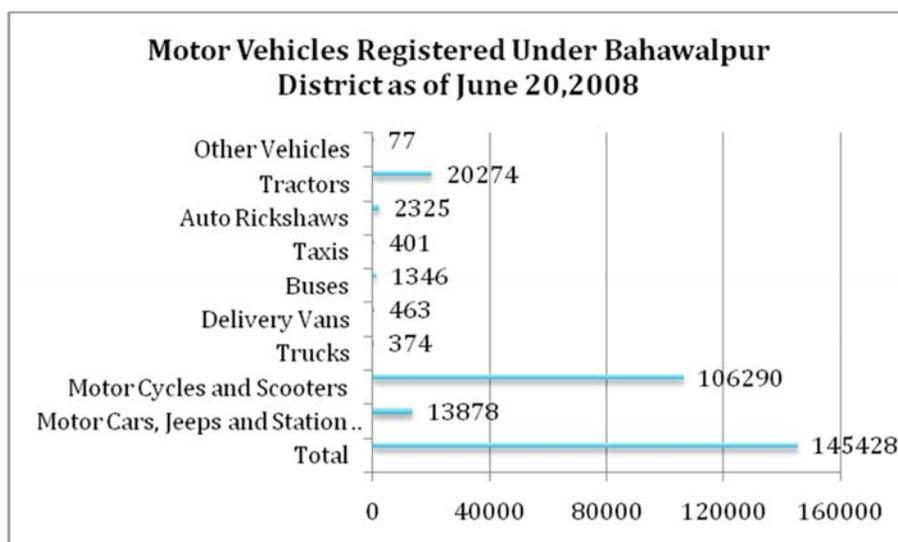


Figure 26: Motor Vehicles Registered Under Bahawalpur District as of June 20,2008**National Trade Corridor Highway Investment Program**

Pakistan's domestic trade flows are concentrated in one major north-south transport corridor. The proposed actions, while aimed at making this corridor more efficient, will also have a major and broader impact on the performance of the entire transport sector and thus on the economy overall. This comprehensive approach is embodied in a special initiative called the National Trade Corridor Improvement Program (NTCIP) initiated in 2007 with the funding from Asian Development Bank. The National Trade Corridor runs right through the district of Bahawalpur. The initiative includes not only new road construction but also the improvement of over 3,500 km of roads, national highways, expressways, and motorways. The NTC highway investment plan has an estimated economic internal rate of return of 39% and a total average economic savings estimated at PK Rs200 billion per year. The total investment cost of the NTC highway investment plan for 2007-2014 is estimated at \$5.36 billion.

Bahawalpur-Ahmedpur East Road: Currently, construction work on the dualization of the 100 kilometers long Bahawalpur-Ahmedpur East road is already much delayed. Work on this PKR 1.33 billion project, which was started by NHA in January 2004, was to be completed by December 2009. So far, not even a single lane has been completed, owing to which motorists and commuters have to face great difficulties. As most part of the old road to Multan is still being manually repaired, the one-way traffic rule is being violated by both heavy and light vehicular traffic posing a threat to the lives of commuters. It is surprising that even the motorway police are unable to check the vehicles using the carpeted road instead of the old one. It is also necessary to raise the level of the old road. The NHA should draw up a new plan for the construction of this old road in accordance with modern technology in view of the fast growing number of heavy vehicles.

Lodhran-Khanewal Road: Another road which is constantly being ignored by NHA is Lodhran-Khanewal Road. It was constructed in the late sixties and since then only a small amount has been spent on its repair. Most of the heavy traffic coming from Karachi via Bahawalpur passes through Lodhran and Khanewal enroute to upcountry to avoid the lengthy route of Multan. Due to the increasing heavy traffic on this road, the NHA should plan its dualization, which would go a long way towards promoting communication in this area.

3.4.1.1.2 Poor Public Transport

Road Sector Development Plan

NHA has prepared a comprehensive plan up to 2015 for upgrading the national road network and extending the motorway system. The cost of implementing this plan is PKR 480 billion (\$8 billion). The plan provides for improvements to 6,500 km of existing roads and the construction of 2,500 km of new expressways and motorways. Parallel plans for improving 7,600 km and constructing 4,500 km of provincial roads. The World Bank has agreed to provide support to the program in the form of a package comprising of: (a) budgetary support through three annual Development Policy Loans, involving policy reforms and sound macro-economic framework and public expenditure program, (b) timely planned targeted investment lending to respond to needs for improvement of infrastructure covering railway, highway and ports; (c) a technical assistance project will do the capacity building and analytical support necessary to implement the reforms agenda.

There is a general complaint of overloading in buses on inter-city routes. Even air-conditioned coaches are indulging in this illegal practice. Passengers are also seen sitting on the roofs of buses. Overcharging by transporters is also going on in the absence of any check by the authorities concerned.

3.4.1.1.3 Vehicle Overloading

Vehicle overloading is a major cause of premature pavement deterioration and of road accidents. As in many other countries, they are ineffective in restricting axle loading and keeping truck loads to within legal limits. The levels of fines are low (about Rs100 per excess ton of load) and represent an insignificant amount in relation to haulage revenues and load value. Where overloading is extreme, many drivers are unable to pay and the fine is overlooked. Neither unloading facilities nor storage spaces are available at the weighing stations; therefore, offloading so that loads can be reduced to within the legal limits is not possible.

3.4.1.2 Proposed Development Projects

3.4.1.2.1 Continuous Road Traffic Data Recording Project

The summary project parameters are given below:

Web Based Integrated Traffic Record System (ITRS) Project

Purpose: The purpose of this project is to provide continuous traffic data for meaningful research and control in the transport sector to enable sustainable and rational policies and measures.

Rationale and/or Criteria for Selection: The problems of traffic, roads and transport cannot be correctly identified without continuous flow of data, before remedies of correct nature and magnitude can be proposed. Substantial amounts of public funds go wasted as these are spent on adhoc basis.

Benefits from the proposed Project: Continuous flow of traffic data will enable efficient and effective planning of works and better control of traffic. The federal government, the provincial government and the local bodies all together spend about PKR 200 billion every year over maintenance and rehabilitation of existing roads and construction of new roads. A substantial part of it is wasted. With the presence of the proposed project, if even 10% of it is saved or appropriately placed, it is PKR 20 billion.

Technology: A machine vision is used to collect and to classify the traffic stream on axle and vehicle length and speed. Portable sensors are also provided along with permanent sensors. Records of commodity flow and accident information is also obtained. The data is automatically transmitted to control database. It is analyzed there, sorted out and compiled in the form which is required by various planning and implementation agencies. A web based integrated traffic record and analysis system will thus be instituted and practiced.

Activities to be carried out: Chief Engineer Highways Bahawalpur will be the custodian of the system. Linkages will be provided with NHA, TMAs, Airport, Police, Rescue, Railways, Bureau of Statistics and GIS. Data collection and processing will be outsourced to private agencies. The data will be disseminated commercially through CDs or web access charge. Pakistan Statistical Bureau will become a lead agency to compile, store, analyze and disseminate traffic data. FIRM's funds will come as grant for tools, plant and equipment. Civil works operation and maintenance will be pooled by local partners.

Project Location: Sensors will be located at all traffic nodal points of the district. Storage, analysis and dispatch will be done at a centre point, in Bahawalpur.

Approximate Cost: Approximate cost of the project is PKR 100 million. Tools, plant and equipment part will be PKR 75 million. Civil works part will be PKR 25 million. Recurring cost will be of the order of PKR 25 million per year. The expected benefits are PKR 20 billion worth of saving.

3.4.2 Railways

The Ministry of Railways has the overall jurisdiction the railways in Pakistan. Pakistan Railways is a department of the Ministry and is responsible for administration, operation and maintenance of the railways. About 19 up trains and 19 down trains load and unload passengers daily at the Bahawalpur railway station. At a rate of 50 passengers per train it makes about 2,000 passengers that are dealt with. Similarly about 10 freight trains daily attach or detach 2 to 3 freight bogies at Bahawalpur. At the rate of about 10 tons in each, the total freight of 250 tons is handled.⁴³

The facilities that exist at the Bahawalpur Railway Station include Railway Washing Line; Railway Colony; Railway Police Station; Parking Area; Railway Bungalows and Railway Club Retiring Rooms.

The main Peshawar-Karachi railway line passes through Bahawalpur District. The district is linked with Rahim Yar Khan, Hasilpur and Lodhran through the railway network. Bahawalpur City is situated just south of the Sutlej River. Adamwahan (Empress) Bridge, is the only railway bridge over the Sutlej River in Pakistan, and is on the national rail link between Peshawar and Karachi. It is a double line triangulated girder bridge of 8 spans of 250ft each.

3.4.2.1 Problems and Issues

The railroad system is experiencing deterioration both in the quantity and quality of service. From 1994 to 2003, the quantity of track fell from 8,775 to 7,791 kilometers, and routes dropped from 12,625 to 11,515 kilometers. Passenger journeys peaked at 85 million in 1989 and declined until 1999, after which they increased to 72.4 million in 2003. Freight tonnage fell from 8 million tons in 1994 to 6.2 million tons in 2003. In the same period, the number of locomotives decreased from 676 to 577, and the quantity of coaches fell from 2,831 to 1,843.

Moreover, in recent years, roads have gained certain priority over Railways. The government's priority for resource allocation towards roads is illustrated from the figures of the development budgets shown in Figure 27.

⁴³ Source: www.railcop-pk.com/Projects-completed-PR

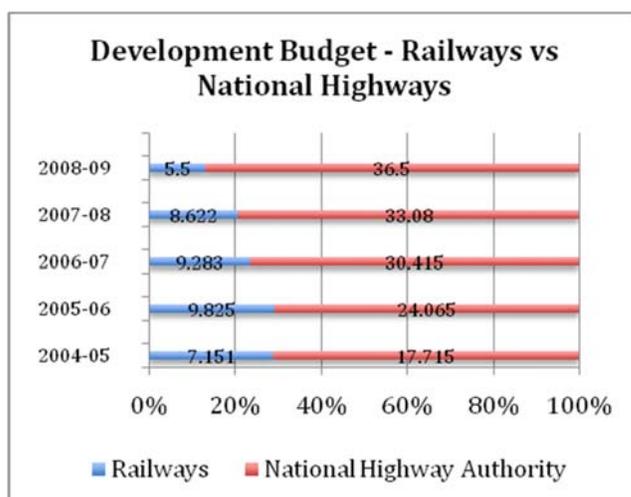


Figure 27: Development Budget – Railways versus National Highways

During 1990-2005 railways share in the freight sector declined from 14% to 4.2%. It did register a recovery in 2000-01 when its freight traffic grew by over 20% as against an average decline of 4.4% in 1990's. The 22200 freight stock fleet constitutes 84.18 % of vacuum and 15.83% of air brake stock, respectively. 4631 Bogie stock (8 wheelers) though utilized efficiently for longer hauls forms 20.86% of the fleet.

3.4.3 Bahawalpur Airport

Situated 3.7 km from the city centre of Bahawalpur, the Bahawalpur Airport caters to Bahawalpur and adjoining districts. Domestically flights are served for Lahore, Karachi and Islamabad. An international flight to Dubai has started since July 2009. The upgradation of the Bahawalpur airport to make possible the landing of Boeing aircraft has been completed. The Punjab government has provided the state land at an estimated amount of Rs300 million to the Civil Aviation Authority (CAA). The rulers of Dubai have extended a financial assistance of PKR 3 billion on the construction of new Bahawalpur airport. The new building has been named after late Dubai Emir, Sheikh Rashid Terminal. The airport has a concourse hall for arrival of approximately 60 to 70 passengers and departure lounges for about 140 passengers.

A royal lounge has also been built adjacent to the main terminal building. The lounge will be reserved for princes and members of the royal family whenever they visit the city. A parking lot has been built outside the building after converting the surrounding sandy area into lush green lawns.

A new terminal has been constructed and the first portion of 4,400-foot-long runway of the Bahawalpur airport is operational. The new amenities include the departures and arrivals halls, new airline offices, logistics, engineering and security support centers as well as cargo areas and passenger and cargo aircraft-parking bays.

PIA had earned a record revenue of Rs 200 million in the year 2008, which was double as compared to the year 2004 from operating at this airport.

The airport traffic in the year 2008 is listed in Table 8: Airport Traffic Bahawalpur 2008.

Table 8: Airport Traffic Bahawalpur 2008

Traffic	Year 2008
Passenger throughput	390,780
Cargo handled (tons)	2,4223

Traffic	Year 2008
Cargo handled (1000s lbs)	4,556
Aircraft movements	7,580

4. Agriculture

4.1 Importance of Agriculture

According to the World Development Report (2008), for the poorest people, GDP growth originating in agriculture is about four times more effective in reducing poverty than GDP growth originating outside the sector. However, the agricultural and rural sectors have suffered from neglect and underinvestment in the developing world, including Pakistan. Considering agriculture's unique poverty-reducing power, the Report warns that this sector must be placed at the center of the development agenda.

In Pakistan, agriculture accounts for 21% of GDP (2006-07), employs over 43% of its workforce and provides livelihood for 66% of population. While major and minor crops constitute 48% of value added in agriculture, livestock's value added is 49.6%, which is more than major and minor crops combined. This sector directly and indirectly constitutes 67% of the country's foreign exchange earnings. The total cropped area of Pakistan comprises of 57,919,634 acres and Punjab's share in this is 39,251,050 or more than 67%. Cotton is the largest *Kharif* crop of Pakistan with 31% followed by rice with 28% while wheat is the largest *Rabi* crop of Pakistan with 75%⁴⁴. Pakistan is the fourth largest milk producing country in the world and milk represents 27% of the agricultural economy. Pakistan is the second largest goat meat production country in the world after China. During 2005-06, livestock contributed over 11 per cent to the GDP, which is more than the aggregated contribution of entire crop sector (10.3 per cent) of the country. Punjab's share in livestock production in Pakistan is as follows: Cattle 49%; Buffaloes 65%; Sheep 24%; and Goat 37%⁴⁵

Despite the substantial contribution to both the provincial and the national economy, the rural masses engaged in this sector have a relatively low per capita income, and suffer from under-employment. The eventual result is poverty. Bahawalpur ranks as the seventh highest district on incidence of poverty, with 39.5% below the poverty line in 2004-05, and also on the Index of Multiple Deprivations⁴⁶. The rural poor largely comprise small farmers, tenants, and the landless laborers. As spelled out in the Government's Poverty Reduction Strategy Paper (PRSP), agriculture development is considered critically important to meet the MTRDF poverty reduction targets.

Considering the centrality of agriculture to the country's economy, this section presents an overall picture of agriculture sector in the district of Bahawalpur, identify constraints to its growth and recommend some possible solutions.

4.2 Agriculture in Bahawalpur

District Bahawalpur comprises an area of 1,514,784 acres. The cultivated area is 1,062,573 acres and 452,211 acres are uncultivated. Out of the uncultivated area, an area of 301,474 acres is uncultivable, 140,852 are cultivable and the balance area of 9,884 is under forest cover.

⁴⁴ Agriculture Census 2006

⁴⁵ Agriculture Census Organization – Livestock Census 2006

⁴⁶ Social Development in Pakistan: Devolution and Human Development – Annual Review 2006-07

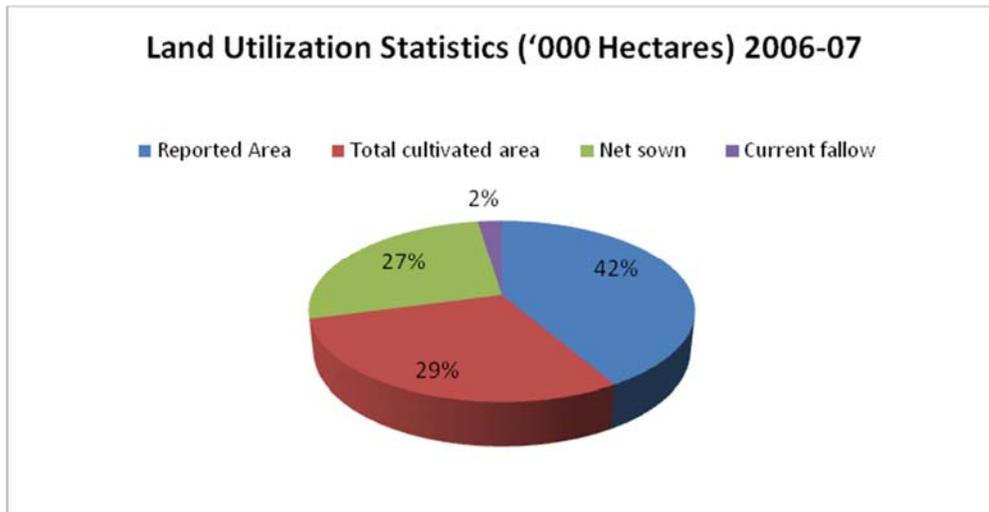


Figure 28: Land Utilization Statistics for District Bahawalpur

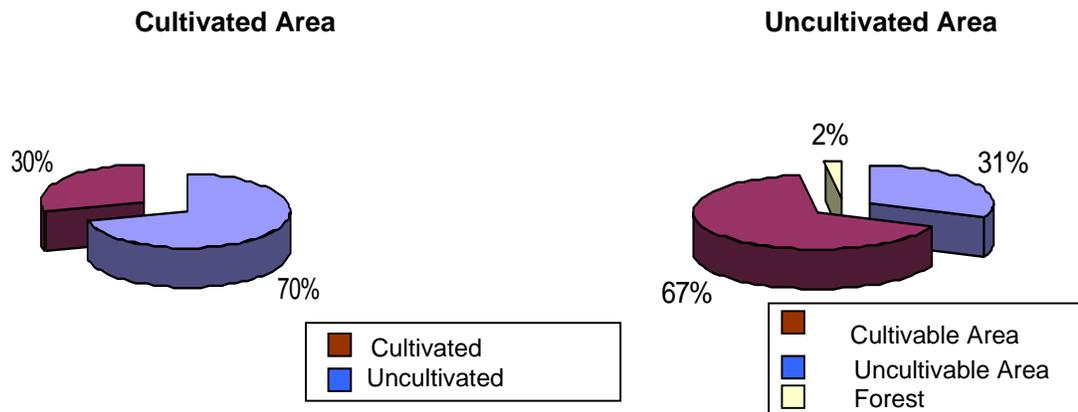


Figure 29: Cultivated and Uncultivated Area of Bahawalpur

Major *Kharif* crop of the district include cotton followed by sugarcane and rice. Minor crops include *jowar*, *bajra* and maize. Bahawalpur is the largest district in terms of land use for cotton and it ranks as first in production of this crop. Other crops grown in *Kharif* include a variety of pulses, vegetables and fruits as shown in the table below. The area is best known for its ability to produce a significant quantity of mangos and a variety of other fruits.

In addition to wheat, *Rabi* crops grown in the district include sunflower, a variety of pulses, vegetables such as onions, tomato, cauliflower, carrot, turnips and the like as well as fruits like citrus, guava and assortment of popular *Rabi* fruits. The following table lists all of the crops grown in the district, area cultivated in terms of acres and production in tonnes.

Table 9: Kharif Crops (2007-08)

Crop	Acres Cultivated	Production (Tonnes)
Sugarcane	30,000	634,000
Rice	10,000	5,800
Cotton (Production in bales)	717,000	1,154,000
Maize	4,000	2.6
Jowar	15,000	3.6
Bajra	10,300	3.4
Moong	1,751	612
Mash	49	11
Other Pulses	193	9
Ground Nut Crop	30	21
Sesamum	656	88
Guar Seed	1,211	483
Chillies	560	317
Kharif Fodder	40	213
Bitter Gourd	475	1,968
Tinda	332	1,140
Okra	170	603
Other Kharif Veggies	3,925	19,396
Pomegranate	320	896
Guava	400	1,418
Mangos	10,750	44,939
Other Fruits	9,660	48,953

Source: Directorate of Agriculture Crop Reporting Service, Punjab

Table 10: Rabi Crops (2007-08)

Crop	Acres Cultivated	Production (Tonnes)
Wheat	684,000	714,000
Masoor	206	64
Other Rabi Pulses	111	26
Rapeseed & Mustard	38.5	156
Canola	396	176
Sunflower	56,000	41,699
Linseed	126	43
Potato	484	2,175
Onion	6,050	16,387
Garlic	120	439
Coriander	93	24
Tobacco	275	129
Rabi Fodder	65.8	746
Matter	30	99
Cauliflower	205	1,561
Tomato	728	3,641
Carrot	240	1,854
Turnip	115	863
Other Rabi Veggies	3,760	24,471
Guava	220	747
Citrus	18,076	59,895
Other Rabi Fruits	19,086	63,552

Source: Directorate of Agriculture Crop Reporting Service, Punjab

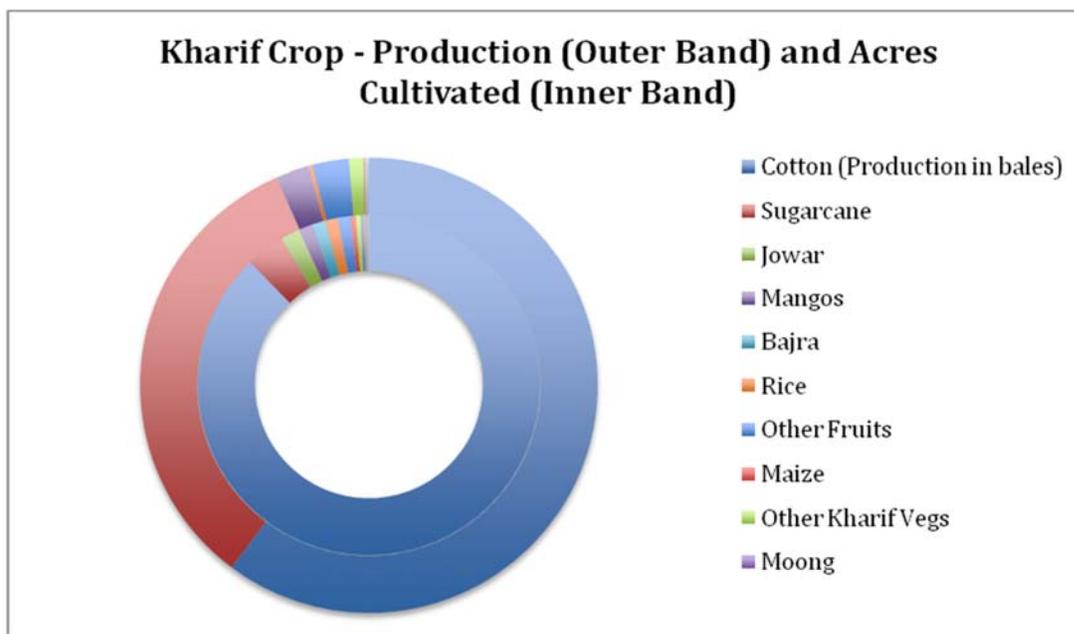


Figure 30: Kharif – Crop-wise Production and Acres Cultivated

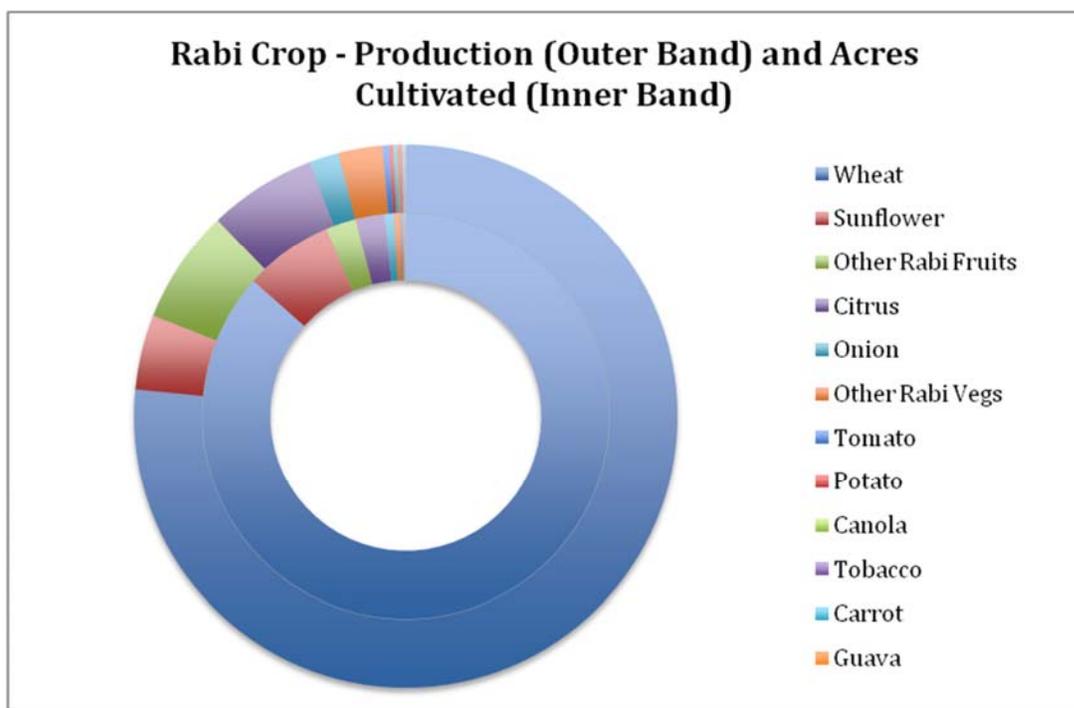


Figure 31: Rabi– Crop-wise Production and Acres Cultivated

In addition to agriculture crops, vegetables and fruits, Bahawalpur and Cholistan figure prominently in the production of large ruminants – cattle and buffaloes – and small ruminants – goat and sheep. Both of these areas together are the largest producer of cattle and second in goat and sheep production. As discussed later, the area holds great potential for dairy and livestock production.

Following tables present the number of tractors and agricultural machinery in district Bahawalpur.

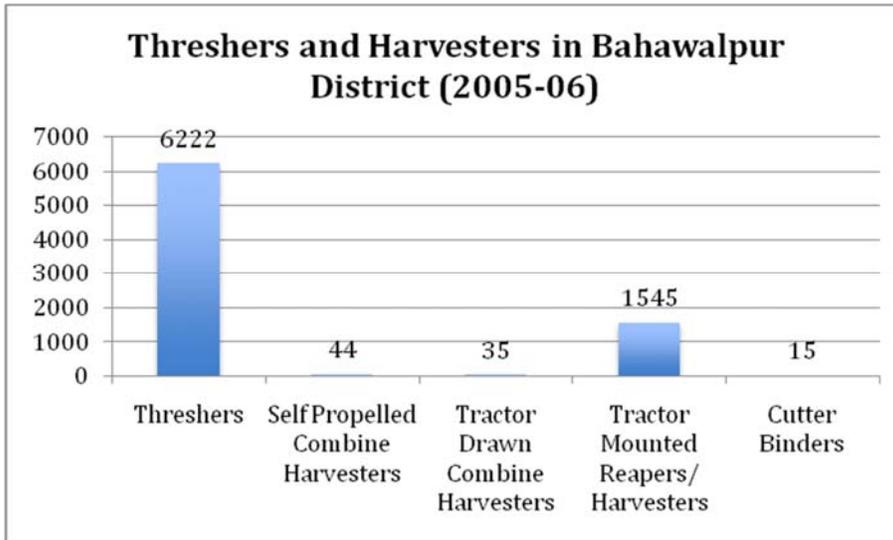


Figure 32: Threshers and Harvesters in Bahawalpur District (2005-06)

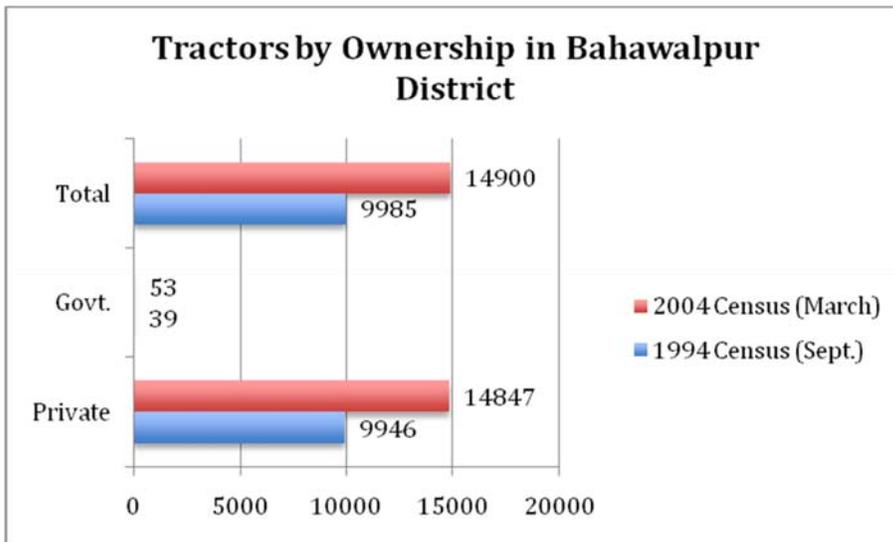


Figure 33: Tractors by Ownership in Bahawalpur District

4.3 Constraints to Agriculture Development in Bahawalpur

The district's agriculture sector – yield per acre, overall productivity and successful marketing of commodities - suffers from a variety of constraints. Some of these are generic in nature affecting all crops while others are specific to a particular crop. Those that are generic in nature are discussed first while those that are crop specific have been identified and discussed later.

4.3.1 Water Shortage

The greatest challenge impeding agriculture development in the district is shortage of water. This is true both in the case of surface as well as ground water. It has been estimated that 82% of ground water is brackish in the district.

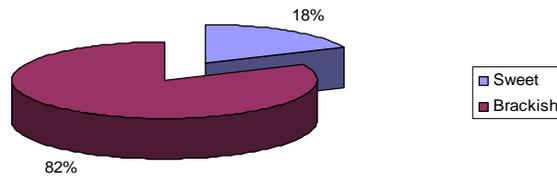


Figure 34 Content of Groundwater in Bahawalpur District

The surface water has become scarce because of falling water flows in rivers. Because of non-perennial canals, the availability of irrigated water for Rabi crop is inadequate. While a considerable number of watercourses have been lined, it is prudent to completely line all of remaining water courses. Other problems contributing to its scarcity include seepage problems, inefficient use of available water and lack of conservation measures. In order to survive in this water shortage situation, it is incumbent upon farmers to adopt water saving technologies such as using water saving varieties and growing of crops on ridges, etc.

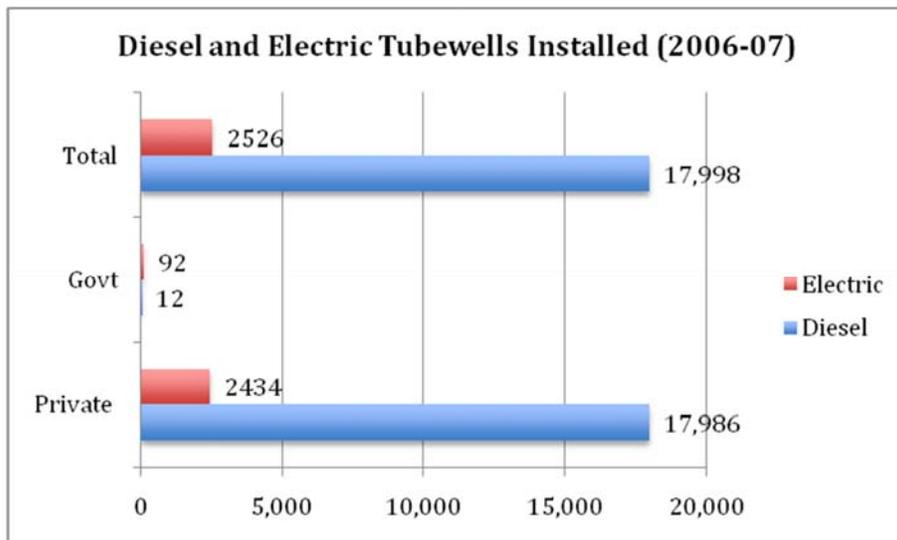


Figure 35: Diesel and Electric Tube wells Installed (2006-07)

There is lack of management, technical and analytical capacity in addressing water related issues. There is also an absence of reliable water related data that can be easily accessed and used in the formulation of a sound strategy, policies and action plans to optimize the use of available water resources not only for today but also for the future. A considerable effort needs to be made in R&D to address water related issues.

4.3.2 Institutional Capacity Constraints

Following the promulgation of Punjab Local Government Ordinance in 2001, the agriculture establishment in the district is headed by Executive District Officer (EDO). Among other oversight and implementation functions, the incumbent has the coordination and supervisory responsibilities of district level offices of extension, on-farm water management (OFMW), livestock, fisheries and forest. While the extension is represented at each Union Council level, this is not the case for other services. Similarly, some of the diagnostic labs are available at the Division, District and in rare cases at the Tehsil level. Consequently, farmers have to run from pillar to post to obtain various services of agriculture office.

The extension office is responsible for the: achievement of area and production targets of crops; implementation of crop production strategy including agronomy and plant protection; preparation of detailed training schedules of all trainers and dissemination of production technology; identification, preparation and implementation of projects approved by higher authorities; implementation of agriculture laws; and ensuring availability and quality of agriculture inputs.

The most common mode of contact between agriculture officials and farmers is field-based training sessions for farmers before each cropping season. The type and number of training sessions are scheduled for different crops. It is the Field Assistant who publicizes the schedule of training, makes logistic arrangements and invites area farmers. The training session, by and large, is conducted by the area's agriculture officer.

In Bahawalpur, there are 12 Agriculture Markaz and one official is assigned at each one of these centers. However, eight out of 12 of Agriculture Officers posts are lying vacant. Even if all were filled, there are more than seven Union Councils and 76 villages assigned to each Officer. Similarly, there is one Field Assistant for each Union Council with 8-10 villages or 15,000 to 17,500 acres of area, which is too much to be supervised by one person. It appears that Agriculture Extension is under-staffed, over-stretched and, therefore, unable to provide adequate coverage and fulfill its responsibility.

The non-provision of transport (motorcycles) is another big impediment for employed agriculture officials to perform their duties. The Department facilitates employees in buying motorcycles on an interest free loan basis for use in the performance of their official duties. They are, of course, reimbursed for kilometers driven on official duty but it seems like a highly ineffective way to provide coverage to clients spread over a large area. We have also learned that newly appointed Field Assistants, on contract basis; do not have any means at all to perform their duties.

It is not only the number of staff but also its technical capacity that matters. While minimum qualification for an Agriculture Officer is B.Sc. (Hons), all officials assigned in the district possess M.Sc. degrees. While these officials have years of experience, they have not gone through any refresher training program in years. Every cropping season, they are expected to participate in less than day long training but, because of shortage of staff and other reasons, they are unable even to do that. Similarly, Field Assistants in the District, with an average of more than ten years of experience on the job, also do not get to receive any in-service training to improve their knowledge and skills. These employees who join the service with a high school certificate and two years diploma in agriculture thus are not adequately equipped to solve problems of farmers in his area.

In addition to increasing the number of Agriculture Officers and Field Assistants to ensure the adequacy of coverage and the provision of transportation resources for field duty, there is a definite need to improve the technical capacity of the Extension personnel. Finally, there is a dire need to institute an incentive system to reward employees based on performance and for being responsive to the needs of their clients.

4.3.3 Sub-optimal Legal and Institutional Framework

One critical impediment affecting agriculture sector is the legal and institutional regime. Critical issues include inadequacies of existing laws affecting such important inputs as certified seed, quality fertilizer and pesticides, the centralization of authority to regulate, control, inspect and finally the challenges associated with the enforcement of laws on the books.

While agriculture has always been a provincial subject, seed certification and certain other regulatory functions were assumed by the federal government as a temporary measure in 1976. However, the federal government's discharge of these functions continues unabated until now, including approval of new varieties of seed. The federal government assigned one inspector at each division level to perform its inspection function. These regulatory functions need to be transferred to provincial governments where they rightfully belong. In order for the provincial

government to effectively discharge this function, it needs to assign additional personnel and focus on its technical and institutional capacity building needs.

Similarly, under the pesticides law, 40% of poison content is tested but the carrier xylene – a type of liquid into which poison is mixed – is not covered by this testing regime because of lack of any such requirement. The quality of xylene used has a significant impact on life of the pesticide as the low quality hastens the expiration of the pesticide long before the expiry date mentioned on the package. Because most of the pesticides are imported, companies' products need to be tested at source and those that are guilty need to be punished. The authority for inspection for pesticides primarily rests with the Plant Protection Department at the Centre and it is hard for the local officials to pin down a local trader guilty of adulteration.

Similarly in the case of seed certification, control of poisonous objects was on the concurrent list (now abolished) and therefore the federal government legislated for quality control of pesticide. This responsibility has now been shifted to provinces after the abolition of concurrent list through the 18th amendment. The necessary capacity needs to be created at the provincial and district levels to discharge these new responsibilities.

Another area that is likely to benefit from legal and institutional reforms is the marketing of animals. Animal markets are poorly regulated whereby livestock is sold based on "look and feel" factors, and not by weight, thus depriving the seller from fetching a fair price. The second issue is the pathetic condition of the markets where animals are sold – lacking basic facilities for both animals and buyers/sellers.

Finally, agriculture development will get a big boost if the district government is charged with the lead role for planning for the provision of all local services. This will truly lead to "bottom-up" planning in Pakistan.

4.3.4 Limited Access to Agriculture Services

It is a challenging task for the area farmers, particularly small farmers and tenants, to access and benefit from a variety of services offered by the Government. These services are spread at a variety of locations – some of these are available at the district, some at the provincial and there are still some that are available only at the central level. It is time to consider bringing these services to their doorstep. Based on the responses of farmers in the area, the ideal place for service availability appears to be at a *Tehsil* level in the form of an 'Agriculture House' with services of Extension, OFWM, livestock, inputs testing labs, credit providers, agriculture research and engineering under one roof for the convenience of farmers.

Farmers' accessibility to functional labs is also a big challenge. There is a need to have one seed testing/diagnostic lab at each district level; need quality testing (cereal technology) lab, especially one for wheat, at each Division level. Similarly, there is only one soil/water testing lab in each district while there is need for one at each *tehsil* level. There are only four labs for testing pesticides in the entire province including one in Bahawalpur division but reportedly it is not functional.

4.3.5 Limited Access to Finance and High Costs

The availability of credit is a major constraint to all farmers but particularly for tenants, small farmers and women. In order to meet their needs for inputs at the time of planting each season, they have to depend upon traders to provide them the required inputs on credit. Because alternatives for buying the requisites are not easy to find, this disadvantaged group is left with no option to get poor quality inputs on unreasonable terms dictated by the traders. To find credit for this group without collateral, in many cases, and at commercial terms is a challenge that must be addressed.

While lending terms of Agriculture Development Bank of Pakistan (ADBP) are most attractive and it has a branch office at a *tehsil* level, it does not lend money to landless farmers. It does lend money to small farmers up to PKR 27,000 for each acre of land as collateral for the purchase of

pesticides and fertilizer. In order to get a higher amount of loan, this group of farmer is willing to pay a higher interest rate to another commercial bank. The Asian Development Bank (ADB)-financed Bahawalpur Rural Development Project did not have any micro-credit component and, therefore, did not lend any money to this target group. National Rural Support Program (NRSP) has been active in micro-lending in the district but it is not present in all areas and its interest rate is considered high.

There is a need to look for sources of micro-credit other than regular financial institutions such as rural support network programs. Other options to explore may include: initially small loans given without any collateral; loans repayable in weekly or bi-weekly installments spread over a year; where eligibility for a subsequent loan depends upon repayment of the first loan; where credit discipline and collective borrower responsibility or peer pressure is provided; the use of special safeguards through compulsory and voluntary savings to minimize the risks that the poor confront; credit provided through commission agents and traders; and agricultural input supply credit.

4.3.6 Inefficient Supply-Driven Agriculture Markets⁴⁷

The current agriculture market system provides for formation of Market Committees and authorizes collection of fees for self-financing market management operations. Marketing of most fresh agricultural produce is effectively controlled within the mandi system. Produce is physically brought into mandis for sale by Licensed Commission Agents (CAs) through auctions. The CA is expected to operate as a disinterested agent that will not directly participate in commercial transactions. He should facilitate transactions through the process of auctions, but is not to become a dealer or wholesaler on the side. Practice, however, has not followed the prescribed roles envisioned in the laws.

Under the current arrangement, two aspects are crucial: First a general concern is to ensure that all possible products are “regulated” within reach of the mandis. CAs share this interest in common, for which coordinated action backed by Market Committees and Government is required. The clearest indication of the limitations created by the current legislation is the need for exemption required for big retailers (like Metro⁴⁸) to undertake wholesale activities. Initiatives of this kind outside the control of Market Committees would be virtually impossible without such special dispensation. Second, the CA does not have an absolute monopoly, as he is in competition with other CAs. His incentive is to increase his position in the market as a percentage of total volume. This would be done by first obtaining products in the field and village, and then consigning products to vendors to his wholesalers. Advance payment for produce and consignment to vendors are ways to gain position in the market. Therefore to be successful, they become the primary financial agents of the market.

Thereby, the market system becomes inward looking and fully supply-driven. Competition is limited to capturing greater volumes of produce for collection of commissions. Buyers or clients - from wholesalers, distributors, retailers to consumer - receive little attention. CAs are allotted virtually all the space in the public markets, yet they do not physically handle produce. Wholesaler is left to the streets and open spaces with no infrastructure provided. Much of the activity takes place along the road and in front of the mandi, rather than within the market boundaries.

The orientation of the current policy and legal framework (The Punjab Agricultural Produce markets Ordinance 1978) is on control of agricultural marketing by Provincial Government through the mandis. The system has led to emphasis on collection of commissions and of fees for self-financing the operation of marketplaces. The auction, prescribed in the current system as the only method for carrying out commercial transactions, provides a false perception of transparency. Although useful in some markets, such as livestock or grain futures, fruits and vegetables should not rely solely on this means of transaction. The auction implies that the grower first produces, and only after harvest and shipment to market, comes into contact with the buyer

⁴⁷ The information for this sub-section has been taken from ‘Agricultural Marketing Policy Framework’; USAID

⁴⁸ The exemption excludes operations of Metro from “inspection,” but an agreed-upon fee is paid to the Market Committee.

- another example of the supply-driven approach. Produce is handled as homogeneous commodities, rather than as products differentiated by special quality standards to gain higher value with buyers serving different market segments or niches. Under the current marketing system, health and safety standards for food products are given low priority.

4.3.7 Role of Women in Agriculture

Women play a major role in agricultural production, livestock raising in the district. They participate in all operations related to crop production such as sowing, transplanting, weeding and harvesting, as well as in post-harvest operations such as threshing, winnowing, drying, grinding, husking and storage (including making mud bins for storage). Rural women carry out these tasks in addition to their normal domestic chores of cooking, taking care of children, elderly and disabled, fetching water and fuel, cleaning and maintaining the house as well as some of its construction.

Wheat is the most widely grown crop in the region, occupying an estimated 42% of total cropped area for producers with less than 7.5 acres of land. Together with cotton it forms the cropping package used by most producers in the region. It is also a major source of seasonal employment.⁴⁹ However, women's role in this sector is very limited. They are found working either as unpaid helpers or as underpaid laborers. Their participation is accepted as an extension of their housework and is not evaluated in terms of monetary value. In the case of working as family helpers with their fathers and husbands, their work is generally unpaid. Only those women that work as laborers especially at the time of harvest are paid daily wages, which are lower than that of men.

The important thing to note is the percentage of rural women engaged in wheat production and its time duration. Out of the total days in a year there are around two to three weeks in which women are engaged in wheat harvest, from around mid April to end of May. However it is important to understand the social class difference among the rural women and their roles in that society. The wives of landowners do not work in the wheat fields. Similarly the wives of service sector employees also do not work in fields. That leaves a small proportion of rural women belonging to the families of landless farmers and agri-laborers. It is therefore not correct to say that all rural women are engaged in agriculture sector. In wheat there is little value addition in the crop and it is sold without any value addition after harvest, however, in case of cotton there is a long value chain of the process from production to final end markets. From picking it goes to the ginning factories and onwards to the spinning, weaving, and knitting factories. It then moves on to apparel making and then onward to finished export market but in this long chain, which involves production, bulking, retail, and export, we see very limited participation of women.

Women are usually engaged at the start of sowing, in a process called "thinning"-which involves plucking out of the extra plants in the field. The rate is approximately 150 Rs per acre and usually two women can easily manage an acre in a day. The next steps in the cultivation process are watering, putting fertilizers and various different sprays of insecticides at different times. In most of these activities there is active engagement of women but the most important stage where there is exclusive involvement of women and children is the cotton picking. In Bahawalpur cotton is picked by women and children as it is in the rest of Punjab. The women are paid by the weight of the cotton picked which was Rs 150 per 40 kg last year. Each picker is usually able to collect one maund of cotton in a day. After collection, the cotton is loaded on tractor trollies and sent to the ginning factories. Each trolley can carry the load of approximately one hundred and thirty maunds. In this manner, the total harvest of the raw cotton reaches the ginning factories. Again as is the case with wheat, a specific proportion of agri-labourer actually work as cotton pickers and the cotton picking season does not last more than two months. The same labourer woman usually picks cotton on various farms in rotation. The value chain of cotton continues but after picking, the role of the woman ends.

⁴⁹ Agro-Economic Survey & Investment Climate Diagnostic Bahawalpur, Bahwalnagar & Rahim Yar Khan

There are 123 ginning factories in the region but none with women employees. There are only six to seven spinning factories in the whole Bahawalpur division and no weaving or knitting factories or apparel making units available so there is no opportunity available there for either men or women.

Another reason why women have very limited role in the agriculture sector is the issue of land ownership. Land ownership by women has increased due to the land reforms undertaken by various governments, which fixed ceilings on personal holdings of land. Women in economically better families now own land on paper, however, they do not exercise control of it⁵⁰. It is hard to find women landowners running and managing their agricultural lands or farms even in a small number.

In livestock sector, however, women make a considerable contribution and this contribution is more visible than their work in crop production. The rural woman works approximately fifteen hours a day spending five to six hours in caring for livestock but spends only fifty minutes for her own children (Hashmi 1988). Women involved in the caring and rearing of livestock and poultry carry out wide range of tasks such as making feed concentrates, feeding, collecting fodder, grazing, cleaning animals and their sheds, making dung cakes, collecting manure for organic fertilizer, as well as milking, processing and marketing of animal products (making ghee, selling eggs, etc.)⁵¹ The women put in a tremendous amount of hard work and labor in taking care of the livestock as it is the precious livelihood for most of them

The district livestock officer has the responsibility to provide extension services including prevention of animal/poultry diseases, artificial insemination, and promotional efforts for establishment of Dairy Farms in Private Sector and training the farmers on training of Villagers on Prophylactic Vaccination, management aspects, first aid treatment. There are three livestock officers in the district Bahawalpur and it is difficult to reach out to all farmers especially in the remote areas with the required extension services. There are only ten mobile veterinary mobile dispensaries, which are insufficient for the needs of the district.⁵² The women have very little knowledge of the new technologies in the sector like embryo transfer technologies and use of good quality semen for better breeding. They also have little knowledge of the ways and means to improve and enhance the production and profitability of their livestock. There is a great need of improving the skills of women through appropriate technologies. Sale of milk from the cattle is the main source of income for both the landowners and the landless. The dairy system is dependent primarily upon the commercialization of milk from herds of between one and three animals, though some peri-urban herds do also exist specifically to serve urban markets. Female household members typically manage the herd, assuming full control when males are away working. Sale of goat milk is limited; nearly all milk sold is produced from buffalo (67%), and cattle (21%). Though priced differently based on fat content, milk from both ruminants is mixed and sold together.⁵³ The women have no opportunities to attain technical training or capacity building regarding livestock breeding or improved dairy production. These women are therefore forced to rely on archaic methods in livestock and there is little qualitative or quantitative improvement in this important sector.

The women who manage the livestock and milk production have no access to the milk collection points and they are forced to sell the milk to the local milkman. These small retailers and milkmen in turn sell milk to the urban markets and milk collection units. No large-scale dairy processing plants are operating within the region of focus. There are three big dairy firms which first transport the milk to a series of chilling centers then on to their plants located elsewhere. There is no provision of quality control and the milk collected at the collection centers is adulterated. Unclean water and other various thickening agents like cornflour, powdered milk and sometimes urea is mixed in water to make it thick and increase its volume. Sometimes the staff at the collection centers is also involved in the adulteration business. Again, there is no involvement of women in the marketing of milk and it is solely considered a man's job. There is no opportunity for local

⁵⁰ Country Gender Assessment Report 2005

⁵¹ ESCAP 1997

⁵² EDO Agriculture Bahawalpur 2009

⁵³ ADB Agro Economy diagnostic 2007

women to take the transport the milk to the urban market or the collection point. The women are forced to sell the milk to the retailer at a much lesser price. There is a need to assist the women farmers to market their produce through the establishment of co-operatives and also train them in improving their produce.

4.3.8 Inadequate Agricultural Storage

The importance of reliable and adequate agricultural produce storage is essential for farmers. There are two major types of storages in the district that are providing services in the market. The first category is dry storage for wheat, rice, etc. The second category is cold storages for perishable items, such as, fruits and vegetables. In the first category storage facilities are available with government departments (mainly the Food Department, Government of Punjab), semi-government organizations (mainly Pakistan Agricultural Storage & Supplies Corporation (PASSCO)) and the private sector. The second category storage is available only in the private sector. Both kinds of storage facilities are highly inadequate in Bahawalpur, which comprises a serious constraint on agricultural development.

There exists an urgent need for the Punjab Government to establish adequate storage facilities in the district, primarily for storing its own purchased commodities, but also as a facility that could be rented to the farmer. For storage of essential agricultural commodities such as wheat, the Food Department, often uses primitive structures like *ganjis* (stacks of bags covered with tarpaulin) for storage, which has the risk of exposing the crop to extreme weather conditions. On the cold storage side, major problem faced by the cold storage providers is irregular supply of electricity. Frequent power failures cause crop damage, which has to be compensated by the cold store operator. So the cold storage provider has to either provide refrigeration through alternate means that are expensive, or he risks losing business. Another issue is that invariably the cold stores are commodity non-specific, which means they do not have arrangements to maintain humidity, temperature, etc. according to individual requirements of commodities. The stores do not have chambers to store different products under different conditions.

4.4 Key Agriculture Sub-Sectors

Some of the key agriculture sub-sectors in the district include dairy, livestock, cotton and wheat. The criteria for selection of sub-sectors in agriculture included: size and share of the district/provincial economy; land use; potential for increased productivity, quality, share in value added, GDP and export; number of people impacted and employment potential; significance to food security; competitive and comparative advantage based on the availability of supportive institutions, resources and facilities.

4.4.1 Dairy and Livestock

Pakistan is the fourth largest milk producing country in the world and milk represents 27% of the agricultural economy. Pakistan is the second largest goat meat production country in the world after China. During 2005-06, livestock contributed over 11 per cent to the GDP, which is more than the aggregated contribution of entire crop sector (10.3 per cent) of the country.

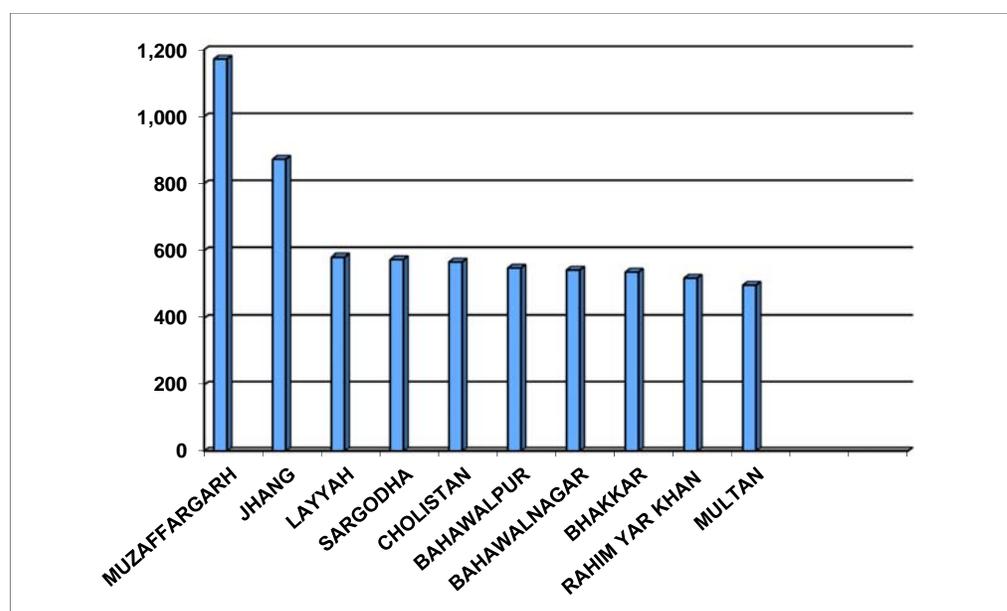
Punjab's share in livestock production in Pakistan is as follows: Cattle 49%; Buffaloes 65%; Sheep 24%; Goat 37%; and Camels 22%. The large area of Cholistan, of which 60% is in Bahawalpur district, holds livestock great potential which is ready to be exploited.

Table 11: Area-wise Contribution in Livestock Production

Animal (Million)	Pakistan	Punjab	Bahawalpur	Cholistan
Cattle	29.56	14.41	0.55	0.56
Buffaloes	27.33	17.74	0.60	0.60
Sheep	26.49	6.36	0.16	0.35
Goats	53.79	19.83	1.04	0.25
Camels	00.92	00.19	0.003	0.011

Source: Livestock Census 2006 – Punjab Province

If we combine cattle production figures of both Cholistan and Bahawalpur, this area comes out to be the largest in cattle production in Pakistan. There is negligible presence of buffaloes in Cholistan while Bahawalpur district ranks as number 12 in the production of buffaloes. Rahim Yar Khan is ranked as number one in goats' production followed by Muzaffargarh and Bahawalpur (3). The combined number for Cholistan and Bahawalpur makes it as the second largest district in goats production. In terms of sheep production, Cholistan ranks as the seventh largest but when combined with Bahawalpur; it ranks as the second largest in Punjab. In camel production, Cholistan ranks as the fifth largest area behind Bhakkar (1), Rajanpur (2), Layyah (3) and D.G.Khan (4).

**Figure 36 Largest Cattle Producing Punjab Districts ('000)**

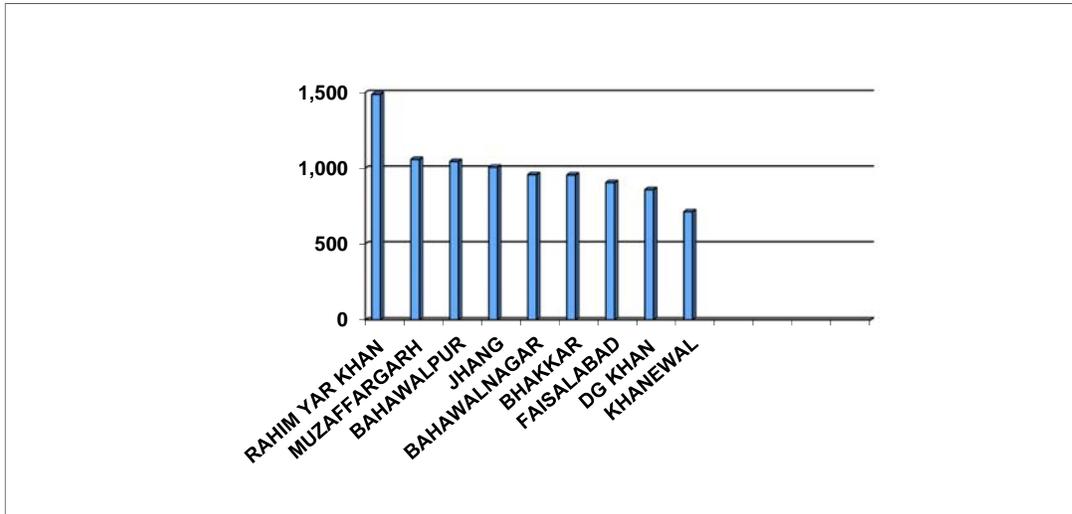


Figure 37 Largest Goat Producing Districts of Punjab ('000)

Based on these statistics, it is easy to conclude that cattle and buffaloes, among the large ruminants, and goats and sheep, among the small ruminants, hold considerable potential for growth in livestock production for milk and meat and its share foremost in the local and then in the provincial/national economy. The significant animal population of Bahawalpur and Cholistan combined can be increased several folds. The potential for camel production as well as other animals could be further explored in the larger context of livestock production. Briefly, sky is the limit in terms of potential for livestock in this one of the largest district of Pakistan.

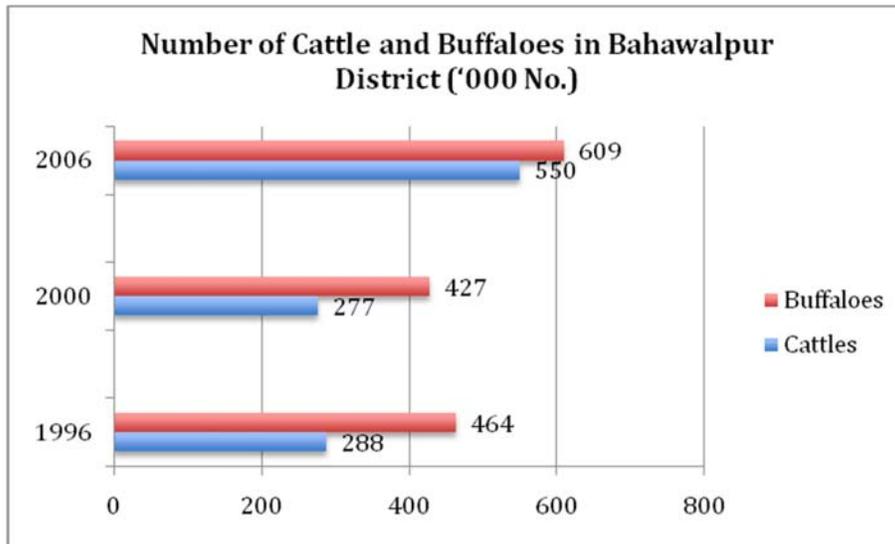


Figure 38: Number of Cattle and Buffaloes in Bahawalpur District ('000 No.)

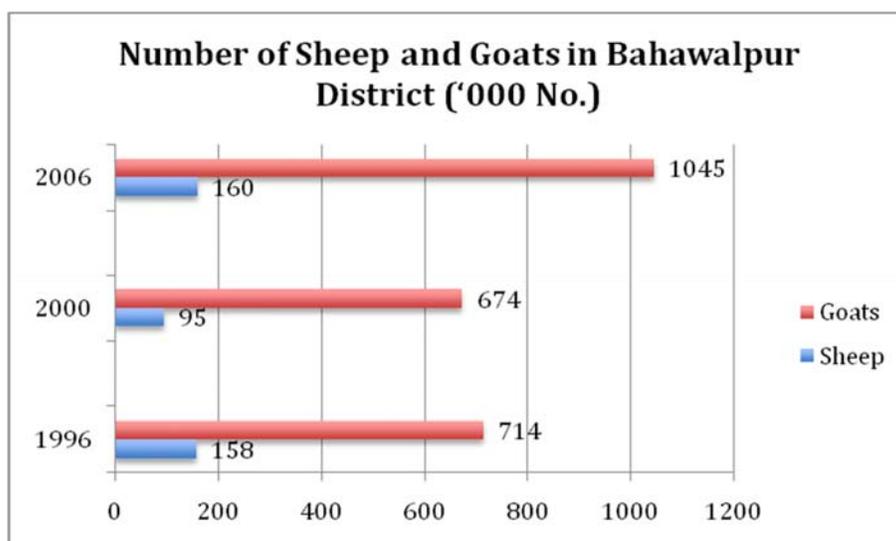


Figure 39: Number of Goats and Sheep in Bahawalpur District ('000 No.)

Livestock production is one of the major activities, employing more than 60% of the district's labor force, climbing to over 70% in rural areas while deriving more than 40 per cent of their incomes with significant involvement of women. It is an integral part of socio-economic activities of the rural areas and plays a very supportive role in mitigating the effects of poverty by providing essential items of daily use. While in Bahawalpur major crops account for almost half of the value added in the agricultural sector, livestock is fast catching up with a contribution of just about as much. The acquisition of animals is seen by the poor as a route out of poverty. Ownership of livestock is described by many respondents as one of the key indicators that separate the poor from the very poor. This sub sector is critical for poverty alleviation that does not depend as much on nature as farming does.

In view of the importance of livestock in the economy as well as in the life of a common man, the Government is trying by all means to fix priorities to increase production of milk, meat and poultry to meet rising domestic demand of ever increasing population and produce exportable surplus as well. The efforts and planning for the purpose will precisely create job opportunities, which would have a multiplier effect on the economy.

SHADBAD

For Cholistan, the Government has recently announced a major initiative 'Shadbaad' for livestock development. Only the first two projects have been approved and initiated while others are in various stages of planning, review and approval:

Cholistan Livestock Development Project – Total Cost PKR 277 Million:

Overall Objective: Projecting & developing Cholistan as a livestock production zone.

Main objectives are include

Projecting potential of Cholistan resources of livestock through all possible means of communications;

Productivity enhancement of livestock in Cholistan through modernized management practices, production inputs, improved breeding and nutritional resources, etc;

Developing community based sustainable mechanism for livestock development in Cholistan;

Human resource development for Cholistan livestock development; and

Tapping production potential through improved marketing system for the livestock & livestock products.

Shaadbad Cholistan Project – Total Cost PKR 202 Million: Main objectives include:

To increase the income of Cholistani Livestock farmers through effective utilization of natural resources of Cholistan;

Mobilization and organization of Communities;

Rehabilitation of Eco-system of Cholistan; and

Human Resource Development.

Development of Rangeland in Cholistan Tract – Total Cost PKR 300 Million: Main objectives include:

To conserve climate & ecosystem of Cholistan;

To rehabilitate multipurpose fodder plants & grasses for livestock feeding in Cholistan;

Efficient utilization of natural resources of water to enhance income of local population through rain water harvesting;

Developing forestry & Oases; and

Restoration of vegetative cover to check soil erosion and improve environment.

Shadbaad Cooperative Livestock Farm Project – Total Cost PKR 471.785 Million: Main objectives include:

To demonstrate real benefits of corporate livestock management and production to the Cholistani livestock producers;

To encourage the Cholistani communities to replicate the modern techniques for enhancing productivity;

To develop and showcase a model of intensive fodder creation on solar pumping;

To enhance the socio-economic capacities of local communities for developing Cholistan as a livestock business zone;

To establish Livestock disease free zone for the purpose of export of Livestock products, meeting OIE / WTO Standards; and

To establish show case farms for the upcoming one hundred corporate livestock farms in Cholistan

Cooperative Livestock Farming in Cholistan:

Allotment to registered companies;

500 Acres (one lot) on 50 years lease;

PKR 500/- per Acre lease in Advance;

PKR 25000/- per Acre Bank Guarantee;

PKR 500.00 Million investment plan 50% 1st 2 years.

25% 3rd year & 25% 4th year complete within 48 months; and

- 250 cows and 2400 calves.

4.4.1.1 Meat Production

Large Ruminants (Cows, Buffaloes, etc.): In many respects, the beef industry is for producers an offshoot of the dairy industry rather than a full-fledged industry in its own right. The great majority of meat production originates from dairy-oriented farmers, who sell young weaned steers and spent cows. There is no formal fattening system in existence, characterized by specialized producers purchasing younger animals and rapidly ensuring weight gain. Small-scale operators value the regular income which dairy cows provide; raising males for beef is a longer-term investment.

Most herds in the region are small, consisting of just a few female dairy cows. These herds provide the majority of the meat that enters the market. Animals, which are not slaughtered at village level, enter the local cattle markets. A small proportion of the sellers at these markets bring their own animals; the rest (approximately 90%) are established cattle traders who buy animals in bulk at village level. An estimated 70% of large ruminants at these markets are bought by butchers from larger centers to be transported and slaughtered there; 10% and 20% respectively are purchased by local butchers and area farmers. There is no commercial slaughterhouse and meat processing plant in the area.⁵⁴

Small Ruminants (Goat and Sheep): The goat population of 1.29 million offers considerable potential. Goats have a number of characteristics that make them the ideal animal for the poor. They have high reproductive potential, short generation interval, ability to thrive on browse, high digestive efficiency for cellulose and less susceptibility to disease - that make them the ideal animal for the poor.

Goat and sheep are the two primary small ruminants kept by farm families in the target region. Goats are increasingly preferred among rural producers, given the small but regular milk supplied, their more adaptable diet, the higher probability of multiple offspring, and the stronger local market for goat meat. Producers surveyed informally indicate higher relative returns from goat rearing. Accordingly, trends suggest that the overall number of goats is increasing, now exceeding the sheep herd by an estimated 20-25%. Average herd sizes for most farmers are low, though specialized farms with herds of 50 to 100 head do also exist in the region. Government support to the industry is focused on ensuring veterinary coverage, assisting with breeding services, and providing practical veterinary training to producers. About 40-50% of the total herd is currently covered by the efforts of veterinary assistants.

Both the sheep and goat marketing chains are controlled to a large extent by agents that aggregate and market the animals both locally and to national markets. A relatively higher percentage of local mutton production is oriented towards national markets given local preferences for goat and higher demand in larger cities for mutton. Accordingly, local urban slaughterhouses process very little mutton. A slight premium of approximately 10% per kilo of live weight is paid locally for goat meat. The animals that are brought to local livestock markets are primarily sold to butchers from outside the region, though smaller proportions are bought by farmers for breeding and by local butchers for slaughter. The primary constraint to development of the mutton value chain is local producer preference. In contrast, market demand in the goat supply chain needs to be investigated in greater detail.

Constraints to Livestock Sector

In the meat sub-sector, following constraints pose significant barriers to its development:

- A government requirement – Animal Slaughter Act of 1963 – stipulates that all meat must be slaughtered in the municipality where it will be consumed. This restricts the

⁵⁴ Middlebrook, Peter J., Iqbal Mustafa, and Ben Fowler. *Agro-Economic Survey & Investment Climate Diagnostic Bahawalpur, Bahawalnagar & Rahimyar Khan*. Rep. Government of Punjab and Asian Development Bank, Jan. 2007.

development of value addition activities within the district and of economies of scale and efficiency. Processing cattle and buffalo which are now being shipped as live animals to larger markets, a promising area for value addition – is prevented by this rule;

- A second resulting limitation to sub-sector development is that current meat processing is entirely done by butchers; there are no commercial slaughterhouses that can process packaged meat and prepare specialized cuts for growing high value niche markets in larger urban centers; and
- A third is the existence of a 'spot check' retail system that does not formally price product based on weight or age, which offers little incentive to maximize animal growth or specialize in the sale of young animals rather than older spent dairy cows.

While livestock plays an extremely important role in income-generation, family well being and female employment within rural Punjab, major impediments to its growth include:

- Prevailing traditional practices that result in poor nutrition and management;
- Lack of adequate and usage of balanced quality feed rations;
- Lack of access to trained and informed support services;
- Poor quality and limited availability of animal health and prophylactic services, including the use of artificial insemination and vaccination;
- Poor genetic quality of much of the existing breeding stock;
- Weak marketing networks and poor quality controls;
- Livestock district office has 17 hospitals, 47 dispensaries, 70 vet centers and each UC is assigned an employee but many positions are vacant and the DO Livestock is understaffed. Consequently, limited or no interaction with farmers. Since the "big wigs" of Livestock Office are based at the district headquarters, there is virtually no monitoring of work in the field.

4.4.1.2 Dairy Production

According to Livestock Census of 2006, Bahawalpur is the sixth largest in milk production but there is no milk plant in the area. This district with a combined population of buffaloes and cattle in excess of a million and a half shows considerable potential for dairy development. Bahawalpur is fifth in cattle milk and fourth in buffalo milk production in the province. However, cattle and buffalo milk production in Cholistan is a disappointingly less than four liters per animal that could easily be doubled. It is estimated that only 3% of the milk is processed and marketed through formal channels and 20% of milk production is lost due to the fragile nature of the informal collection and delivery systems.

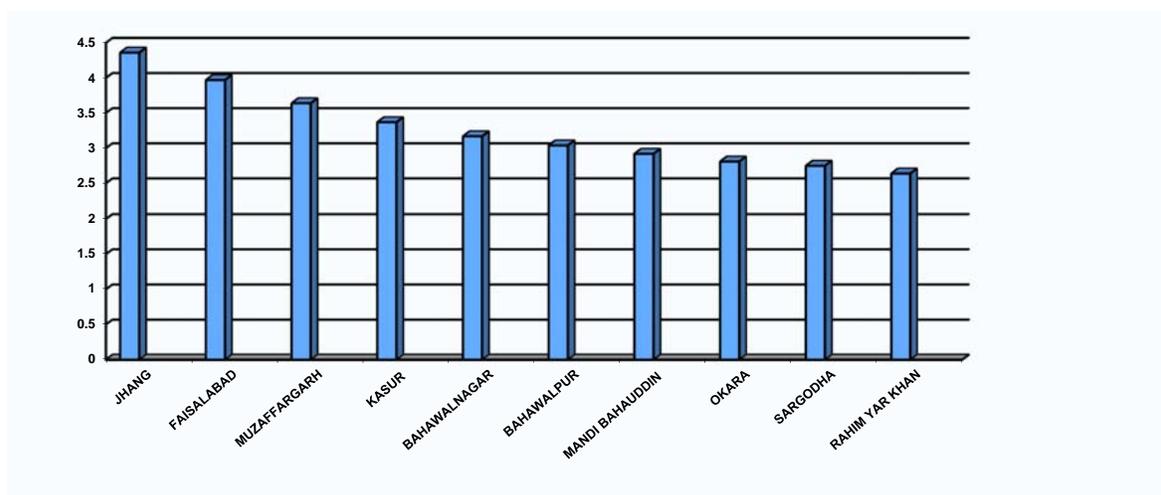


Figure 40 Largest Milk Producing Districts in Punjab (Million Litres per Day)

Source: Livestock Census 2006

Constraints to Dairy Production

Fixed constraints in the sub-sector primarily involve the small scale of dairy operations, which increase extension and collection costs. There is high level of product spoilage during transportation. Another major constraint is regulatory. Pure Food Ordinance of 1960, for instance, imposes ridiculously low fine for milk adulteration that serves as disincentive for development of commercial dairy. Farmers are also not organized and there are no cooperatives to look after their interest.

Dairy is a key source of income in the region, practiced extensively by both landed farmers and the landless. Income from milk is particularly important for the latter group, as it provides a much larger percentage of household income. The dairy system is dependent primarily upon the commercialization of milk from herds of between one and three animals, though some peri-urban herds do also exist specifically to serve urban markets. Female household members typically manage the herd, assuming full control when males are away working. Nearly all milk sold is produced from buffalo (53%), and cattle (47%). Though priced differently based on fat content, milk from both ruminants is mixed and sold together. "International comparison studies indicate both that Pakistani producers are extremely competitive and that farm gate prices for milk are low by both international and regional standards".⁵⁵

Sale of goat milk is limited. Similarly, there is no marketing of camel milk. According to one estimate by officials of Cholistan Development Authority, as much as 150,000 liters of camel milk is lost every day – used by owners but not sold for money. He was of the view that with planning and concerted effort this popular product among the Arabs could be marketed in the Middle East. However, this figure appears to be exaggerated. Based on a figure of 14,000 camels in both Bahawalpur and Cholistan, and considering that only 5000 animals are in-milk status producing 10 liters a day, these results in a total production of 50,000 and not 150,000. This is not to say that this prospect could not be explored sometime in future.

⁵⁵ Food and Agriculture Organization, Policy Brief1

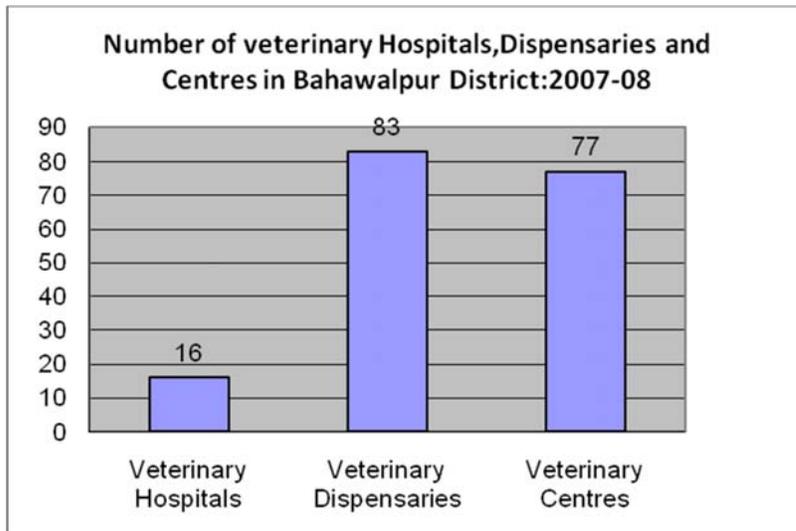


Figure 41: Number of veterinary Hospitals, Dispensaries and Centres in Bahawalpur District: 2007-08

The marketing chain for dairy products involves a diverse set of actors. Small-scale producers at village level, who consume about 1/3 of daily production, retail the remainder to local collectors (i.e. *Gawallas* and *Dhodhis*) and to the agents of milk processing firms. Competition among these players is primarily service- (as opposed to price) based. *Gawallas* and *Dhodhis* transport the milk by motorcycle to sell in urban markets and on to the processing firms.

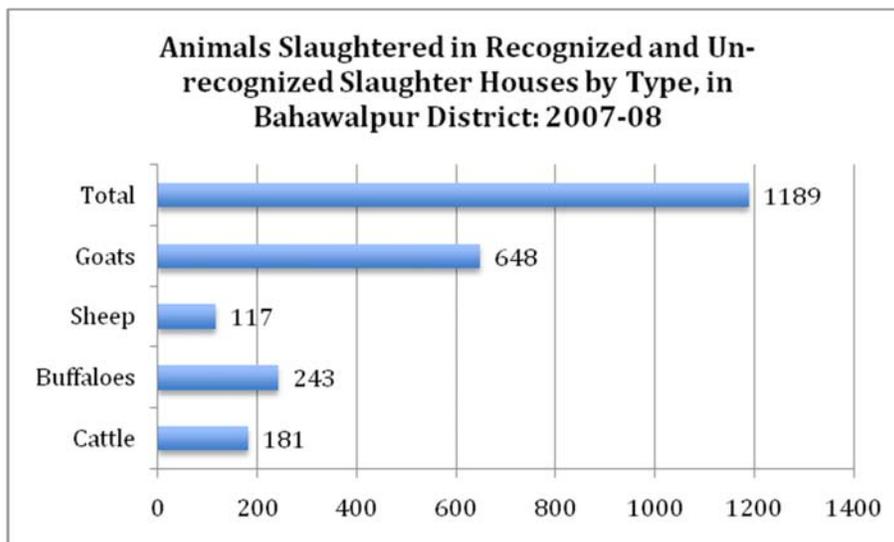


Figure 42: Animals Slaughtered in Recognized and Un-recognized Slaughter Houses by Type, in Bahawalpur District: 2007-08

No large-scale dairy processing plants are operating within the region of focus; the four active dairy firms collect around 400,000 liters of milk every day which is first transported to a series of chilling centers then on to their plants located elsewhere – Olpers in Sukkur, Nestle in Kabirwala, Haleeb in Bahi Phayru and Millac Food in Gujrat. Because this milk is not processed locally, as stated earlier in this section, 20% of milk production is lost. Yogurt, powdered, reduced fat content and ultra high temperature (UHT) milk and other dairy products are all produced there. Relatively

few of these products are then brought back to the region; approximately 98% of milk plant output is directed towards large urban centers.⁵⁶

In addition to a large quantity of milk availability from the district, the plant should be able to attract and process milk from adjacent districts such as Lodhran, Rahim Yar Khan, Bahawalnagar and perhaps others. Such a development is likely to provide a big boost to dairy development, consequently boosting the district's economy.

4.4.2 Cotton

Cotton is cultivated on an area of 3.19 million hectares⁵⁷. Approximately 77-78 percent of all Pakistan cotton is produced in Punjab and remaining 22-23 percent in other provinces⁵⁸. Globally, Pakistan is the fourth largest cotton producing country of the world, after China, USA and India. Pakistan's share of total world cotton production in 2004-05 stood at 9.47 percent.⁵⁹ Pakistan is the sixth largest importer of cotton, third largest consumer, consuming 10 percent of the world production. It is the third largest yarn producer with 9 percent, second largest yarn exporter with 26 percent, third largest cloth producer with 7 percent and is also the third largest cloth exporter with 14 percent of the world cotton production.⁶⁰ World yield comparison indicates that Pakistan stands at the 16th position in cotton production primarily because of non-availability of genetically resistant varieties and pest attack.⁶¹

One hopeful trend for Pakistani cotton is 40% reduction in export of raw cotton during July – December period of 2005-06 and 27% increase in manufactured textile export over the same period one year earlier.

⁵⁶ Middlebrook, Peter J., Iqbal Mustafa, and Ben Fowler. *Agro-Economic Survey & Investment Climate Diagnostic Bahawalpur, Bahawalnagar & Rahimyar Khan*. Rep. Government of Punjab and Asian Development Bank, Jan. 2007.

⁵⁷ Agricultural Statistics of Pakistan 2005

⁵⁸ PES 2005

⁵⁹ CS Bulletin 2006

⁶⁰ Int. Cotton Adv. Com. 2005

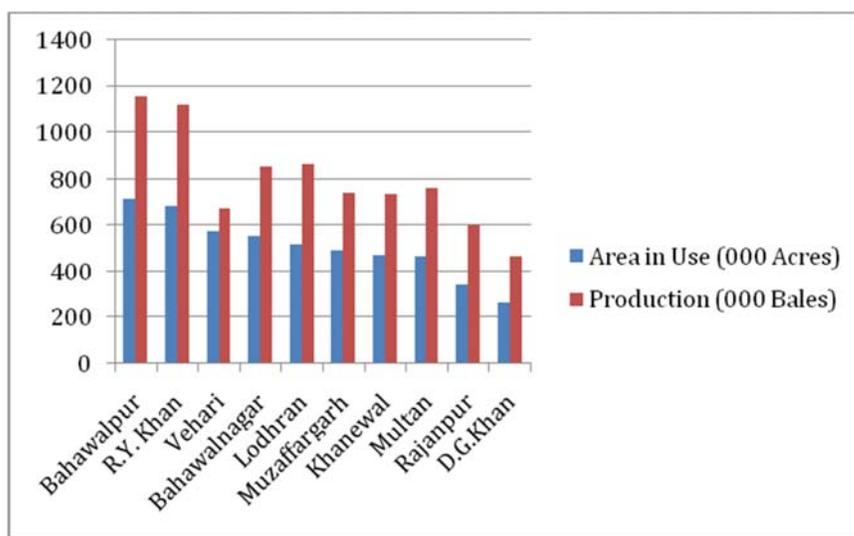
⁶¹ Cotton Production, Marketing and Export 2006, Directorate of Agriculture - Economics & Marketing – Punjab

Table 12: Cotton Facts

COTTON (2007-08)	PAKISTAN	PUNJAB	BAHAWALPUR
Area in Acres Cultivated (000)		5,992	717
Rank in Land Use Punjab			1
Production (Bales 000)	11,655	9,062	1,154
Rank in Cotton Production in Punjab			1

Source: Directorate of Agriculture, Crop Reporting Service, Punjab

According to figures available for 2007-08, Bahawalpur is the largest district both in land use (717,000 acres) and cotton production (1,154,000 bales) in the country. It is the largest Kharif crop of Pakistan with 31% of cropped area followed by rice at 28%.⁶²

**Figure 43 Largest Cotton Producing Districts of Punjab**

“Cotton production is a primary source of livelihood for both farmers and the landless. Around 35% of the total cropped area for farmers with less than 7.5 acres of production is dedicated to the crop. Many of the landless not directly involved in cultivation earn labor income from harvesting for neighboring farmers. Nearly all cotton is grown under irrigation. Studies indicate that financial returns of irrigation water application to the cotton crop far exceed those of wheat or sugar cane. The Pakistani cotton crop is of extremely high quality at farm level”.⁶³

⁶² AGR Census 2000

⁶³ Middlebrook, Peter J., Iqbal Mustafa, and Ben Fowler. *Agro-Economic Survey & Investment Climate Diagnostic Bahawalpur, Bahawalnagar & Rahimyar Khan*. Rep. Government of Punjab and Asian Development Bank, Jan. 2007.

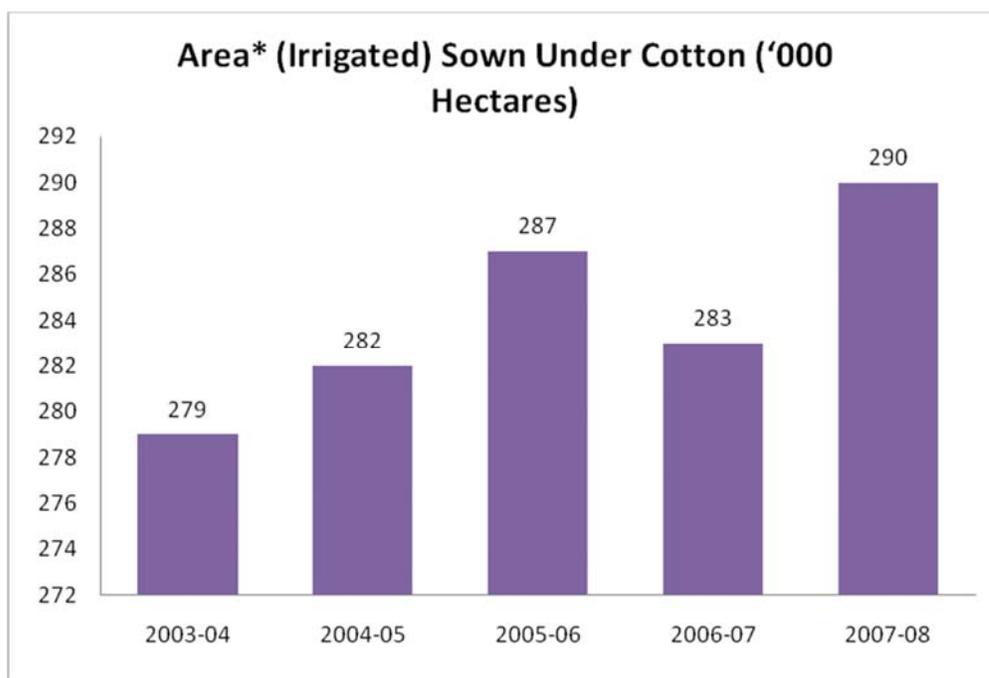


Figure 44: Area Sown Total and Irrigated Under Cotton in Bahawalpur District

It is an important cash crop for Pakistan. The percentage share of value added is 22.11. This crop alone plays an important role in the country's economy, 63.9% of total export earnings (2005), provides raw material to domestic industry – 503 textile mills, 1,263 ginning factories, 8.1 million spindles, and 2,622 oil extracting units. Cotton also yields 3.5 to 3.6 million tons of seed, which contributes to over 64% of domestic edible oil production (2005). Cotton seed and its cakes are also used in feeding livestock. The potential for employment associated with cotton crop is huge both at crop level in rural areas as well as in allied industries.

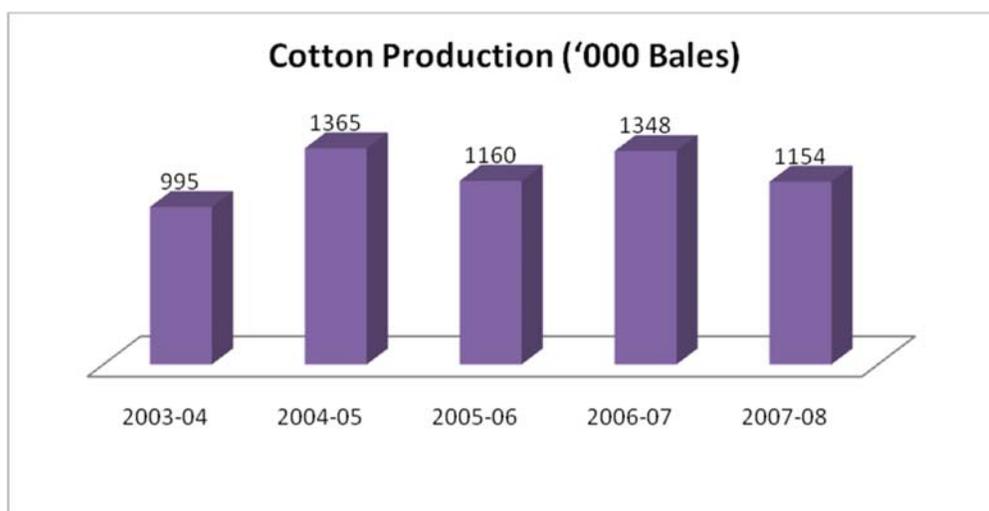


Figure 45: Cotton Production in Bahawalpur District

Cotton Leaf **Curl** Geminivirus

In Asia and Africa the major disease of cotton is caused by the Cotton leaf curl geminivirus (CLCV). Leaves of infected cotton curl upward and bear leaf-like enations on the underside along with vein thickening. Plants infected early in the season are stunted and yield is reduced drastically. This virus devastated the Pakistan cotton industry in early 1990's where it caused an estimated yield reduction of 30-35%

Cotton price is fixed by the buyers and not the sellers. As much as 80% of cotton is procured by agents of traders on-site and only 20% of the crop comes to the market, and traders make commission by selling it to ginneries in auction. There is virtually no government involvement in buying cotton from farmers and selling it to ginneries. Though there is some local cottage and large-scale textile production within the region, the majority of these bales are trucked out of the region to be processed elsewhere. The cotton sub-sector comprises a large number of different value chains, including garments, fabric, and yarns, which transform the raw product into a variety of finished goods. The industry is well serviced by input firms and financial institutions, which market and finance the high quantities of external products required for production.⁶⁴

Constraints to Cotton Production

Cotton production in Bahawalpur, like elsewhere in Pakistan, faces many constraints. Three major constraints include diseases and pests, lack of extension services, and water scarcity. CLCV, mealy bug and various bollworms have been major pests/disease during the last two years. CLCV is currently the biggest constraint on cotton production in Pakistan. It causes plant leaves to curl and stop growing. CLCV had already caused an economic loss to the tune of US\$5 billion. Mealy bug has been a major problem during 2005-08, when it caused an estimated yield loss of one million bales per year. Prior to the introduction of genetically modified insect resistant cotton (commonly known as Bt cotton), bollworms were estimated to cause a loss of 1-2 million bales a year.

A mix of public and private sectors is responsible for providing extension services to cotton farmers in Pakistan. Each provincial Department of Agriculture has a large network of extension workers at the district level, yet the extension service is inadequate qualitatively and quantitatively. This is due to the usual governance issues in the public sector, such as lack of resources, absence of stewardship, and an ineffective monitoring and evaluation mechanism. The private sector has since emerged as an important provider of extension services. All local and foreign companies maintain a cadre of extension workers who provide advice to farmers. However, the private sector extension is often limited to the use of pesticides and herbicides. This is because of limited private sector participation in seed provision. If private sector's participation in the market was larger and more institutionalized, it would also provide extension advice on agronomic issues as listed above.

Over the years, Pakistani cotton breeders have bred varieties that respond well to inputs like fertilizers and water. But the availability of irrigation has been steadily declining due to agricultural intensification, the opening of new canals and channels, and decline in river flows. The ground water is brackish in many places, and in others the water levels are falling by the year making tube well irrigation unfeasible.

The country and the region suffer a considerable loss of earnings caused by a number of factors, including poor seed quality, the use of mixed seed grades and varieties and improper picking methods. These are compounded by substandard post-production methods including poor quality, improper packaging, storage problems and transportation difficulties between farms and markets.

⁶⁴ Middlebrook, Peter J., Iqbal Mustafa, and Ben Fowler. *Agro-Economic Survey & Investment Climate Diagnostic Bahawalpur, Bahawalnagar & Rahimyar Khan*. Rep. Government of Punjab and Asian Development Bank, Jan. 2007.

In order to improve comparatively low yield, selection of field with high content of loam followed by proper bed preparation are important factors. The timing of planting, irrigation efficiency, and fertilizer/pest/weed management could be additional contributing factors in improving yield. As much care as this crop needs, this area's farmers – perhaps like their counterparts elsewhere – are not getting the professional help and technical guidance they need during planting and various phases leading to its harvesting. As stated in an earlier section, the Extension is understaffed, technically not up to the challenge, transportation resources and finally the motivation to produce results.

The availability and use of good quality seed with at least 75 to 80% germination and disease resistant varieties is a major challenge in improving the yield and quality of cotton. Considering the country and area's dependence on this crop, it is critical to invest money, time and effort on research and development of improved varieties.

Availability of adequate supply of fertilizer and quality pesticides are other input constraints that affect small farmers. They buy these inputs from suppliers on credit and thus end up using poor quality inputs. There is no issue of supply and demand here but only the lack of flexibility to bargain for good inputs from all available sources because of non-availability of cash and/or credit at reasonable terms.

Poor cotton picking and handling practices is another major constraint. A high degree contamination occurs during transportation from farm level to ginnery, which lowers the value of the product. While producers are often paid lower prices due to the amounts of impurities (5-10%), group collection and transportation constrains individual incentives to reduce these losses. Another variable constraint is the outdated equipment used by much of the ginning industry, which worsens output quality.

4.4.3 Wheat

Pakistan is the ninth largest wheat producer, with its share of 3.47% of world's total output (2004-05). Wheat is the most important staple food; 75-80 percent of households' food budget is spent on wheat alone. It is grown on 37% of the cropped area – 20,653,000 acres in 2004-05 – 65% of the food grain acreage producing 21,612,000 tons of wheat or 70% of the production. Punjab contributed 78 -80% of the total production in the country. The wheat percentage share of value added is 37.46. It is Pakistan's largest grain crop, and contributes 14.4 percent to the value-added in agriculture and 3.0 percent to GDP⁶⁵. Despite its heavy involvement, Pakistan is not self-sufficient in this area and imports wheat to meet its domestic consumption needs. For instance, its import of wheat in 2005-06 was U.S. \$19.0M.

Table 13: Wheat Facts

WHEAT (2007-08)	PAKISTAN	PUNJAB	BAHAWALPUR
Area in Acres Cultivated (000)		15,820	684
Rank in Land Use Punjab			5
Production (Tons 000)	24,000	15,607	714
Rank Production in Punjab			4

Source: Directorate of Agriculture, Crop Reporting Service, Punjab

According to figures available for 2007-08, Bahawalpur is the fifth largest district in land use (684,000 Acres) and fourth largest in wheat production (714,000 Tons) in Punjab. It is the largest Rabi crop with 75% of cropped area⁶⁶. While the cultivation area of wheat remains stable, the total production fluctuates in a narrow range due to change in yield level.

⁶⁵ Government of Pakistan 2007

⁶⁶ (AGR Census 2000).

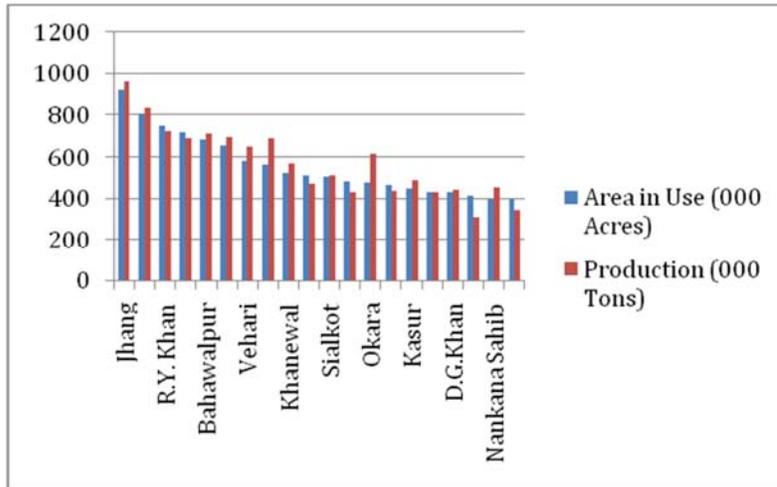


Figure 46 Largest Wheat Producing Punjab Districts

Together with cotton it forms the cropping package used by most producers in the region. The production system is input-intensive, with even the smallest-scale producers typically using fertilizer and insecticide buy inputs on credit. The wheat sub-sector is dynamic, involving many different actors. As with cotton, input suppliers heavily market their products to producers. The majority of wheat produced within the region is subsequently purchased and processed into flour at several major mills. The flour produced is largely shipped elsewhere in Pakistan for consumption and further value addition – a variety of bakery items for consumption by higher end of the market.

Wheat is used both for household consumption (up to 90% for small farmers) and for sale. It is also a major source of seasonal employment, primarily for landless men. Wheat stalk, remaining after harvest, is used as a feed input for cattle. Formal financial institutions offer a range of loan products. Credit for both crops is also offered by commission agents based at grain markets.

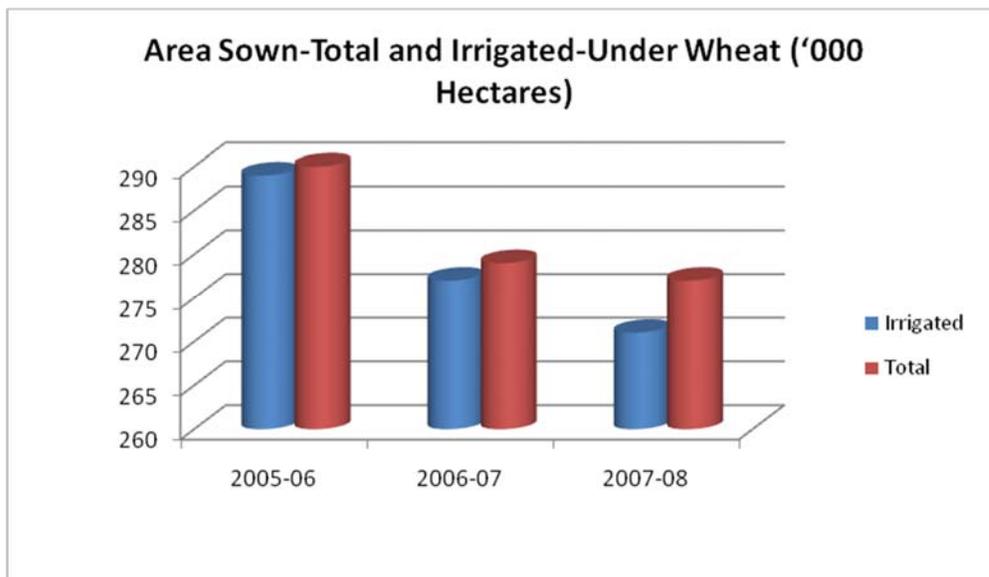


Figure 47: Area Sown Total and Irrigated Under Wheat in Bahawalpur District

Vertical expansion of wheat depends upon the availability of high yield quality seed, water use efficiency inclusive of quantum and timing of rainfall, and balanced use of fertilizer. Other initiatives that could help include the availability of credit, availability of implements and other inputs at reasonable cost and increased support price. Wheat production should not be limited to favorable irrigated environment and opportunities need to be explored in marginal rain-fed areas.

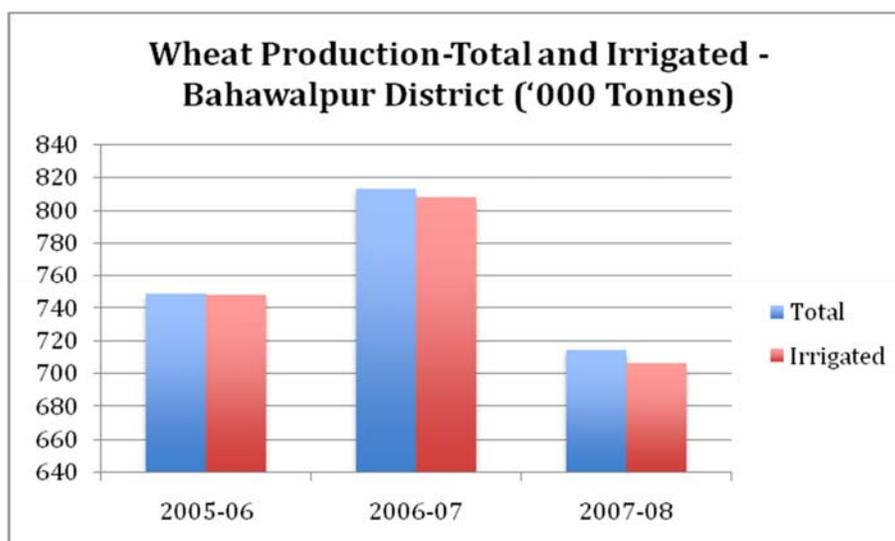


Figure 48: Wheat Production in Bahawalpur District

Constraints to Wheat Production⁶⁷

The government has limited capacity to buy wheat, e.g., it has announced its plans to procure 20 maunds per acres at pre-fixed support price in 2010. It either needs to expand its own capacity to do so or make it possible for the private sector to do so on its behalf. The inability of the farmer, particularly small ones and tenants, to sell all of their production soon after harvest leaves them vulnerable to the tactics of middlemen and sustain loss by selling the produce at less than the publicly fixed support price.

The government does not have modern warehousing capacity to store wheat it procures. At many locations, the wheat remains stored in the open with no protection from incidence of rain and other variations in weather. In the event of adverse weather conditions such as rain, temporary arrangements are made to protect this critical commodity and lifeline of Pakistan. Similarly, there are no modern wheat storage facilities even in the private sector. The lack of storage facilities at the farm level and in the private sector as well as in the public sector is a serious constraint to the growth and development of this important sub-sector.

4.5 Recommendations and Proposed Interventions

4.5.1 Recommendations⁶⁸

The above sections have identified a number of generic and sector-specific constraints on agricultural production in the district. Following are some of the recommendations to address these constraints:

1. Reform the Legal and Institutional Infrastructure

- Amend the Seed Act of 1976 to enable private sector participation in seed provision in the formal sector, and to also extend regulatory oversight to private sector seed operations.

⁶⁷ The issue of free/controlled trading structure for wheat is linked to the Provincial Food Policy and needs separate addressing.

⁶⁸ Government of Punjab, with assistance from DFID, has developed a strategy to develop livestock and dairy sector in Punjab. The strategy lays out an action plan to undertake critical interventions at the provincial level. The strategy focuses on six key areas including institutional development; human resource development; improving livestock management; facilitating marketing and investment; promoting public-private partnerships and improving regulatory & compliance regime. The proposed recommendations for livestock sector in DEDS are aimed at supporting the provincial strategy, by undertaking requisite measures at the district level, such as building the capacity of District Livestock office, privatizing extension services, encourage private sector participation in breed improvement, etc.

- Enact Plant Breeders' Rights. This will create proprietary rights in new plant varieties, which will pave the way for private sector investment in agricultural R&D in general and development of new varieties in particular.
- Amend Rules made under the Plant Quarantine Act of 1923 to allow for large scale import of cotton seed by the private sector at any port of entry.
- Amend the Pesticide Control Act for testing of xylene as well as the poison content.
- Amend the Slaughter Control Act to ensure the free functioning of the market. The revised law should set standards and facilitate the establishment of slaughterhouses in the private sector. Also remove market distorting provisions, such as the one banning slaughtering of beef and lamb on Wednesdays.
- Amend the Cruelty to Animals Act to set standards and to approve techniques that would ensure that all slaughtering techniques used are humane. The absence of such provisions not only imposes undue cruelty on animals, but also makes it difficult to export meat that has not been slaughtered in accordance with international practices.
- Revise the Cattle Market Rules to remove market control through price caps. Such caps not only distort values, but also raise quality concerns. In general, remove all caps on meat and milk prices.
- Enact legislation for milk and meat quality control. A significant quantity of the milk produced in the district is adulterated and is not fit for human consumption. This law is required to develop standards on the quality of the milk and meat, and to provide a framework that will ensure the monitoring of this quality.
- Develop regulatory capacity at the provincial level. Variety approval and registration, seed testing and certification, and overall regulation of the seed business in all crops is a provincial privilege. Hence, the Punjab Seed Certification and Variety Registration Authority should be established as an independent regulatory organization.
- Develop seed certification facilities at district level; at least one seed inspector to be dedicated for the district.

2. Build the Capacity of the District Agriculture Office

- Fill all vacant positions in the district with qualified professionals; rationalize work load by creating more positions at the union council level; provide motorcycles and POL budget for all Agriculture Officers and Field Assistants in the district.
- Develop specialized cadres of extension workers for different crop groups (cotton, wheat, etc.).
- Conduct a target and resource gap analysis to develop a realistic work plan for each official in the district.
- Develop effective linkages with R&D institutes and agricultural universities for a regular flow of information on crop production from the lab to the field.
- Develop a capacity building strategy and a capacity building plan for district agriculture office; training on use of information technology tools to be an important component in all training programs
- Use information technology for creating databases of farmers, crops and livestock.
- Provide performance-based incentives to officials who meet targets and provide effective extension advice to farmers.

3. Privatize Extension Provision on a Pilot Basis in One Tehsil

- Focus extension effort on key crops (cotton, wheat, sunflower, mangoes and citrus).

- Develop a set of key messages that are to be delivered to farmers; develop terms of reference and invite private sector companies to bid for provision of extension advice to a pre-determined proportion of farmers in selected crops.
- Reformulate the role of district agricultural establishment to the extent of pilot tehsil as manager of contracts, rather than a service provider.
- Document lessons learnt for possible replication in other tehsils of Bahawalpur and subsequently in other districts.

4. Improve Farmers' Access to Various Services

- Establish water and soil testing laboratories at tehsil level.
- Offer quality diagnostic services to farmers on cost-recovery basis.
- Establish a Provincial Reference Fertilizer and Pesticide Testing Laboratory at Lahore to test disputed fertilizer and pesticide samples; this laboratory can also evaluate fertilizers, pesticides, enzymes and other growth regulators for the purpose of registration.

5. Improve Crop Reporting Services

- Use modern tools of information technology to maintain crop data in the district.
- Use GIS for accurate and real time crop reporting on pilot basis in one tehsil.

6. Promote Water Use Efficiency

- Encourage the use of high-efficiency irrigation systems (e.g. drip and sprinkler). 60% of the cost to install drip irrigation is currently supported. Extend this scheme to the entire district.
- Strengthen the district On-Farm Water Management office.
- Integrate advice on water use efficiency with core extension activities.

7. Improve Agricultural Storage Facilities

- Support private sector development of storage facilities, including cold storage facilities.
- Develop model pack houses, farm cooling systems and portables reefers to facilitate the growers to maintain the quality of their produce. Provide training to growers on picking techniques, storage and post harvest treatment. This will save about 20-40% of produce, which is currently wasted due to lack of proper infrastructure and post-harvest care.
- Encourage ADBP and commercial banks to provide soft credit to farmers intending to store their crops for short to medium term at a private sector storage facility (including cold stores); use stored crop as the collateral; the credit can be recovered at the time of sale. This will be a tri-partite arrangement among the bank, the farmer and the storage provider.
- Support conversion of existing commodity non-specific cold stores into 'control-atmosphere' commodity-specific types.
- Study 'futures trading system' and support private sector warehousing facilities to enable 'futures trading' of wheat, maize, rice, etc.;

8. Promote Use of Biotechnology to Improve Crops

- Support private seed companies in producing and marketing their Bt cotton varieties.
- Use government microbiology labs to support private sector breeding activities; provide seed testing services for genetic purity, for existence of new traits (such as insect resistance and herbicide tolerance) and for expression level of proteins (such as the one produced by Cry 1Ac gene from Bt).
- Rigorously enforce quality standards in genetically modified BT cotton seed provision.

- Establish effective partnership with Monsanto for introduction of double-gene Bollgard II cotton in Punjab. This will help the farmer in bollworm control, and will build the capacity of our seed industry.
- Explore avenues for introduction of herbicide tolerance technology through the formal sector. This will help the farmer overcome the weed problem. Genetically modified herbicide tolerant crops allow use of broad-spectrum soft herbicide (such as glyphosate) at vegetative and reproductive stages to control weeds without damaging the crop (which has been genetically modified to be tolerant to the herbicide).

9. Invest in Agricultural Research and Development

- Strengthen the crop research institutes at the Ayub Agricultural Research Institute (Faisalabad). Fill vacant posts and create new posts to patiently carry out crop improvement activities through breeding and selection.
- Establish a system of performance-based incentives to encourage innovation; develop a system of royalty sharing between breeder, institute and seed providers on commercialized crop varieties.
- Implement governance reform in research institutes to give them operational, fiscal and administrative autonomy; they should be responsible to key stakeholders, rather than bureaucrats in the Agriculture Department.

10. Create Awareness Among Small Farmers about Newer Production Techniques for Fruits and Vegetables

- The district agriculture office should enlist technical assistance from the Punjab Agricultural Marketing Company (PAMCO) to develop projects for creating awareness on Global GAP (Good Agriculture Practices), better production techniques including efficient fertiliser application and water management, pruning, and plant care.
- Develop training manuals for crop production and work on disseminating the information and 'preaching by demonstration'. Establish more model farms and farmer learning schools to impart training on growing practices .
- Develop effective linkages between PAMCO and small farmers for appropriate farming and harvesting practices that support high-end domestic and export markets.

11. Develop ISO 17025 Certified Laboratories

- Support the existing laboratory infrastructure (public and private) to become ISO 17025 certified. This will enable the private sector to meet international sanitary and phytosanitary (SPS) measures on microbial contamination and pesticide residue analysis. Active monitoring and surveillance must also be provided to ensure that processes are being followed at the grower and processor level.

12. Build the Capacity of District Livestock Office

- Fill vacant posts and create new posts to rationalize work load.
- Provide veterinary care facilities at the union council level.
- Develop a system of regular training of staff, especially for the extension and artificial insemination staff.
- Develop a database of livestock farms.
- Establish a Livestock Development Centre in the district to provide animal health services, advisory services for livestock owners and provide business facilitation services.
- Develop an animal disease reporting and epidemiology system in the district.

13. Create Awareness Among Livestock and Dairy Farmers about Production Techniques

- Emphasize practical training in the existing livestock training programs.

- Privatize extension services on pilot basis in one Markaz or tehsil.

14. Encourage Private Sector Participation in Breed Improvement

- Support development of artificial insemination facilities in the private sector

15. Strengthen Agriculture Markets⁶⁹

- The inefficient organization of wholesale markets (mandis) should not be passed on to retailers as hidden costs or higher transaction costs due to time taken for purchasing and variations in quality that cause uncertainty about shelf-life.
- Weekly bazaars and other public markets should be expanded to more locations and to cover all days of the week. This mechanism provides an alternative channel for direct market access for suppliers and growers. Local governments should further develop bazaars and other retail marketplaces to serve residential areas at all income levels.
- The Punjab Agricultural Produce markets Ordinance 1978 (based on The Agricultural Produce Markets Act of 1939) regulates agricultural marketing in Punjab, promoting an active role of government in agriculture marketing. There is a need to repeal this law and replace it with an investment friendly legislation, calling for a competitive market for agriculture produce.

4.5.2 Proposed Projects

4.5.2.1 Strengthening Agriculture Department's Capacity

Purpose: To strengthen the capacity of district agriculture office and to improve their service delivery to the area farmers.

Rationale and/or Criteria for Selection: There is a wide spread complaint about the performance of the department and for good reasons. Many positions remain unfilled and field staff remains oblivious to needs of the area farmers. There is no concept of service and dedication to work. It is no wonder that in a meeting with tenant and small farmers, the unanimous recommendation of the group was "to dismantle the department".

Benefits from the Proposed Project: With proper technical assistance and service to the farming community, farmers yield will go up resulting in significant increase in production – both by 10% - and, in turn, income generation, economic growth of the area encouraging investments in agriculture, uplifting economy and reducing incidence of poverty in the area that is among the highest in the province.

Activities to be carried out:

Agriculture Extension:

- a. Fill all current vacant positions without delay;
- b. Assign two Field Assistants at each Union Council instead of one now;
- c. Ensure the provision of motorcycles to field staff and other resources;
- d. Hold training sessions for all extension staff, at a minimum, twice a year – prior to the start of *Kharif* and *Rabi* cropping seasons;
- e. Introduce an incentive system for field employees for providing on-demand services and enhancing the yield and productivity of area farmers;
- f. Improve farmers' accessibility to agricultural services by consolidating them, to the extent possible, at one location at each tehsil level.

⁶⁹ This recommendation is drawn from 'Agricultural Marketing Policy Framework'; USAID

Implementation Approach:

- a. Enter into an agreement (MOU) with counterparts in government that spells out parties obligations, conditions precedent and covenants ensuring sustainability of operations long after the completion of the project;
- b. Designation of entity, team leader, key personnel, and support staff;
- c. Assessment of needs – identification of human and material resources;
- d. Promulgation and notification of essential operating procedures;
- e. Provision of material resources from project funds.

Proposed Location: Throughout the district from the headquarter seat in Bahawalpur all the way down to each union council level.

Approximate Cost: It is recommended that the project should reach an understanding with the government about sharing costs where the government picks up the tab for all humanresources to be employed and for the project to pay for one time capital costs and selected operational costs. A provisional cost estimate of \$500,000 is broken down as follows:

Two person local TA team for one year	\$100,000
Training Costs	100,000
Crop Specific Field Demonstrations	100,000
Transportation and other Equipment	200,000

4.5.2.2 Private Sector Participation in Extension Services

Purpose: To provide an alternative to the provision of agriculture extension service by the private sector on a pilot basis in one tehsil of the district.

Rationale and/or Criteria for Selection: Farmers of the area have complained about the utility and effectiveness of the government provided extension services. Despite a fairly vast network of employees – at least one Field Assistant – at each Union Council, there is a wide spread dissatisfaction of the quality of services received. This initiative is being proposed to see if the private sector can deliver demand driven quality service to the farmer at a reasonable price.

Benefits from the Proposed Project: It is hard to calculate potential benefits from an initiative like this one. However, more than the magnitude of potential benefits, this initiative can possibly transform how these services are delivered to farmers in future years and revolutionize how other such public services are delivered to the public in the country in future.

Activities to be carried out:

- Orientation to existing organizational structure, operations, the area, public outreach to educate target beneficiaries and other start-up activities;
- Submission of work plan, setting-up of benchmarks and indicators to monitor and evaluate contractor's performance; and
- Delivery of extension services.

Implementation Approach: The project funded TA team will help draft the scope of work for extension services by specifying number of farmers by small/medium/large groups, the frequency and type of services to be provided during Kharif and Rabi by crop. Specific objectives to be accomplished, targets and outcomes will all be spelled out and competing bidders will be encouraged to propose innovative ideas and methodology to accomplish the stated objectives. The criteria for selection of the potential firm will be spelled out as part of an Expression of Interest and later the detailed Request for Proposal.

Proposed Location: One tehsil of the district is to be jointly selected by the TA team and the Office of the EDO for Agriculture.

Approximate Cost: Because the successful contractor for extension services will be selected based on competitive bidding process, it is hard to come up with a reliable estimate. Nevertheless, the \$250,000 estimate is based on the following:

Personnel Costs	\$100,000
Transportation Costs	50,000
Field Presence Set-up Expense	25,000
Field Demonstration Activities	50,000
Overhead Expenses	25,000

4.5.2.3 Address Water Shortage Challenge

“Solve our water issues” is the cry of the people in general and farmers in particular of the district. Water availability is a limiting condition for economic development in Bahawalpur. Scarcity of water is described as number one problem faced by farmers. An economic development advantage can be created by solving this problem.

Purpose: To expand the supply of water fit for use in agriculture, make optimal use of available water supply and conserve this dwindling resource.

Rationale and/or Criteria for Selection: Considering the dwindling supply of surface water, the poor quality of ground water, overwhelming dependence of the economy and livelihood on agriculture, there is absolutely no higher prior priority than addressing the issue of acute shortage of water.

Benefits from the Proposed Project: For almost all of the area residents, their livelihood is directly linked to the availability of adequate water supply and the provincial and national economy so acutely dependent on the area’s agriculture particularly cotton, wheat and livestock.

Activities to be carried out:

- Establish water budgets (needs and availability assessment) for the entire district;
- Provide technical assistance and training to district personnel – on Farm Water Management (OFMW) towards the development of an in-house institutional management, technical and analytical capacity, in addressing water related issues.
- Develop an informational warehouse or database of existing data. Assess the scope of data currently available data and evaluate existing reports/studies regarding the availability and utilization of surface and ground water.
- Lining of 100% of water courses is strongly encouraged. As of now only about 30% of the lengths of 2700 out of 3100 have been lined. The use of plastic membranes or other cost effective methods needs to be explored.
- Reportedly, several hundred storage ponds have been constructed for storing water in *Kharif* and using it in *Rabi*. Need to expand the construction of additional ponds at each village level. Similarly, in Cholistan, 1500 *tobas* and 110 big ponds to collect season water have been constructed. Expand this effort in the district.
- Underground water in most areas is brackish. For the treatment of brackish water throughout the district, such methodologies as water softening plants, solar pond, and the use of magnetic need to be aggressively pursued.
- Make the availability of two laser land levelers per *Tehsil* throughout the district, but particularly in acute water shortage areas, on convenient terms to help in the optimal use of water. These machines may be procured using project funds.

- Encourage the use of drip irrigation aggressively to conserve water. This has been tried in the district and it needs to be replicated. Provide technical assistance and training to strengthen the capacity of OFMW to promote this methodology.
- Investigate incentives to encourage innovation and policies to encourage the use of technological devices to conserve water. Develop the capacity of OFMW in this area.
- While an Arid Zone Research Institute in the district exists, the capacity of this institution needs to be strengthened. The TA team assigned to this particular intervention needs to undertake a thorough assessment in order to make it a vibrant entity to promote agriculture growth in arid conditions with strong emphasis on research and development.
- Launching of mass media campaigns designed to promote conservation of surface and ground water in rural and urban areas, strategies for optimal use of this diminishing resource in agriculture, industrial and domestic areas.
- Explore a wide range of methods and feasibility for wastewater treatment for different size urban communities in the district.

Implementation Approach: A comprehensive program is proposed to achieve the stated project purpose. These include a number of conservation measures, activities to expand water supply, the provision of equipment such as laser land levelers, the establishment of an arid zone research institute, strengthening the capacity of OFMW as well as mass media campaigns.

No single step, like building up the capacity of OFMW, is likely to yield the desirable impact. All proposed activities are proposed to be carried out simultaneously. A team of three to five experts is proposed to be assigned for a period of two years or more. While most of these experts can be Pakistani nationals, the senior members, particularly the Team Leader, with vast experience in similar water resource constraint areas is encouraged. This team will work with policy makers and local officials to devise short and long term plans for development of the area on sustainable basis.

To ensure sustainability of the program, long term commitments on the part of decision makers in the form of conditions precedent and covenants are warranted.

Proposed Location: Throughout the district and Cholistan area

Approximate Costs: Considering the foreign expert costs and the procurement of equipment and other commodities as well as the time consuming nature of building and/or strengthening, the cost of this component is estimated at \$4.5M

Capacity Building of OFMW (TA/Training)	\$2,000,000
Lining of Water Courses	500,000
Expansion of Water Storage Capacity (Tobas/Ponds)	250,000
Treatment of Brackish Water	250,000
Provision of Laser Land Levelers	500,000
Capacity Building for Arid Zone Research Institute	500,000
Promotion of Water Conservation e.g. Drip Irrigation	100,000
Support for Innovative Initiative	100,000
Other Incidental Expenses (Contingency)	300,000

4.5.2.4 Access to Credit for Small Farmers, Tenants and Women

Purpose: To increase the economic contribution of small farmers, tenants and women from a revolving fund to be established under the project.

Rationale and/or Criteria for Selection: This intervention is proposed to facilitate the disadvantaged groups from the exploitation of area traders who sell inputs of dubious quality to them on unreasonable terms including a much higher than market interest rates. This has negative impact on their productivity and keeps them dependent on area traders. Without assistance, they are likely to fall deeper into the poverty trap and make less than optimal contribution to the economy and improve their own quality of life.

Considering the inaccessibility of credit through such financial institutions as ADBP, Khushhali Bank and the high cost of credit from the RSP network, a small revolving fund will go a long way to cater to the needs of small and/or landless farmers.

Benefits from the Proposed Project: Availability of credit at reasonable interest rate and payment terms will facilitate small farmers, tenants and women, who care for small herds of livestock, cultivate five acres or less of land and want to experiment innovations to conserve natural resources like water or enhance their yields in the area. This intervention is specifically designed to enhance the contribution of this disadvantaged group to the area's economy.

Activities to be carried out: A revolving fund is to be established and a simple operational handbook developed to facilitate the intended lending activity without any inconvenience to target beneficiaries.

Implementation Approach: A micro-credit unit is proposed to be established within the project implementation unit to administer the proposed revolving fund. Only those beneficiaries who are women, tenants and own less than five acres of land will be eligible to receive credit. A competitive interest rate will be set and effective operational mechanism will have to be developed to ensure the agreed upon use of the credit. An information campaign, using help of field extension staff, will be launched to inform target beneficiaries of the availability of credit. This unit is proposed to be given legal powers to recover the defaulting amount as declaration of land arrears or through other mechanisms from landless borrowers.

Project Location: Specifically reach out to the target group throughout the district, wherever there is an active interest in the program.

Approximate Cost: A revolving fund using a small amount of \$250,000 is proposed to be established.

4.5.2.5 Promotion of Livestock Development

Purpose: To improve the capacity of livestock farmers in the production and marketing of animals for both meat and dairy production. This purpose is to be accomplished by strengthening the capacity of the district livestock office and, to a lesser extent, to concerned officials at Cholistan Development Authority.

Rationale and/or Criteria for Selection: Considering immense existing livestock resources, the high potential for this sector and the neglect rendered to this sub-sector makes it a primary candidate for project focus. Improvements in this sub-sector have tremendous potential for poverty alleviation among small holders and women.

Benefits from the Proposed Project: On balance, the rectification of production and marketing chain inefficiencies has the potential to generate major economic benefits for sub-sector participants.

Activities to be carried out:

- Strengthen the institutional capacity of the District Livestock Office – filling all vacant positions, hiring additional personnel to provide adequate coverage, provision of all essential equipment and supplies, transportation resources and improving technical capacity of personnel;

- Launching topic specific short training sessions on topics such as animal feed and fattening for small farmers in the field;
- Introduce improved genetic quality of breeding stock;
- Improve marketing networks and improving quality controls for both milk and meat;
- Organize small/women farmers in cooperatives to improve their bargaining power, reduce their collection costs and reap benefits of economies of scale;
- Persuade government to offer incentives for establishing a modern slaughter house in the area;
- Improve regulatory framework allowing the transportation of meat out of the area where it is slaughtered, selling of animals by weight and imposition of heavy penalties for adulteration in milk;
- Provision of support to small-holders and women programs for dairy and small ruminants development program including TA, training, improved feeding, basic animal health care and the like;
- Reduce product spoilage during transportation and by providing chilling and pasteurization for dairy products.

Implementation Approach: Considering several announced initiatives for Cholistan, strengthening of the District Livestock Department in Bahawalpur is the key intervention under this proposed project. A team of three to four livestock experts need to be assigned for nine months to one year to work with professionals to strengthen their technical capacity to provide animal care, ability to organize and train farmers. In addition, under the watchful guidance of contracted experts, a prolonged and consistent interaction with livestock farmers is necessary to improve their production and marketing skills. Finally, the contracted team needs to work with the government representatives to improve the regulatory framework and provide incentives for the private sector to make investment in both meat and dairy development.

Project Location: Rural areas of Bahawalpur are the focus of this intervention.

Approximate Cost: Assuming these experts come from the local private sector and other incidental expenses over a two year period, the cost for this initiative is estimated at \$2,000,000.

Capacity Building of District Livestock Office	\$1,000,000
Field Demonstration & Training Activities	250,000
Improved Breeding Initiative	150,000
Dairy & Small Ruminant Development Program	100,000
Provision of Small Chilling & Pasteurization Units	400,000
Contingency	100,000

4.5.2.6 Improved Production of Cotton

Purpose: To improve the yield and quality of cotton by improving the quality of seed used and harvest handling practices.

Rationale and/or Criteria for Selection: Significance of the sector to the economy of the country, the province and the area.

Benefits from the Proposed Project: Improvement in per acre yield and cotton fiber quality will reduce manufacturing costs and result in economic growth by fetching higher export earnings and improving profit margins for manufacturers, traders -all the way down to farmers.

Activities to be carried out:

The greatest need of the time in this sector is investment in research and development to come up with improved seed that is high-yielding quality fiber, disease resistant and stress tolerant. An R & D fund is proposed to be established to award small grants to individual researchers, public/private academic and research institutions. Specific components to be financed include:

Support the establishment of a new institute in the private sector for cotton R&D by provision of technical/financial assistance;

Establishment of Cotton Breeding Program to develop propriety germplasm from a variety of domestic and international sources with a strong support from microbiology for breeding where not only it will have its own lab but also establish linkages with other centers of excellence in microbiology. In addition to the establishment of breeding stations, acquisition of technology from multi-national companies, a strong program of capacity building will be pursued; and

Development, testing and marketing of hybrids: under this component, the lead organization will establish, among other things, seed/fiber testing labs and hybrid seed production facilities towards developing hybrids from its proprietary germplasm and import from elsewhere and market all of these varieties in the country.

Implementation Approach: The lead entity for the implementation of this activity will be known for its leadership role in all aspects of cotton breeding, production and marketing of seed under national/international safeguards and standards, known for its agronomic research/extension/support services and for its leadership role in policy advocacy for legal and institutional reforms. If none exists, USAID's support could be provided to a new indigenous entity that is dedicated to the cause and one that has invested considerable resources of its own in the pursuit of common objectives. Short term experts, both local and international, are proposed to be assigned to advise and assist the selected entity using project's TA funds. The selected entity is expected to train extension staff, master trainers, farmers and others as deemed appropriate by project implementers.

Project Location: Most of project activities – research and development as well as conferences, symposia and training - will be carried out anywhere and everywhere in Pakistan. Training programs designed for extension staff and farmers will be carried out locally. The ideal location for concentration of project activities is southern Punjab.

Approximate Cost: Considering the long term nature of this undertaking, the upfront costs for purchasing of land, setting up of laboratory facilities and essential equipment may be procured using USAID funds. Other costs of the project such as essential commodities, human resources, expert technical assistance and training ought to be the responsibility of the counterparts. A memorandum of understanding needs to be signed spelling out commitments of parties. A Concept Paper on Centre for Agriculture Research, Innovation and Advocacy (CARIA) proposed to be established by local industry leadership on similar lines, estimates total costs for such an undertaking to be around US \$10.0 million. Inputs based cost estimate for this initiative is as follows:

Technical Assistance	\$1,000,000
Capacity Building (Training & Demo Activities)	500,000
Cost of Land, Equipment and Commodities	5,000,000
R & D Activities in support of Breeding	1,000,000
Development, Testing and Marketing of Hybrids	1,000,000
Extension Support and Farmers Outreach	500,000
Support for Policy Advocacy, Reg & Instl. Reforms	200,000
O & M Costs over a Three Year Period	700,000
Contingency	100,000

5. Manufacturing, Trade and Commerce

5.1 Introduction

Manufacturing, Trade and Commerce make up 3/4th of Pakistan's GDP⁷⁰. These sectors play a similar economic role in the district economy of Bahawalpur. The district has a modest manufacturing base, which plays its due role in investment, employment and industrial output of Bahawalpur district.

Manufacturing establishments in Bahawalpur primarily provide value addition to the district agriculture supply chain for cotton, wheat, sugar cane, rice, solvent plants, animal feed etc. Small-scale industries include food processing, auto parts, confectionary, pesticides packaging, etc. Micro Enterprises include silver jewellery, traditional embroidery and host of different trades. The contribution of the district in national exports is very insignificant.

Trade and Commerce sectors of Bahawalpur are quite diverse and cater to the needs of district population for transport and communication, education, health care, financial services, retail, whole sale, restaurants, hotels and host of other commercial services.

The structure of manufacturing and commercial establishment of Bahawalpur consists of handful Large Scale Manufacturing (LSM) units and a sizable number of small and medium enterprises (SMEs) and Micro enterprises. Most of the SMEs and Micro Enterprises have the outfit of informal sector

Industrial profile of Bahawalpur consists of a few Large Scale Manufacturing (LSM) units, over 230 units of small and medium enterprises (SMEs) and many unregistered micro and cottage enterprises⁷¹.

Bahawalpur is the divisional headquarter for Bahawalnagar and Rahim Yar Khan districts. Despite having the dynamic agriculture, vast desert land of Cholistan, a modest industrial base and traditional advantage of divisional headquarter, the district ranks high on deprivation ranking list of Punjab⁷². Labour force is predominantly engaged in agriculture due to the very fact that 72.6% of population resides in rural areas as per District Census 1998.

This chapter touches various issues related to the sector, various government and private sector organizations related to economic performance, economic establishments, infrastructure, labour and employment, poverty and challenges ahead for district economy. Subsequent parts reflect upon Business Environment, Small and Medium Enterprises, Priority Sectors and their constraints and evolving economic development strategies along with a list of proposed projects for rapid economic development of the district.

5.2 Manufacturing, Trade and Commerce in Bahawalpur

5.2.1 Agro-based Economy

Bahawalpur has vast land area, vibrant agriculture and livestock sectors as its economic drivers. Commodity price hike during the last three years, cotton and wheat in particular, has multiplied the money in circulation, which had a favorable impact on demand side of the economy. District economy is dependent upon agriculture output. Non-farm economic activities are mostly associated with the forward linkage of agriculture supply chain like cotton ginning, oil mills, wheat flour mills, sugar, rice, whole sale trading, transport and communication etc Current landscape of economic activities depicts strong linkages of Manufacturing, Trade and Commerce sectors of the district with the agriculture economy.

⁷⁰ Pakistan Economic Survey 2009-2010

⁷¹ Directory of Industrial Establishments Punjab, 2006

⁷² Indices on Multiple Deprivations 2005; Social Policy & Development Centre

5.2.2 Industrial Infrastructure

Bahawalpur district has only one small industrial estate developed in 1970 by Punjab Small Industries Corporation (PSIC). It has a total of 408 kanal area, out of which, 257 kanal is dedicated for 204 industrial plots. The industrial estate was flooded in 1988 due to sever floods in Sutlej River. Industrial activities in the Small Industrial Estate decelerated afterwards due to this disaster and could never revive to pre-floods levels.

At present, about 49 units are in operation in the Punjab Small Industrial Estate of Bahawalpur. As per Joint Director of Punjab Small Industries, currently operating units provide employment to over 400 workers and are engaged in a diverse range of industrial activities as reflected in the following table:

Table 14: Number of Units operating in Punjab Small Industrial Estate

Description	Units in Operation
Flour Mills	5
Oil Mills	4
Milling Mills	3
Auto Parts	1
Food Processing	3
Ware Houses	10
Miscellaneous	14
Total units in Operation	49

Source: Punjab Small Industries Corporation, Bahawalpur

The Industrial Estate is facing the challenge of a diminishing role due to the decreasing industrial activities at the Estate during last two decades. It is one of the unique industrial estates in Pakistan where few industrial plots have been illegally sold and registered for residential purpose. The industrial activities of the estate have been further hampered due to the decision of WAPDA to downgrade the feeder of Industrial Estate from industrial to residential. Excessive load shedding and status of non industrial electricity connection has further hampered the industrial activities.⁷³

Another industrial estate comprising upon 375 acres under Punjab Industrial Estate has been announced some two years back. No ground work has started so far. Bahawalpur Chamber of Commerce and Industry (BCCI) claimed struggling to have the announcement formalized, get approval of proposed land from the provincial administration and commence development work for early completion of the new industrial estate.

It was reported that Industries Department, Government of Punjab has reservations that proposed industrial estate would attract enough investors to make it commercially viable project. Low level of industrial activities at Punjab Small Industrial Estate of Bahawalpur and slow growth of industrial projects in the district in the past are reportedly considered the deterring factors to commence development of new industrial estate.

The lingering status of proposed industrial estate may have an effect on future industrial activities as there is no suitably developed infrastructure of industrial investment. For industrial stakeholders of Bahawalpur, it is a dilemma similar to chicken and egg mystery. Provision of infrastructure would attract local and other regional investors but absence of such infrastructure would not be helpful to generate even a remote interest in future. It was argued that low occupancy was observed at initial stages of development in many major industrial infrastructure

⁷³ Source: Punjab Small Industries Corporation, Bahawalpur

projects like Export Processing Zone, Karachi, Noori Abad Karachi, Korangi Industrial Estate Karachi, Quaid-e-Azam Industrial Estate Township Lahore, Multan Industrial Estate, Gaddoon Amazai Industrial Estate etc.

5.2.3 Industrial Activities

Main industrial activities include cotton ginning, wheat flour mills, solvent extraction plants, spinning, vegetable ghee mills, animal feed mills and rice mills. The number of units in these industrial sectors, except ginning and flour mills, are too small; mostly below 5 in number in respective sectors! Nearly all industrial units fall in the category of SMEs as defined by National SME policy 2007 and State Bank of Pakistan⁷⁴. Large industrial units in operation include three spinning mills and one sugar mill, two ghee mills, two animal feed mills and four solvent plants.

Following table reveals the number of industrial units installed in the district in 2006. A few closures and additions have taken place since last census of establishments was carried out in 2003. Most prominent were reported as closure of two spinning mills, few rice units, tannery unit, and addition of flour mills and Solvent plants⁷⁵.

Table 15: Industry Wise Installed Capacity

Serial No.	Industry	No.	Installed Capacity
1	Agricultural Implements	1	12,000 Nos
2	Cold Storage	17	94,600 bags/crates
3	Cotton Ginning and Pressing	153	75 Sawgins, 161 Press, 360 Expellers
4	Flour Mills	25	3,800 M.Tons/Day
5	Iron & Steel Re-Rolling	1	4,800 M Tons
6	Paper and Paper Board	2	10,000 M Tons
7	Poultry Feed	2	2,700 M Tons
8	Rice Mills	7	16 Hullers
9	Solvent Oil Extraction	2	75,000 M Tons
10	Sugar	1	8,000 M Tons
11	Tannery	1	6,500 Th. Sq ft
12	Textile Spinning	6	99,172 Spindles, 200 Rotors
13	Textile Weaving	4	438 Looms
14	Vegetables Ghee/ Cooking Oil	4	118,500 M Tons

Source: Directory of Industrial Establishments Punjab, 2006

It was reported that currently prominently operating industrial units of the district include 125 ginning factories installed, 35 flour mills, one ghee mill (2nd unit in progress), two feed mill, two

⁷⁴ SMEs are defined as businesses with an employment size up to 250, paid up capital up of PKR 25 millions and an annual turnover of PKR 250 millions.

⁷⁵ Bahawalpur Chamber of Commerce and Industry, meetings with two leading industrialists

solvent extraction plants and three rice units along with many other units from different sectors. Small part of installed capacity as reflected in the table is now closed⁷⁶.

5.2.4 Trade Facilitation

Trade facilitating infrastructure for international trade is not fully available due to the economic dynamics of district economy. Due to few export items manufactured or processed at district level, infrastructure for direct export has not developed e.g. export cargo flights, dry port, customs, local container terminal, banks foreign trade operations, warehousing etc. Trade development Authority of Pakistan (TDAP) does not have its office at Bahawalpur for obvious reasons. Security Exchange Commission of Pakistan (SECP) does not have its office in the city and serves the area through its Company Registration Office (CRO) Multan. Small and Medium Enterprise Development Authority (SMEDA) does not have office in Bahawalpur and is serviced through its Multan office. However, SMEDA operate a fortnightly help desk at Bahawalpur Chamber of Commerce and Industry(BCCI) and provide its other services like trainings, AHAN Programs, advisory and research and development as well mainly through the Chamber⁷⁷.

Bahawalpur City has a small new airport operative since last four years offering limited commercial flights to and from major business cities of Pakistan. It has twice weekly flights to Islamabad, four weekly flights to Lahore and nine weekly flights to Karachi. It has rail links through main railway line which is primarily used for passenger movement. Commercial cargo movement is insignificant. There is no dry port in the district. Imports take place through Karachi ports or nearby Multan dry port.

There are reportedly about six tax consultants but there is no chartered audit firm practicing in the city. So is the availability of Cost and Management Accountants', engineering firms, architect firms, corporate law firms, advertising firms, media companies, management consultants etc. Availability of Business Development Services for business enterprises is a severe handicap for local business community. It was reported that for specialized Business Development Services (BDS), industrial and commercial organizations engage the required expertise from nearby city of Multan, Lahore or in few cases Karachi.

5.2.5 Exports

Main export items include traditional ladies' embroidery garments, silver jewellery and ethnic crafts of Cholistan origin alike. Most of the exports are undertaken indirectly through traders based in large cities. However, TDAP Multan reported presence of over 100 exporters; mainly small size enterprises.

Cotton processed through ginning factories is sold to spinning mills of other areas where major parts of finished products ultimately find its way to exports. Live animals (livestock) are sold as domestic commerce and are not exported directly. However, it was reported that a substantial quantity of live animals procured from the district is ultimately exported and smuggled. Horticulture is also not exported directly as no proper processing, grading, packing and cold chain facility exists in the district.

The District lacks the presence of significant export enterprises and, hence, the Bahawalpur City does not have the business and cultural benefits of exports e.g. foreign visitors, export enterprises, export infrastructure, hotels and restaurants worthy of foreign trade visitors, exhibitions, travelling agencies, travel logistics etc.

5.2.6 Trade

Trading activities includes commodities, livestock, dairy, fruits, wholesale, retail, transport. There is a Grain whole sale market, a vegetable wholesale market and few specialized whole sale markets catering the local retail trade, other regions whole sellers for silver jewellery, traditional textiles and clothing and many other trading items.

⁷⁶ Bahawalpur Chamber of Commerce and Industry

⁷⁷ Regional Business Centre, SMEDA, Multan

Services sector cater to the needs of local industrial and commercial activities and resident population. Hospitals, clinics, wholesale, retail markets, transport, hotels, restaurants, banks, insurance, educational institutions, petrol/gas stations and many other streams of services from the services sector in Bahawalpur district.

Size and scope of services sector is not expanding due to various reasons. Few of such reasons found by ADB funded project to study the economies of Bahawalpur, Bawalnagar and Rahim Yar Khan are reproduced in the following:

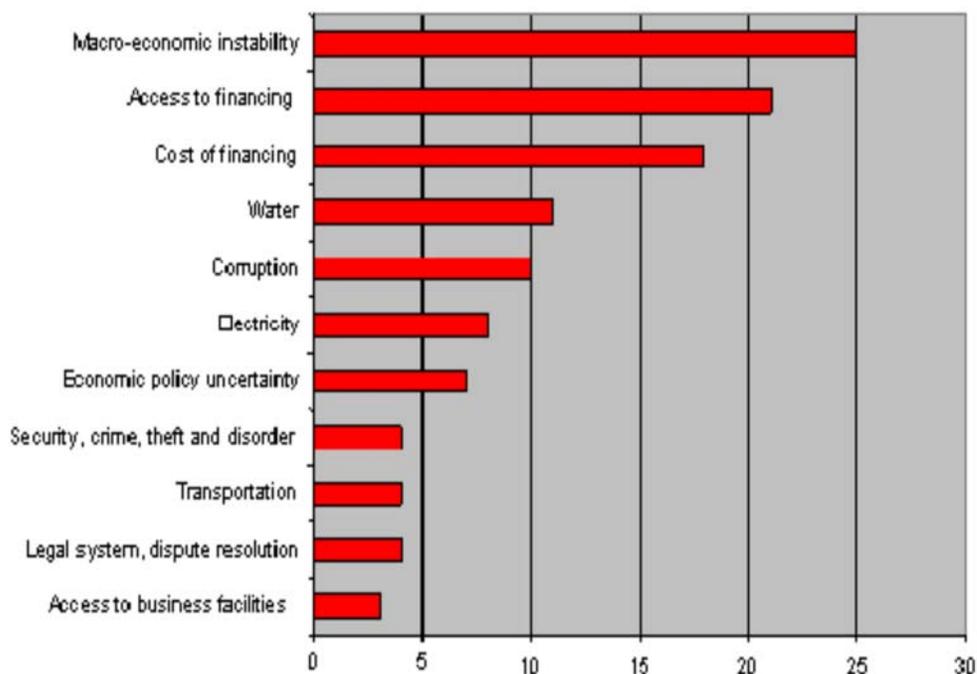


Figure 49 Constraints to Service industry Growth in Bahawalpur

Source: Agro Economic Survey and Investment Climate Diagnostic, Bahawalpur, Bahawalnagar, Rahim Yar Khan; Asian Development Bank, 2007

5.2.7 Financial Sector

Financial sector is fairly well represented with all major commercial banks; five major banks along with over two dozens of smaller banks. Lending activities are dominated by commodity financing and working capital financing due to limited industrial activities. Imports business is routed through local commercial banks whereas actual imports take place through Karachi ports or nearby Multan dry port. Banks do not have substantial export business due to insignificant direct exports from the district. Bahawalpur has a vast funds collection market for most of the banks due to limited lending by them. It is reported that most of the banks have surplus deposits due to low value of lending⁷⁸.

A leading bank. Allied Bank Limited reported a deposit profile of Rs.3.5 billions during 2009. The bank management felt that economic activities are at subdued level due to a narrow industrial base, absence of large investors (only two sizable industrial groups reported in the district), lack of new industrial infrastructure development, no apparent government efforts to promote industrialization and entrepreneurship deficit.

Bahawalpur has SME and Micro Finance banks as well as few micro credit organizations. Leading among these banks and organizations are Khushali Bank, Tameer Bank, First Micro

⁷⁸ Regional Head of a leading commercial bank, Bahawalpur

Finance, NRSP and Kashaf Foundation. SME Bank had ceased its operations since around 2002 or so due to massive defaults.

Khushhali Bank is a leading Micro Finance bank and has one branch in Bahawalpur city. It offers range of lending products for agriculture, livestock, working capital, new businesses and assets purchase. Lending rates are charged at 29% per annum. No loan is offered to individual. Lending is done to groups of individuals and every one stands personal guarantor for each other. Groups of five individuals to 20 individuals are eligible for loan. Micro loans do not require collaterals and rely on personal guarantees for loan security.

Average amount per loan was reported as Rs.18,000 by Khushahali Bank. It reported following number of borrowers during last three years⁷⁹:

Financial year 2008	3,800 members
Financial year 2009	4,000 members
Financial year 2010	6,000 members

Lending rates for large and SMEs are linked with Karachi Inter Bank Official Rates (KIBOR) on quarterly, six monthly or yearly basis as per agreed terms of financing by the individual banks. The usual banking spread for sizeable financing is about 150 to 300 basis points usually applicable to large size business enterprises. However, the banking spread for SMEs was reported higher up to 600 basis points depending upon borrows' risk profile and quality of collateral. The mark up rate for Micro Enterprises by Khushali Bank, Tameer Bank is 28% to 29% against the personal guarantees. The other micro lending organizations like Kashaf Foundation charge over 30% mark up rates.

5.2.8 Development of Industrial and Commercial Enterprises

Development of new enterprises or formation of new businesses determines the growth of investment, output and non farm jobs creation opportunities in the economy. This part analyzes the existing operating number of available enterprises and formation of new industrial and commercial enterprises in the formal sector of Bahawalpur district.

There are two data sources available on new enterprise development which record the formation of new business enterprises in the formal sector. District Office; Enterprise and Investment Promotion(E&IP) maintain the data of Firms registrations whereas Security Exchange Commission of Pakistan(SECP), Multan takes care of corporate sector incorporations under Companies act 1984. Reliable data of enterprises operating in informal sector, additions and closures of businesses every year in the informal sector is not available with any of the departments though the informal sector apparently makes up a sizable share of local economy.

Following paragraphs offer mapping of the number of existing and formation of new industrial and commercial establishment in district Bahawalpur to develop a wholesome picture of industrial and commercial establishments in operation.

Following are the details from Punjab Development Statistics 2009. Latest data is for Year 2004. According to this data Bahawalpur district had 237 factories registered in 2004 with estimated employment of 12,402.

Table 16: Number of Registered Factories, Their Employment Level, By District and division, The Punjab (as on 30th June)

Division / District	No. of Factories		Estimated Employment	
	2001	2004	2001	2004
Punjab	6171	6521	57,8620	594,909
Bahawalpur Division	456	528	30,454	33,665

⁷⁹ Regional Office, Khushhali Bank, Bahawalpur

Bahawalpur	206	237	11,564	12,402
Bahawalnagar	87	102	2,845	3,226
R.Y Khan	163	189	16,045	18,037

Source: Punjab development Statistics;2009

Security Exchange Commission of Pakistan (SECP) Multan office has administrative jurisdiction of Bahawalpur as well. The data of Company Registration Office (CRO) Multan reveals that 262 companies are registered from Bahawalpur till mid June 2010(period the data was procured). 73 companies out of total incorporated companies are meant for Hajj and Umra services as a mandatory requirement for Hajj quotas and operations.

Following table reveals the pace of incorporation of new companies during last five years in comparison with Multan; the nearest large industrial and commercial city.

Table 17: Number of Incorporated Companies

Year	No. of Companies Incorporated	
	Bahawalpur	Multan
2006	26	127
2007	29	105
2008	26	128
2009	7	45
January-July 2010	6	39
Source: Security Exchange Commission of Pakistan		

As evident from the table, the pace of incorporation of new companies declined during 2009 and 2010; more so compared to Multan. It is interesting to note that population of Bahawalpur district is almost 3/4th of Multan district whereas incorporation was almost 1/5th (20%) during 2006-2008 but declined to almost 1/6th (15%) viz-a-viz incorporations in Multan district.

The District Office, Enterprise and Investment Promotion (EI&P) is responsible to register the partnership firms under partnership act 1934, welfare societies under societies act, mosques and Madaaris. As per current registration record, following were registered firms and societies in June 2010:

Enterprises Registered in Bahawalpur District

Registered Business Enterprises as Firms	1,119
Registered Non-profit Enterprises	
Madaaris (religious institutions)	453
Mosque cum Madaaris	122
Mosques	138
NGO's, Societies	183
Total non business	
Organizations registered	896

Source: DO; Enterprise and Investment Promotion

As evident, business enterprises registration is not far ahead than the religious and social organization registration reflecting the attitudes towards business activities. It is important to note that figures of registration are till to date and on accumulated basis. It was highlighted by EDO E&IP that Government does not conduct any survey to update the operational status of such firms. The concerned department suspected that 1/3 to even ½ of registered firms may not be in business. If conservative estimate of 1/3 dormant registration is taken into account, at best, approximately 750 firms may be in operation.

Bahawalpur Chamber of Commerce and Industries has members in industrial and commercial sectors. Its record reveals that it has 400 members as Associate Class and 188 as Corporate Class.

Careful analysis of these sources and discussions with various stake holders leads to conclude that following number of registered business enterprises exist in Bahawalpur district are estimated as on June 2101:

Total Companies incorporated with SCEP	262
Companies registered for Hajj services with SECP	73
Companies incorporated for business with SCEP	189
E &IP registered partnership firms in operation:	1,119
Total estimated business enterprises (Industrial & Commercial) in operation in the district;	1,308

Source: SECP – CRO Multan, DO; E&IP Bahawalpur

Almost, all the industrial and commercial establishments fall under the category of SMEs with the exception of few Large Scale Manufacturers. This mapping of industrial and commercial establishments speaks volumes of low level of non farm job opportunities in the district.

5.3 Business Environment

The key elements of successful private sector development strategies include ease of doing business, improved competitiveness and investment friendly policy framework. The interest of private sector to expand their businesses depends upon the profitability. Hence, it is of vital interest for Bahawalpur district to develop and implement a policy framework and incentives, which help to improve the business enabling environment and inspire confidence of private sector for security of business, consistent policies and a competitive business environment.

Business enabling environment is influenced by various regulatory, infrastructure and economic factors. These include ease of doing business, and cost of doing business; power supply and provision of other utilities, affordable and efficient infrastructure, prices of commercial industrial land and access to finances and high interest rates.

5.3.1 Ease of Doing Business

Ease of doing business is a vital element of enabling business environment. World Bank (WB) compared the ease of doing business in 13 Pakistani cities in 2009. Though separate figures for Bahawalpur are not available, but it is reasonable to assume that same figures may be relevant for Bahawalpur due to its economic and regulatory resemblance to the other districts of Punjab.

The following table reveals the difficulties, time taken to start a business and the cost of doing so in the few major cities of Punjab and is assumed having similar application for the Bahawalpur district:

Table 18 Time and cost to start a business in the major cities of Punjab

City	Time (Days)	Cost (Percent of per capita Income)
Faisalabad	17	12
Rawalpindi	17	24
Multan	19	23
Sheikhupura	19	24
Lahore	20	12
Sialkot	20	25
Gujranwala	22	24
South Asia Average	28.1	27

Source: Ease of Doing Business 2009; World Bank

5.3.2 Cost of Doing Business

The following constraints have been reported as the most important elements for cost of doing business in Bahawalpur district:

- 1) Availability and cost of Electricity and other utilities
- 2) Consistency of policies and macroeconomic stability
- 3) Development of an affordable industrial Infrastructure
- 4) High Cost of commercial and industrial Land
- 5) Access to finances and high Interest Rates

5.3.3 Power Supply and Other Utilities

Availability and cost of power supply and other utilities are essential for industrial and commercial concerns. Bahawalpur along with the whole country has suffered heavily due to severe power shortage and frequent load shedding. Availability of Gas during December and January has also been inconsistent.

Cost of electricity and gas has been raised many times since 2009. Electricity tariff has been revised upward by 70% since March 2009 as per PEPCO. This has raised the proportion of electricity and gas cost in overall business operations.

The waiting period for a new connection has considerably increasing over the years due to persistent short supply of power. Investment Climate Assessment II by World Bank has revealed that "All Pakistan" waiting time has deteriorated considerably from the previous survey conducted in 2002, when it was 31.8 days as compared to current "all Pakistan" figure of 91.8 days and Punjab as 55,5 days. In the absence of district specific figures, these Figures may be assumed for the district as Bahawalpur as well having the same source of electricity distribution system.

5.3.4 Consistency of Policies and Macroeconomic Stability

The growth of manufacturing, trade and commerce is closely linked with consistent government policies and macro economic stability. Manufacturing project involves long term capital commitment and one to two years gestation period from planning to operations. Economic policies are the founding assumption in the project feasibility. Any uncalled for change in the policy can jeopardize the whole viability of the project.

Taxation and incentives are two major components of these policies. Taxation regimes have experienced occasional sudden changes affecting the manufacturing and commerce sectors.

Recent examples of 1 to 2% increase of General Sales Tax in Federal Budget 2010-2011 as consequence of failure to develop consensus on introduction of Value Added Tax demonstrate how additional burden may pile up for a policy shift. Annual or periodic change of tariffs on imports of machinery and raw materials may at times adversely affect the cost of doing business.

Macroeconomic stability is another vital policy requirement for sustainable business. Change in monetary policy due to macro economic policies of the government and State Bank of Pakistan (SBP) usually brings burden instead of relief to the businesses. For example, SBP has followed tight monetary policy causing increase in lending rates over the years. Latest rate hike of 50 basis points in July 2010 has increased the burden of already high mark up cost for the industry and commerce. On the contrary, SBP has been reported inactive on the rising banking spread for the borrowers compared to prime lending rates. Banks have been reported more aggressive for SMEs where banking spread has been found as high as 650 basis points.

Depreciation of Pak Rupee has been another uncertain element of cost for businesses. Pak Rupee was quoted around Rs.61 in end 2006 but starting to depreciate to over Rs.80 by early 2009. It has experienced another fall of Rs. 5 during 2009-2010 i.e. over 6% depreciation. Depreciation not only creates uncertainty to ascertain cost of machinery and raw material for businesses but also ignited spiral of price hike due to close linkage of economy on imports.

5.3.5 Affordable and Efficient Infrastructure

Availability of affordable and efficient infrastructure is an important consideration for an industrial and commercial concern. Increase in land prices by two to three times between 2003-2008 has emerged as an impediment to industrialisation and commercial growth. Increase of land directly influence the cost of doing business as it raises the capital cost of new project or expansion of current project, rent of business premises, increased rent of storage and ware housing, increase cost of living attributed to employees compensation. Many countries around the world have thus dedicated special industrial and commercial zones at affordable prices for industrial and commercial concerns. Current level of high land prices has already affected the cost of doing business in Bahawalpur.

Development of proposed industrial estate and clusters for cottage industries can fill the gap of fully developed infrastructure for potential investors. Lately, many fast developed industrial nations have promoted a new concept of infrastructure. Infrastructure development authority develops the industrial infrastructure (roads, provision of utilities, common facilities area, housing colonies etc), undertakes construction of modular production structure of offices for variety of uses and sizes with production halls, warehouses, storages etc for a turn key offering on lease to the investors. Besides providing fully developed industrial infrastructure of industrial plots, the Authority offers a range of constructed production halls, warehouses and offices as well. The concept of providing industrial and commercial infrastructure on lease with the structure which is modular and compatible to the needs of variety of businesses has successfully being followed by many other countries like Jable Ali, Dubai, Sharja Free Zone, Industrial Parks in India, Technology parks in many Asian countries. Availability of such infrastructure takes out the worry of investors to tie up huge funds in fixed infrastructure and offer saving of time and capital so as investor can immediately start the operations.

In view of constrained financial depth of most of industrial and commercial establishments in Bahawalpur, this concept offers an alternate where investors can use the required spaces against competitive rents.

5.3.6 High Cost of Industrial and Commercial Land

Businesses need competitive prices of land for offices, storage and factories to stay competitive. Higher land prices cause high rentals cost for businesses and employees causing increase in cost of doing business. Land required for expansion or new project can have prohibitive impact on viability due to high cost. Pakistan and Bahawalpur has experienced multiple price hikes since 2003.

Land price for residential purpose in main city area in Bahawalpur is as high as Rs. 2 to 2.5 lakh per marla. It is exorbitant for commercial purpose (an average size shop of say 10X20 ft or so

was quoted over Rupees one million on main commercial areas). Land prices for an industrial set up are equally high even five kilometers outside the city. Latest estimate reveals that average and acceptable location on main road linking Bahawalpur and Ahmad Pur East is being quoted from Rs.2.5 to Rs 3.5 million per acre where it is being quoted as Rs. 1.5 to Rs. 2.5 millions on Hasil Pur Road ; five KM outside the main city of Bahawalpur.

Such an enormous land price for manufacturing has discouraged the industrial activities which have to operate in longer term perspective and bear the market risks as well. It was reported that trading and investment in real estate has generally offered better returns at much less or no risk. This has prompted a trend of investing into real estate as a preferred mode of investment rather than investing into manufacturing.

High cost of land has burdened the viability of traders and commercial establishments who usually operate in main city centers where prices of land and rent are found at maximum levels. No wonder, most of traders and commercial enterprises in main city centers restrict to the bare minimum spaces in a bid to control their cost instead of expanding for natural business growth.

5.3.7 Access to Finances and High Interest Rates

Bank financing is an integral part of commercial and industrial activities. Banks are privately owned and operate under State Bank of Pakistan supervision. Banks loans are largely governed by Prudential Regulations which govern the lending procedures and defines the market access for businesses. Lending risk and security of loan are two fundamental principles of the banks. Banking history, bankable accounts of an enterprise, sectoral priorities, risk profile of borrower and earning capability are few operation binds for lending by the banks. The structure and mode of most of business in Bahawalpur does not make them a preferred choice for many banks and business enterprises face different levels of constraints for financial access.

On top of all these guiding principles of the banks, arbitrary mark up rates and trend of rising prime lending rates have added the burden of borrowing making the cost of business higher. Currently, large borrowers can have borrowing at 150 to 350 basis point on KIBOR, SMEs at 300 to 650 basis points whereas Micro Financing from 29 to 36%.

5.4 Small and Medium Enterprises (SMEs)

SMEs are considered as one of the most important force behind economic development, employment generation and poverty reduction. SMEs jointly contribute approximately 30% to GDP; employ 80% of non agricultural labour force, 25% to total exports and 35% to manufacturing value addition to Pakistan economy⁸⁰.

In line with the dominance of SME on the national level, SMEs dominate the industrial and commercial sectors of the district as well. In the district economy of Bahawalpur, Small and Medium Enterprises (SMEs) play a major role in investment, employment and value addition due to their largest share in commercial establishments.

The National SME Policy 2007 defines SME's as businesses with an employment size up to 250, paid up capital of PKR 25 million and an annual turnover of PKR 250 million. State Bank of Pakistan also adopts the same definition of Small and Medium Size Enterprises.

The Survey of Commercial Establishments 2005, conducted by the Federal Bureau of Statistics (FBS) offers useful insight of SMEs sector on its style and structure. Due to the similarity of Bahawalpur district economy to other major commercial cities, it is reasonable to assume relevance of results of this survey for Bahawalpur. The survey reveals that 95.21% of economic establishments have an employment size of 1 – 5 employees, usually termed as micro or cottage industries. As per the census hardly 1% economic establishments have more than 250 employees, meaning thereby, that 99% of business establishments in the country are SME's. The census reveals that 28% of economic activities are concentrated in wholesale, retail trade, hotels and restaurant sectors. Manufacturing accounts for 18% of total establishment.

⁸⁰ Pakistan economic Survey 2009-2010

The same survey highlighted that legal status and mode of business which reflected the approach and style of the business. In Pakistan around 97% of economic establishments fall in the category of sole proprietorship while only 2.1% are partnership firms and a meager 0.08% is private limited corporations.

5.4.1 Advisory and Information Availability for SME's

Structure and mode of SMEs brings various constraints and inherent vulnerability for smooth and sustainability of SMEs. The size and structure of majority of SMEs is so small that they can hardly afford to engage sufficient pool of human resources, technical support, marketing and management skills either in house or engage on fee basis for sustainability and growth of their businesses. This necessitates the government to offer the desired support through enabling environment and support organizations. Pakistan like many other nations has a dedicated organization-SMEDA- for this need in addition District Office Enterprise and Investment Promotion (E&IP) and many other provincial and federal governments.

Small & Medium Enterprise development Authority (SMEDA) was established in 1998 as part of Federal Ministry of Industries and Production. SMEDA has a broad and multipronged mandate. Institutionally organized as the model of corporate entity, it drew its strength from apex authority in the public sector. Main issues relating to SMEs in its multi pronged strategy included⁸¹:

- The creation of a conducive and enabling regulatory environment
- Development of sectors and industrial clusters
- Provision of Business Development Services to SMEs in all areas of business management
- Direct interventions through Common Facility Centers and Demonstration Projects

Small and Medium Enterprises Development Authority (SMEDA) has a Regional Business Centre at Multan which serves Bahawalpur as well. The regional office has strength of 3 persons with frequent visits of technical and managerial staff from Head Office, Lahore. SMEDA conducts and manages various activities for the promotion of SMEs. The record of SMEDA reveals that it provided guidance to over 900 SME's during 2009 through its help desk services at own office, fortnightly help desk at Bahawalpur Chamber of Commerce and Industry (BCCI), Multan Chamber of Commerce and Industry (MCCI) and All Pakistan Bed sheets and Upholstery Manufacturers Association (APBUMA) at Multan.

The SMEs facilitated at Bahawalpur and Multan through its Regional Business Centre during 2009 by SMEDA reflects a wide array of information / services required by typical SMEs of the area. The graph below provides the details of information sought by the SME's of the area as per SMEDA record.

⁸¹ SME Sector; Genesis, Challenges and Prospects, SMEDA

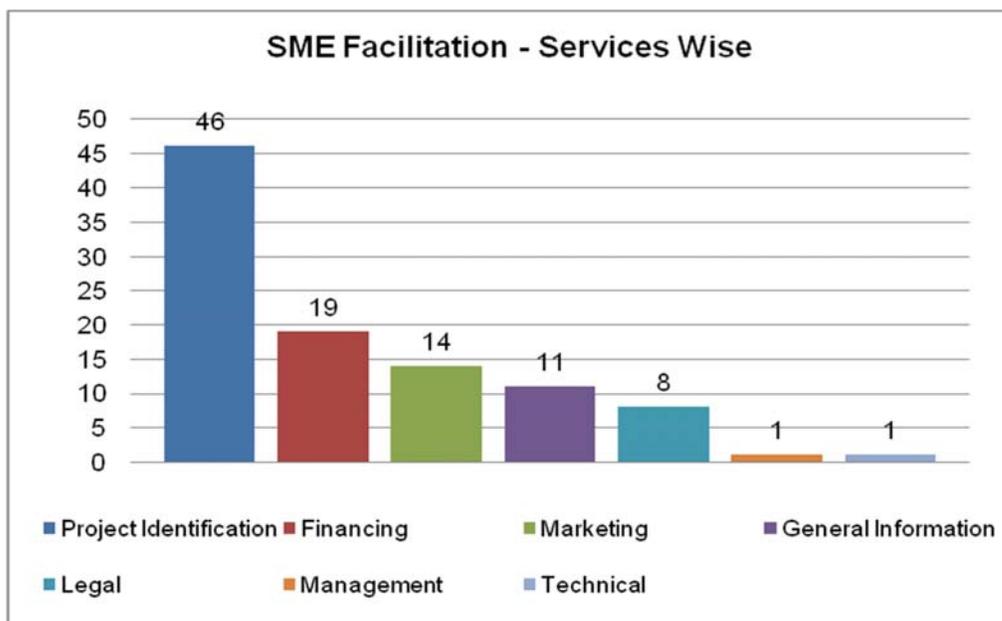


Figure 50 Services sought by SMEs at Bahawalpur and Multan from SMEDA

Source: SMEDA, 2010

The graph reveals that 46% of SMEs approached SMEDA to seek help for Project identification. Another 19% sought assistance to procure financing followed by 14% for marketing, 11% for general information, 8% for legal and 1% each for management and technical support.

An initiative of “Aik Hunar, Aik Nagar” (AHAN) was launched through SMEDA in 2006 for rural modernization on the basis of acclaimed Asian experience of One Village One Product⁸². AHAN is focussing to lend technical, marketing and advisory support to the traditional arts and crafts of selected areas. Bahawalpur is included in its program for development.

The areas office of AHAN is housed in Regional Business Centre, SMEDA Multan. It extends its services and manages various programs in Bahawalpur like SMEDA through regular visits, helpdesk and special programs.

AHAN selected following clusters for further development through training and capacity building in Bahawalpur district since it began its operations:

- Silver Jewellery
- Traditional Textiles (Chunry, needle work etc)

Following programs are underway to develop these clusters⁸³:

- Product Profiling
- Horizontal and Vertical Networking
- Product and Design Development
- Marketing (Participation in trade fairs etc.)

⁸² AHAN Official web site- <http://www.ahan.org.pk/>- The OVOP and similar programs have been implemented with some modifications in other parts of Japan and other APO member countries such as Pakistan, Bangladesh, Republic of China, India, Indonesia, Islamic Republic of Iran, Srilanka, Republic of Korea, Lao PDR, Malaysia, Mongolia, Vietnam and Nepal.

⁸³ AHAN, Multan Office

5.4.2 Sector Constraints

Despite the importance of SMEs to the employment and economic activities, SMEs face numerous constraints. Extensive meetings with various stakeholders and research reports reviews reveal that SMEs have the following major constraints:

1. Access to Finances

SMEs operate on a narrow capital base. The enterprises who intend to expand have limited options for financing. SMEs access to formal credit from commercial banks and leasing has been insignificant over the years. In 2006, out of total credit off take of Rs.2400.8 billions for private sector, SMEs share was 408.3 billions or just 17% of total amount⁸⁴. The situation did not improve in subsequent years.

SME sector finance occupied second place in terms of total finance from formal sector (10 percent) after Corporate Finance. At the end of June 2009, total outstanding loans to the SME sector stood at Rs345.1 billion compared to Rs393.6 billion in June 2008⁸⁵.

SMEs are too preoccupied with sustainability of their organizations and very small proportion of enterprises embark upon long term investment. SPB on SME credit access reveals that "A break up of the SME loans reveal that out of the total SME portfolio of Rs345.1 billion, around 76 percent were disbursed for working capital, followed by 13 percent for trade finance and 11 percent for fixed investment finance".⁸⁶

As per same report, the number of SME borrowers also witnessed a decrease of 2 percent during Financial Year 2009. The total numbers of SME borrowers were 219,062 at the end of June 2009 as compared to 223,675 at end June 2008⁸⁷.

It was reported during the interaction that main bottlenecks include the availability of bank worthy collateral as security, insufficient suitable banking products for SME needs and lack of awareness on part of SMEs to make efforts and prepare bankable accounts for positive access to the banks.

2. SME are mainly dependent on traditional market channels dominated by middle men or whole sellers. Usually SMEs do not have sufficient resources and risk appetite to spend human and financial resources to develop market linkage to other potential markets and are constrained to be contented with available traditional local market. Market linkage has been reported a weaker area of SMEs operations.
3. Lack of Trained Human Resource and Weak Management Skills: factors of production include Land, capital, machinery and labour. SMEs need equally skilled human resources to turn their operation into profits. The quality of human resource availability is a major issue as reported that level of technical skills of most of technical staff with SMEs is not as superior as of their counterparts in Lahore, Gujranwala, and Sialkot⁸⁸.

Lack of sufficient sectoral training is another constraints as skills in main technologies main provided by various institutions but sectoral skills building in say dairy, meat processing, Gems and Jewellery, dairy, plastics etc are not easily available.

4. Frequent Power Shortages: country is gripped with severe power shortages since early 2007. SMEs generally cannot afford to have own generators and hence loose productivity.
5. Lack of Cottage and Small Industrial Estates: Bahawalpur has few traditional informal clusters for embroidery and silver jewellery. Common facility centres, cottage and small estates for

⁸⁴ SME Sector, SMEDA

⁸⁵ State Bank of Pakistan Annual Report 2009, Credit Access SMEs

⁸⁶ SBP Annual Report 2009, Credit Access to SMEs

⁸⁷ SBP Annual Report 2009, Credit Access to SMEs

⁸⁸ Two leading industrialists of Bahawalpur

these clusters can help improve designing, human resource training and availability of processing facilities and market linkages.

6. Lack of Awareness and Intellectual Property protection: General lack of awareness and non observance of property protection is a constraint to brand development, innovation and frequent and quick copying discourages competition.

5.4.3 Recommendations

1. Helping to increase creation of new enterprises and expanding the pool of entrepreneurs. A program based on advising and “Business Incubation” should be formulated with the support of relevant District Offices, banks and private sector institutions to expand the existing pool of entrepreneurs. The Enterprise and Investment Promotion (E&IP) department with the help of relevant chambers and sector associations should join this program as public private partnership. Business Incubation includes advising the new entrepreneurs, supporting them to access technical and financial support from relevant organizations, making infrastructure available for a limited time period to start their enterprises and help in market linkages at nominal charges till they can take off on their own.
2. Suitable SMEs financing products should be evolved with the help of State Bank of Pakistan (SBP), SME Bank, Khushali Bank, representative of large commercial banks, SMEDA, PSIC, BCCI and DO;E&IP to address the constraints of access to finances by SMEs; more specifically the problem of collaterals faced by SMEs.
3. SME’s are usually handicapped in marketing and R&D due to their restricted size and resources. It is recommended to develop market linkages and extend R&D support through Business Development Service Providers (BDSP) as private – public partnerships. Availability of BDS has been identified as a key success factor to address the Entrepreneurship Deficit and improving chances of enterprise success with the availability of BDS to SMEs.
4. There is general disbelief in industrial and commercial enterprises based on their experience that suitably human resource training programs are not being pursued by most of the technical institutions. A revisit is required of the curriculum of Technical and Vocational Training Authority (TEVTA) and Punjab Vocational Training Council (PVTC) with the help of BCCI, SMEDA, PSIC and DO; E&IP to align the curriculum to need based training of the required human resource for SME’s.
5. Most of the SME’s suffer from weak management skills, affecting their productivity and growth. It is recommended to carry out a need assessment and initiate capacity building programs to improve management and technical skills of existing SME entrepreneurs.
6. Cottage and micro enterprises need special support of common facility centres for availability of crucial services at one place. One way of providing Common Facility is to provide affordable small cluster based cottage estates with proper “production ready structure”. Such estates should rent out the required space and facilities to the desirous SMEs to house their operations and offices in a fully operative facility. Cluster for silver jewellery and clusters for traditional embroider can attract the suppliers, technical workers and buyers alike at respective cluster with much ease. These cluster would-be different in style and structure from a Small Industrial Estate which usually provide developed land only whereas these clusters would have constructed structure of production halls and other facilities like a turn key for ease of use and start up on rental basis (Recently this concept has been very successful in Jable Ali Free Zone Dubai and Sharjah Free Zone) .
7. Chamber of Commerce and Industry represent the organized and formal sectors of business. Smaller and micro businesses are not well represented by the District Chamber. A separate Trade Body should be developed to highlight the problems of sector based SMEs and cottage enterprises like a Trade Association to interact with regulatory authorities and other stakeholders for the promotion of their sector. This sector Trade Association (e.g. silver jewellery, embroidery, Rohi crafts etc.) should act as sector promotion councils at district level to promote and develop their own sector similar to sector development companies established at national level for furniture, marble, gems and jewellery.

5.5 Priority Industrial and Commercial Sectors of Bahawalpur

All industrial and commercial sectors have vital contribution towards district economy. An integrated economic growth can only be achieved if all sectors have business enabling environment. We hereby discuss few sectors in the following as priority industrial sectors based on their potential of investment, employment, value addition, balanced economic growth and being natural link of existing supply chain of agriculture and industry.

5.5.1 Ginning Sector

Cotton ginning is the most vibrant sector of Bahawalpur district. The details have already been discussed in other relevant sections.

As per cotton arrival pressing figures by PCGA, Bahawalpur district produced 1.073 millions bales in 2009 whereas its production was recorded as 0.899 millions bales in 2010 as on May 1, 2010. It was the second largest district in cotton ginning after Rahim Yar Khan in crop year 2008-9 and has ended as 3rd largest cotton ginning district in Punjab after Rahim Yar Khan and Bahawalnagar in crop year 2009-2010.

It would be interesting to monetize the cotton crop processed by ginning factories to estimate cotton ginning trade volume and amount of money introduced in the rural economy of Bahawalpur district. Official bale weight of pressed cotton is 170 kg. For cotton pressed in crop years 2009-2010, following emerges as economic volume and contribution of ginning sector:

Estimated Monetary value of Cotton Ginning Industry

Cotton pressed as on May 1, 2010:	898,882 bales (152.810M Kgs)
Cotton seed estimated production:	305.620 million Kgs
Cotton sales revenues @ Rs.4250/mound:	Rs.17.400 Billions
Cotton seed revenues @ Rs. 900/ mound:	Rs. 7.370 Billions
Total value of cotton ginned- crop 2009-2010:	Rs. 24.770 Billions

(Source: own calculation based on statistics collected from PCGA, two large spinning mills groups, two cotton traders/brokers, Karachi Cotton Association Spot Rates)

Cotton sector is facing few chronic problems which are hurting its productivity. These include availability of high yield certified seed, delay in the development of virus resistant varieties, delay in the introduction of certified BT cotton, rising cost of inputs, contamination of foreign fibres etc.

Further, foreign fibre contamination creates a severe quality problem for finished products of cotton. It is generally believed by industry experts that Pakistan cotton is discounted by at least 5% due to contamination problem. The figure of revenue loss due to this discount runs into billion of rupees at national level. Based on same national figure of 5% discount, it works out revenue loss of Rs. 870 millions per annum for Bahawalpur district. It is highly important to devise a program to avoid both losses of yield and contamination for increased.

5.5.1.1 Constraints

- Various regulations on classification, grading and contamination have so far proved ineffective and mostly not implemented at all.
- A major constraint relates to the training of ginning entrepreneurs as most of them enter this field without formal technical and entrepreneurial training and find limited training options later on as well.
- Continuation of obsolete ginning technology without much up gradation. Some up gradation has been done by few individuals at Bahawalpur partly with the help of Agricultural Machinery Research Institute and other programs of technology

improvements. But process of up gradation needs to be institutionalized and made an ongoing process for perpetual improvement.

- Yield is 5-6% low as compared to world leading producers. Higher Trash contents, high floating fibers and foreign fibers contamination makes the cotton inferior compared with many of leading global cotton producers.
- The issues related to maintenance, new technology introduction and technology up gradation are overly dependent on non professional technicians. Their role becomes even more precarious due to abundance of non technical entrepreneurs who blindly rely on these technicians. Almost all of them are trained by their own master trainers who never had formal training in modern discipline of mechanical, electrical and electronics and industrial engineering.

5.5.2 Meat Processing Sector

Bahawalpur has one of the highest population of cattle heads in the Punjab. Livestock is a source of earning through sale of milk or selling live animal for meat purpose. Permission to export live animal has created a strong demand for live animals, hence, livestock trading is a crucial source of earning for small farmers and leadless farmers.

Marketing system is flawed with distorted pricing mechanism. Prices of live animals are dictated by demand and supply whereas retail price of meat is rigidly regulated by the government. Scale of operations of meat processors is too small to have sustainable growth. Infrastructure is poorly organized for housing animals, slaughtering and transportation to shops. This can cause break out of epidemic like mad cow disease, foot and mouth disease due to poor observance of healthcare and veterinary care norms.

There are around 282 butcher shops in Bahawalpur City, 10-12 in Hasilpur, 15-20 in Ahmedpur, 15-20 in Yazman and 15-20 in Khanqā Sharif. Other smaller towns also have a few local shops. Out of these shops, most fall in the '*phatta*' category, with the exception of about 40 shops in Bahawalpur city, 2-4 in Yazman and 1-2 each in Hasilpur and Ahmedpur. On an average, approximately 300 small animals (goats, sheep, etc.) and 70-80 big animals (cows, bulls, etc.) are butchered in Bahawalpur city everyday⁸⁹.

5.5.2.1 Sector Constraints

- There is no wholesale market which offers the meat processors the place and choice to have quantity and quality of meat of their requirement.
- Health care and hygiene is largely ignored as supervisory body has a ceremonious role to enforce standards of cleanliness and hygiene with a veterinary doctor to have taken supervision and stamping the slaughtered animals for mutton only.
- Non availability of facilities for temporary housing of animal herds besides the slaughter house and provision of veterinary care.
- Strict price control policy by the Government and rising prices on supply side has caused many malpractices to retain viability by the sellers. This has severely deteriorated the quality of meat being sold. Prices of live animals are dictated by demand and supply whereas retail prices of meat are rigidly regulated by the government. Pricing mechanism need a fresh look to integrate it with demand and supply forces of market.
- Scale of operations is too small to have sustainable growth of meat processors. No wonder, meat processors have traditionally been family business of few individuals instead of transforming into medium or large scale enterprises.
- This sector has continued with orthodox business model so far with individual butchers handling the procurement, slaughtering and sales to the consumers. The trade of meat processing has been mechanized around the world with larger scale of economy, export potential and selling in local markets like any other food item brand. In Pakistan, few major

⁸⁹ BDS Mapping and Gap Analysis of Bahawalpur, USAID

entrepreneurs in poultry sector have already pioneered to define new sales channels, explore segmentation, offer a wide product range, offering the consumers choice of buying at their convenient timings and assurance of better hygiene. Meat processing sector needs to abandon obsolete style of business process and embark upon mechanized meat processing and contemporary marketing style. Current style of processing and sales is inefficient and unsustainable.

5.5.3 Dairy Sector

Dairy live stock is an important livelihood for small farmers and landless rural people. Most of the milk is produced by herd size of up to three. It is estimated by a leading private dairy company that 2/3 milk is produced by buffalo and balance 1/3 by cows, goats and sheep in the district. It is estimated that some 20,000 liters per day is available from camels in the desert areas but is consumed locally due to lack of market linkages and demand⁹⁰ (Source CDA).

It is estimated by the industry analysts that bulk of milk is consumed locally by house hold due to lack of market access. National dairy companies have developed a vast network of milk collection and chilling centers during last 25 years. This has provided an impetus to farmers to produce and sell milk as regular source of earnings. It is estimated by a leading dairy company field staff that saleable milk produced in Bahawalpur district is estimated as 700,000 liters per day during flush (peak period of winter months) and around 400,000 liters per day during lean period of summer⁹¹.

The procurement patterns are reflected in the following:

Estimated Milk Production and Collection per day

Description	Flush Period	Lean Period
Estimated Milk produced – liters	700,000	400,000
Milk sold loose/ consumed locally	350,000	240,000
Milk procured by dairy companies	350,000	160,000

Source: Engro Foods (Olpers Milk), Bahawalpur

There is a wide fluctuation in procurement prices. Rs. 33.25 per litre was procurement price at milk collection centre on June 22, 2010 whereas middleman offered around Rs 27 per litre to the farmers.

Currently, Nestle has 133, Engro Foods has 45 and Shakar Ganj has one chilling station in the district. It is estimated by one of the leading dairy company that about 80 more collection points can be opened with proper field work and extension services.⁹²

Estimated supply and price data suggest that milk procured by the leading dairy companies is in the range of over Rs. 2.7 billions per annum. It was estimated by the same company that another 150,000 liters per day milk can be sourced / sold to the dairy companies with some concerted effort.

5.5.3.1 Sector Constraints

- Milk collection channels need enhanced coverage so as the areas which are currently not being covered by leading dairy companies and local wholesaler should also be connected with market channels.
- Frequent manipulation of the buying parameter of Fats and SNF by milk collection companies and middlemen for their favor at the cost of farmers.

⁹⁰ Cholistan Development Authority

⁹¹ Field Procurement Centre, Engro Foods (Olpers), Bahawalpur

⁹² Engro Foods & Nestle Milkpak

- There is no milk processing plant in the area which could provide impetus to enhance milk coverage and production.
- Unavailability of chilling facilities in most of rural areas restricts the capability of farmers to sell their milk on regular basis.

5.5.4 Embroidery and Silver Jewellery

Bahawalpur is famous for its fascinating embroidery on ladies dresses. There are reportedly over 15 different embroidery types for formal and classic casual dresses. There are five major artisan centers around Bahawalpur providing livelihood to female workers. It is estimated that as high as 40,000 women may partly or wholly be engaged in embroidery work⁹³. There are many training institutes and craft centers mainly in public sector promoting this trade in Bahawalpur City.

Silver jewellery known as Kundan is a specialty of Bahawalpur. It is attractive and very ethnic product. It has many design possibilities and is rated as a stylish fashion statement. Many known designers from Karachi and Lahore have their arrangement to produce their own orders and sell the products later at hefty prices with their own label. This craft has tremendous potential of exports like India created a huge local and export market for its ethnic jewellery craft.

Similarly, Cholistan desert area has range of unique embroidery(rally and fallacy are most well known) which currently is handled in unorganized manner through traditional middlemen and wholesalers.

5.5.4.1 Sector Constraints

- Market linkage is a paramount issue for the sector. Middlemen and traditional wholesalers dominate the markets and set the rules of business resulting meager income for the women workers.
- Lack of professional designing and processing facilities have left the markets hostage to the dealers who choose the designs from design books and opt for cheapest processing and inputs to keep the prices of end product at minimum level.
- Practice of dealer dominated designing and material choices has resulted in declining sales in premium quality segments and insignificant value addition. This phenomenon has held back this craft from becoming a fashion statement in exchange for a handsome price.
- No formal clusters exist where common facility sharing can be practiced in terms of designing, training human resources, processing facilities and marketing thrust.
- Women workers complain of low wages viz-a-viz the work they are asked to perform. Many a times their wages and payments are usually dragged too long depriving them of timely payment for their work.
- Consistency of having work orders to the workers poses an uncertainty resulting in loss of work for many days or weeks.

5.5.4 Horticulture

Fruits and vegetables of the area are treasure of future economic growth for rural areas. Other than the steps required on farm production side, marketing, modern processing and packing facilities can open new windows of exports for this district. So far, huge potential of horticulture for this district has not received due attention.

Availability of new Multan airport offers a window of opportunity for the area. In short term, upcoming facility of fruit processing facilities at Multan can help establish the supply chain on commercial and export driven basis. In the second phase, Bahawalpur can have own food processing, packaging and cold storage facilities.

⁹³ BDS Mapping and Gap Analysis of Bahawalpur, USAID

5.5.4.1 Sector Constraints

- Trade association at district level are very weak to present their case to regulatory authorities for having facilities for development of the trade. More active and visible trade associations of Multan (e.g., Mango Growers Association) have been able to attract attention of government and development sector. Bahawalpur district has a similar potential of fruits and vegetables but weak advocacy has not made its potential visible to the relevant stake holders.
- Major research and development organizations are located in Multan. The district is not a primary objective of development by the research organizations. Concerted efforts can help improve the existing state of production, quality and sustainability of production volume for commercial market development.
- There is no processing facility for preservation, grading, polishing and packaging of fruits in the district which could help growers to organize their trade on modern commercial basis.
- There is no export infrastructure for export of horticulture in the district. The district has good potential of exports provide suitable infrastructure is made available.

5.5.5 SME and Micro Enterprise Development

Industrial and commercial landscape and projected scenario indicate that sufficient job creations in the district would remain a challenge for government and private sector. Growing poverty and income inequalities are a threat to social fabric as well. Similar challenges have been addressed through development of SME's and Micro enterprises development in many countries in the world. Same is relevant for Pakistan and more so for Bahawalpur district.

Most of the industry in Bahawalpur, with few exceptions, falls under the category of SME's as explained earlier. Number of commercial and industrial establishments is hardly over one thousand despite population of over three million. Creation of new enterprises is slowing down. It is utmost necessary to improve the business environment in a way that SME's and micro enterprise development should be ignited with full force at public and private level. It is the only way forward to create required non farm jobs to face the menace of unemployment or disguised unemployment in the district. With concerted efforts, quantum expansion in per capita industrial and commercial establishments in Bahawalpur district can be achieved for the economic growth of the area.

5.5.5.1 Sector Constraints

- It was reported that there was an entrepreneurship deficit in the district. Either due to agrarian background or due to cultural traits, it was reported that people generally prefer to peruse job career instead of opting for business. Even the graduates of Department of Business Administration, Islamia University expressed job career as their fist priority instead of entrepreneurship.⁹⁴
- The industrial and commerce community is very small. There are not many examples of glorious business successes to motivate others to follow the suit. Larger pool of entrepreneurs can have better visibility to attract more investors to increase the pace of enterprise development
- The industrial base is very narrow and does not offer a wide choice of investment. Majority of industrial projects are ultimately linked with agriculture like ginning, oil mills, wheat, rice etc.
- City lacks robust industrial and commercial activities which could attract other regional industrial and commercial giants, foreign visitors, expat community. Business activities appear on the back seat leading to low interest in enterprise development as a way of life of civil society.

⁹⁴ Department of business Administration, Islamia University, Bahawalput

5.6 Constraints and Recommendations

Discussions on the economic profile, leading industrial and commercial sectors and business environment offer the context of current economic situation of Bahawalpur district. It is evident that Bahawalpur district has a mix of economic strengths, weaknesses and opportunities. The economic challenges as emerged during the research process are summarized as follows:

1. Promoting District Economic Development through Manufacturing, Trade and Commerce
2. Promoting creation of New Businesses(Enterprises Development)
3. Improve Business Competitiveness
4. Identify and support “Agents of Economic Change” for the promotion of Entrepreneurship and “Business Culture”
5. Promote investment for regular creation of Non-farm jobs
6. Up scaling and value addition of key economic sectors

Major constraints as enumerated in the preceding sections are summarised as follows:

Business Competitiveness; Cost of doing Business

1. Availability and cost of Electricity and other Utilities
2. Consistency of Government policies and macro Economic Stability
3. Development of an affordable industrial infrastructure
4. High cost of land for manufacturing and commerce sector
5. Access to finances and high interest rates

SME sector is Constraints:

1. Access to Finances
2. Market linkages
3. Lack of trained Human resources and weak management skills
4. Power shortages
5. Lack of Cottage and small enterprises clusters
6. Lack of awareness and intellectual property collection

The challenge of economic development is to address the above mentioned constraints and pave the way for enhanced investment, creation of non farmed jobs, improve business competitiveness and promote entrepreneurship for sustainable growth.

Many of the constraints pertaining to regulatory frame works of provincial and federal governments (e.g., power shortages, anomalies in taxation etc.) are affecting Bahawalpur district as much as other districts of Punjab. Recommendations to these areas are not highlighted as the Bahawalpur district alone has limitations to influence the provincial and federal policies to alter the issues of regulatory framework. Hence, the recommendations are focused for the economic areas, which can positively influence and augment the economy of Bahawalpur District with minimal reliance on such regulatory issues resolution.

The recommendation in the subsequent paragraphs follows the macroeconomic thrust of the federal and provincial government to provide the private sector a larger role in economic development.

While discussing the district specific constraints and recommendations, it would be useful to learn how the federal economic regime views some of the constraints pertaining to the nation equally affecting the Bahawalpur district as well. The energy crisis which intensified during last year was acknowledged as a major constraint causing deceleration in the national GDP. As a result it is

estimated that a loss of approximately 2.0-2.5% of GDP occurred in 2009 and 2010 on account of energy supplies constraint⁹⁵. The Bahawalpur district was equally affected by the persistent energy crisis like other areas of the nation causing loss of local GDP.

The economic managers of the country also acknowledged that total energy consumption declined by 5.2% in 2009 versus 2008 causing a drop in the national manufacturing output. Electricity used in industrial sector fell by 6.5% while gas consumption recorded 2.6% declined. Cumulatively since 2006 -07, Electricity consumption by the industrial sector has declined by 8.2%.⁹⁶

The assessment of long-term constraints by the economic managers acknowledged the fact that a set of complex, interrelated and longer term structural constraints, over all growth continues to operate. The longer term constraints include a declining share of manufacturing in the economy, as a percentage of GDP, in new fixed investment and in total employment (share of manufacturing in fixed investment dropped from 23% in 2000 to 16.2% in 2010), a decline in size and scale of manufacturing sector and expansion of informal sector (the share of informal labor in the economy has increased from 72.8% in 2007-08 to 73.3% in 2008 and 2009)⁹⁷. It is reasonable to assume the application of same observations to Bahawalpur as well due to resemblance of its economic structure with the national economy.

The private sector generates around 90% of the Punjab's output of goods and services and is the dominant actor in the economy. Thus, the province must move aggressively to enhance the capabilities of the private sector (reference PSDS for Punjab). A study on Private Sector Development Strategy for Punjab, thus, emphasizes support to strengthen private sector through policies that make product and factor markets more flexible, lower cost of production and distribution, includes efficiency through increased competition and move the structure of the major sectors in the direction of higher value added products.⁹⁸

The impediment with the rapid growth in size and productivity of Punjab's private sector arise from the issue of both "hardware" (meaning physical requirements) and "software" (meaning the working of institutions, questions of governance, policies, cultural factors etc). The hardware issues are relatively easy to diagnose; for example, it is quite clear that for the immediate future most pressing issue is the power supply. The software issues are much harder to analyze and to act upon, because they often reflect deep rooted influences of history, habits and values. Yet addressing these issues is fundamental to the success of this strategy.⁹⁹

The challenge of economic growth in Bahawalpur is dependant upon hardware as well as software issues. The following excerpts/reflections from few leading stake holders of Bahawalpur economy highlight the importance of addressing the software issues as much as hardware issues. A leading business educationist of Islamia University, Bahawalpur pointed out that manufacturing sector is stuck up with preliminary production processes without much value addition. In addition lack of infrastructure is an impediment for the manufacturing growth and commercial growth.¹⁰⁰

A leading industrialist of District summarized the constraints to economic growth as follows: ¹⁰¹

- The lack of interest for entrepreneurship as an alternate career against the prevailing mind set for general preference for jobs career; that too preferably with the government sectors.
- Lack of new commercial and industrial infrastructure development
- Non supportive attitude of concerned provincial departments

⁹⁵ Pakistan Economic Survey 2009-2010

⁹⁶ Pakistan Economic Survey 2009-2010

⁹⁷ Pakistan Economic Survey 2009-2010

⁹⁸ Private Sector Development Strategy for the Punjab, DFID Final Draft June 2010

⁹⁹ Private Sector Development Strategy for the Punjab, DFID Final Draft June 2010

¹⁰⁰ Chairman, Department of Business Administration, Islamia University, Bahawalpur

¹⁰¹ CEO, Shamim Ghee Mills, Bahawalpur

- Lack of good technical skills availability in the area.

A leading banker expressed his opinion on the impediments to economic growth as follows:¹⁰²

People generally prefer salary based careers instead of leaning towards entrepreneurship/ new business developments.

No large investor exists in the area with comparable acumen and investment portfolio as of investors in other leading industrial cities.

No significant dedicated manufacturing and commercial infrastructure

No significant investment in new projects in recent past

No apparent government interest to develop this area as manufacturing and commercial hub.

Hence, the challenge of evolving economic development strategies for Bahawalpur District should address “hardware” issues as much as “Software” issues if a sustainable difference is aimed at. These strategies should necessarily be imbedded with the strengths and opportunities of the district. The economic development strategies should also account for the weaknesses of the district economy.

A larger role of private sector and development of private sector capability and capacity would be decisive policy thrust for future economic development. These strategies can become a foundation of economic growth with the regulatory support of the government and private sector led investment and institutional capacity build up. The core objectives of these economic development strategies include growth and investment, poverty alleviation, quantum jump and creating of non formed jobs, promote value addition and prepare the district as “a preferred choice” for the potential investors in near future.

A three pronged strategy is, thus, recommended to address the economic challenges of Bahawalpur district:

1. Promoting business competitiveness
2. Promoting new enterprises development and business culture.
3. Key sectors up scaling and value addition

¹⁰² Regional Head, Allied Bank Limited, Bahawalpur



Figure 51 Framework for Recommendations

5.7 Promoting Business Competitiveness

Competitiveness is the key for the economic development. The competitiveness can be achieved through favorable policy framework for a competitive cost of doing business. Efficient and competitively priced infrastructure is central for the development of manufacturing and commercial activities.

5.7.1 Cost of Doing Business

5.7.1.1 Power Shortages

Currently Bahawalpur District is facing similar power shortages as of other districts. Availability of power, cost of power supply and waiting period for new connection are the key components impacting the businesses. Businesses also face occasional shut down of gas during November to January.

It is recommended that a dedicated independent power project (IPP) of required current and near future industrial and commercial requirement should be initiated. The current industrial and commercial load of Bahawalpur may not need a gigantic IPP but a suitable capacity meeting the local requirement may be initiated by the regulators in the private sector. The distribution company should ensure that power generated through the dedicated IPP should be provided to the industrial and commercial establishments without interruptions.

5.7.1.2 Consistency of Macro Economic Policies

Consistency of policies and macroeconomic stability as acknowledged in the Pakistan Economic Survey 2009-2010 are crucial for sustainable economic development at national level. The district economy is also equally affected with abrupt changes in macroeconomic policies and regulatory framework.

It is recommended that anomalies in the policy framework and abrupt changes in policy framework may be taken up with regulatory authorities so as the business environment improves for better competitiveness. Bahawalpur Chamber of Commerce and Industry has submitted various proposals on taxation, tariffs etc. to FBR and other relevant departments

Current weaknesses in Economic Systems have set perverse incentives for formality and scale for the formal sector. For example, total income tax liability including headline tax rate and worker's obligations make up 47.8% for listed and unlisted companies whereas it amounts as 27% for association of person's, 34.3% for small companies and 20% for individuals.¹⁰³

It is recommended that policy anomalies of higher taxation for formal enterprises maybe addressed so as formation of new businesses finds sufficient natural incentives against informal sector. Macroeconomic policies dictating the rates of import tariffs and rate of general sales tax should not be altered arbitrarily to the disadvantage of formal businesses.

Monetary policy by State Bank of Pakistan while determining the prime lending rates should take into account of high cost of interest and its impact on cost of doing of businesses. So far the Monetary Policy is macroeconomic centric rather than businesses focused.

5.7.1.3 Affordable and Efficient Infrastructure

Availability of efficient and sufficient infrastructure is a pre condition for the development of industrial and commercial activities.

It is recommended that proposed industrial estate under Punjab Industrial Estates for Bahawalpur should be formalized and development should be commenced immediately. It is also recommended to ensure the prices of industrial plots competitive so as new investors should be attracted towards the new industrial estate.

It was reported that regulatory authority has repeatedly expressed reservation and apprehension about the assured occupancy of the proposed Industrial Estate . It was reported that this argument did not hold good for the strategic economic interests of the District. Apparently the investment in the development of an industrial estate is a compulsory measure to provide the necessary infrastructure for increased industrial and commercial activities.

It is fairly common phenomenon of relatively smaller occupancy for such new industrial estates in the beginning and was experienced by Nooriabad Industrial Estate, Karachi. Quaid e Azam Industrial Estate, Township, Lahore, many industrial estates of Punjab's Small Industries Corporation, Multan industrial Estate etc. In no case, development of industrial infrastructure

¹⁰³ Pakistan Economic Survey 2009-2010

was held back to underwrite occupancy assurances before commencement of development work.

Traditional crafts of Bahawalpur have a good demand and have widespread production base in rural and urban areas. But unfortunately, current market dynamics are crudely being dominated by the wholesalers and middle men. The designing, quality of raw materials being used and value addition are conveniently being sacrificed to keep these traditional craft items cheaper and saleable at the cost of labor wages and value addition.

It is recommended that clusters should be developed for the promotion of Bahawalpur arts and crafts of silver jewellery and traditional embroidery. The proposed cluster would offer opportunities to relocate many of the artisans and traders to avail the benefits of cluster locations.

It is also recommended to develop common facility centers for product designing, training, capacity building, processing and market linkages which can open new horizons for the up gradation, value addition and branding of Bahawalpur silver jewellery and embroidery for domestic and export markets.

5.7.1.4 High Cost of Industrial and Commercial Land

Land is a vital factor of production. Bahawalpur district has experienced price hike in the prices of land from 2003 onwards. Current price levels of land at suitable locations for industrial and commercial purpose are exorbitantly priced and hence, have emerged as a barrier of entry for new and existing investors from SME sector.

Bahawalpur District is reported to have an entrepreneurship deficit. The creation of new businesses has slowed down during the last two years.

It is recommended that an out of box thinking should be applied to provide affordable and developed infrastructure to SME's of Bahawalpur. Lately, many fast developing industrial nations have promoted a new concept of infra structure which is based on to develop, construct and offer turnkey facilities on lease to the potential investors. The offices and production halls of modular sizes are built and leased out for a turnkey start of new businesses. This concept has been successfully practiced by Jable Ali Dubai, Sharjah Free zone, Industrial and Technology parks of many Asian countries. It is recommended that a similar facility should be developed for new industrial and commercial clusters so as new investors focus on creating new businesses instead of being deterred by high land prices.

5.7.1.5 Access to Finances and High Interest Rates

Access to finances is a key determinant of new business creations and growth of existing businesses. Large and SMEs of Bahawalpur District has similar problems of access to finances like other districts. High cost of mark up is another factor causing higher cost of doing businesses.

It is recommended that a task Force may be formed with representation of State Bank, leading commercial banks, relevant Government Departments and Bahawalpur Chamber of Commerce and Industry which should remove the current irritants and causes of low credit off take. Suitable policy adjustments should be encouraged for higher credit off take with competitive mark up rates.

5.7.1.6 SME Development

Despite the importance of SMEs in the economic development, the constraints of SMEs are largely ignored.

Recommendations have been mentioned in details in the earlier sections for the implementation. The key crucial constraints include access to finances, market linkages, lack of trained human resource and weak management skills, frequent power shortages, lack of cottage and small industrial Estates and lack of awareness and intellectual property protection.

5.8 Promoting new Enterprise Development and Business Culture

It was reported by majority of stakeholders that the prevailing culture has a leaning towards job career preference instead of opting entrepreneurship as an alternate. Despite, the annual intake

of over 470 students in Business Administration Department by Islamia University Bahawalpur, most of the students prefer to engage in job careers.

It is recommended that a series of steps and policy incentives should be designed to promote the culture of entrepreneurship. Accordingly, two comprehensive programs have been recommended as Proposed Projects enumerated in subsequent section.

SME and micro credit are essential tools to promote small and micro enterprises. Ironically, SME bank has stopped lending in Bahawalpur district since around 2002 onwards due to massive defaults. The whole sector is paying the price of SME bank's negligence to assure potential regulations and quality of lending decisions. It is recommended that SME bank should resume its lending in the Bahawalpur district immediately.

Khushhali Bank and few other micro credit organizations are extending loans to micro enterprises. Loan amount generally varies from 15,000-40,000 Rupees with exorbitant mark up cost of 29% or above. Detailed scrutiny of lending process and creation of new businesses reveals that most of the borrowers are trapped in "Loan Cycles" having used the loan amounts for their personal uses instead of new business development. No wonder, new micro enterprise development was found negligible despite the micro credit banks claiming thousands of loan members.

It is recommended that instead of traditional policy of lending small amounts to the micro entrepreneurs, an approach of "Credit Plus" should be adopted through which the borrower is helped to establish a business enterprise and repay the loan obligation through sustained business activities. The services of feasibility studies, establishing the business, organising business processes and advisory service is provided at nominal charges to the micro entrepreneurs for a period maximum up to 3 years to ensure utilization of micro credit amount only for enterprise development and strengthen the entrepreneur's capability to establish and manage the business successfully.¹⁰⁴ The Credit Plus approach would ensure that lending of micro credit amounts do not end up meeting the requirements of personal needs of borrowers. It is recommended that Micro Credit Banks devise a supplementary mechanism of Credit Plus to ensure that the loan amounts are only used for new business development or strengthening existing businesses.

5.8.1 Developing the Agents for Economic Change

The agents of economic change play a very crucial role to originate cultural and behavioral changes in the community. Trade associations, business chambers and academic institutions are time tested catalysts of change. Currently, Bahawalpur Chamber of Commerce and Industry is the only effective trade body of the district. Existence and prominence of other trade associations is insignificant. On the contrary, the counterpart chambers and trade associations of other cities play more proactive role and undertake aggressive policy advocacy, propagation and promote the causes of their specific trade. Consequently, these Trade Associations are better noticed and entertained. Such is not the case with trade associations and Chamber of Bahawalpur District.

- It is recommended that capacity building of Bahawalpur Chamber of Commerce and Industry and other trade associations should be undertaken so as these institutions can act as agents for economic change in the area.
- It is recommended to develop better linkages of the academic institutions like Islamia University Bahawalpur, forthcoming University of Veterinary and Animal Sciences, TEVTA and PVTC with the local manufacturing and commerce through the Trade Association to develop a nexus of change agents.

¹⁰⁴ As practiced by micro credit arm of Servadaya Foundation, Socio Economic Enterprise Development (SEEDS) Sri Lanka. Similar practices followed in Bangladesh and India as well by many organizations.

5.9 Leading Private Sector Development – Rolling Out Recommendations to Strengthen Trade, Commerce and Manufacturing Sector

This chapter highlights a number of constraints in Bahawalpur that are constraining private sector-led economic growth. While it is relatively easy to identify these constraints, in contrast it is quite a significant challenge to remove these constraints, as many of these issues need interventions at the provincial or federal level or creation of permanent institutional capacity within the district to spearhead the process of attracting investment. Therefore, it is critical to move forward with a carefully developed approach to lead the private sector development in the district.

In order to operationalize the recommendations given in this chapter, it is proposed to develop a Private Sector Development (PSD) Unit under the district govt. This PSD unit can be initially established as a publically funded project, but should be manned by personnel from the private sector. The PSD Unit will work closely with the local Bahawalpur Chamber of Commerce and Industry and the local trade/industry associations. The PSD Unit would perform the following activities:

5.9.1 Developing Permanent Capacity for Effective Advocacy

Work closely with the local business associations and chambers to develop a permanent advocacy capacity for policy reforms. The PSD Unit would help these organizations/bodies to develop specific policy papers, on the basis of which they can lobby with the govt. for investment-friendly regulations. This effort would also result in more meaningful participation by the local businessmen in the proposed task forces for interest rates rationalization, galvanizing provincial govt. support for various projects and better articulation of needs of the local businesses.

5.9.2 Attracting Investments

Government of Punjab has recently developed a public-private partnership policy for the province, which lays down the PPP framework. The framework envisions setting up a PPP Cell in the Planning and Development Department, with PPP nodes established as focal points for specific PPP projects in line departments and district governments.¹⁰⁵ The proposed PSD Unit should also act as the PPP Node for the district government Bahawalpur. The PSD Unit will identify various investment opportunities in the district, including PPP projects. The Unit will also orient various section of the district government on facilitating private sector participation and will be responsible for project identification, project preparation, project tendering and project implementation and monitoring. For PPP projects, the Unit will also be responsible for contract enforcement during the operation stage. More specifically, the PSD Unit will be:

- a) Identifying suitable investment opportunities and PPP projects and developing a pipeline of such opportunities;
- b) Recruiting consultants, technical experts and transaction advisors for project preparation and tendering;
- c) Supervising the preparation of feasibility studies;
- d) Conducting marketing events and investor conferences to market the investment ideas;
- e) Liaising with the provincial government (including PPP Cell) and conducting a competitive tendering process consisting of pre-qualification and bidding to select the private sector partners;
- f) Carrying out bid evaluations, facilitating contract awarding by relevant authorities and negotiating and signing agreements; and

¹⁰⁵ Policy for public-private partnerships in infrastructure. rep. govt. of Punjab, planning and development department, 2009. print.

- g) Monitoring and evaluating implementation and operation of PPP projects and other investment initiatives.

Since the PPP projects that have been identified in DEDS are likely to be sufficiently complicated to execute, the PSD Unit will need to recruit the services of external experts for advice during project preparation and transaction execution. Careful screening of consultants/technical experts/transaction advisors will need to be done, to recruit the most credible and professional. The PSD Unit can either fund these advisors from the district government resources or from the revolving Project Development Facility, managed by Planning and Development Department. The Unit can also seek technical or financial assistance from the newly established Punjab Board for Investment and Trade at the provincial level.

5.9.3 Developing a Portfolio of Projects for Private Investment

Although establishing the PSD Unit is the first step towards enhancing private participation, the Unit would immediately need to develop a pipeline of potential projects for seeking private investment. The DEDS identifies a number of such projects, however, the PSD Unit would need to continuously review and expand that list. For instance, the section on agriculture proposes an extension services project, with private sector participation. Given the dissatisfaction that farmers have with service delivery and effectiveness of the government in provision of extension services, the proposed initiative seeks to invite partners from the private sector to provide the agriculture extension service on a pilot basis, starting with one tehsil. Similarly, the section on resource mobilization emphasizes that the revenue generated through rent from properties is very limited in Bahawalpur. Introducing private sector participation been suggested as a new viable way for enhancing service delivery and managing financial resources optimally. The report portrays a comparative analysis of the municipal rent in all six TMAs combined, of around PKR 50-60 million annually which is extremely low compared the market value of these assets. Unused or underutilized real estate property can be auctioned to the private sector, and more income may be earned, while saving on maintenance expenses. There is a need to develop the portfolio of all such projects, with some details about the investment size, rate of returns, terms and conditions, etc. This portfolio can then be marketed to potential investors.

5.9.4 Workforce Development

As portrayed earlier in the District Profile Chapter, the latest figures from MICS 2007-08 point to an unemployment rate (people who are unemployed and are actively seeking jobs) of around 5% for Bahawalpur District as a whole. Rural unemployment rate stands at 4% while the urban rate is 7.8%. Within various age brackets, the age group 15-24 has the highest unemployment rate at 15%, which speaks volumes about the untapped potential in the youth population. Since most of the employed people in Bahawalpur district are working in agriculture or low skills occupations, it is important that the district economic development strategy formulate an appropriate workforce development agenda, which can correctly assess the training needs of the employed population, so that the workforce is adequately equipped to handle the new opportunities that would be created from all the proposed interventions in the main sectors of the economy. As mentioned earlier in the District Profile, the public sector institutes are out of synch with the industry demand and most of the courses offered are outdated. The number of short-term, low skill courses is very few in the district, with only a couple of courses being offered in computer application, wireman and quantity surveyor. The number of training institutes operating in the District is limited. When looking across different tehsils, it is observed that overall computer-related courses have the highest enrolment. In Yazman and Ahmedpur East tehsils, computer operator/office assistant courses are also quite popular. The PSD Unit should develop a comprehensive Action Plan for Workforce Development covering the following features:

- There needs to be a private sector space for training institutes, such as NGOs and capacity building organizations, who have the relevant experience in undertaking assessment studies for offering the relevant courses. Using a market driven approach, the initial assessment will calculate courses that are highest in demand, in various sectors such as livestock, industrial skills, agriculture etc.

- Apart from creating a space for private training institutions, the private-public partnership model can also be looked in to deliver efficient training programs. TEVTA and PVTC can partner with private consultancies to formulate courses, and implement professional programs.
- With an envisioned shift from manual systems to automation, high-skill courses dealing with technology and computer skills will be designed and made available to the population, especially in the Tehsils of Yazman and Ahmedpur East where computer operator/office assistant courses are more popular.
- The training institutes will be staffed with competent, qualified professionals who will be evaluated independently by third-party evaluators. It is important that the training programs incorporate an evaluation framework so that the benefits accrued to the participants can be identified when they re-enter the workforce after acquiring the new skills.
- The training programs need to be well integrated with the economic development projects in all sectors, such that the positions which need to be filled by the necessary qualified individuals in the District Govt. can be filled from a pool of trained labor skilled in the right management expertise.

5.10 Key Sector up Scaling and Value-addition

The key economic sectors of Bahawalpur district has already been identified in the earlier section. In line with the proposed economic development strategy, it is recommended that few key manufacturing and commerce sectors are focused for targeted investment with the objective of up scaling and value addition of these sectors. The inter linkage of these sectors from agriculture to manufacturing and commerce is an important element to select these sectors for economic development and sector excellence. Implementation of these proposed projects is expected to ensure the up scaling of the key sectors in terms of technology, investment, process improvement, human resource development and market access.

Prior to the details of Proposed Projects, it is appropriate to record an empirical effort to identify the projects for rapid economic development of the area. An extensive consultation process took place in 2005 among SMEDA and all district Chambers of Commerce and Industries of South Punjab to identify the projects for investment leading to swift economic growth of respective districts. A host of projects were identified but unfortunately all identified projects are still waiting to be implementation despite lapse of five years. The list for Bahawalpur district is reproduced in the following for empirical perspective:

Development projects proposed jointly by BCCI and SMEDA- 2005

No.	Proposed Project	Action Required
1	Sheep, Goat and Livestock Export Zone	PC-1 for Development Project
2	Dairy Farming	Lending and pre-feasibility
3	Meat Processing	Development Project(PC-1)
4	Training Institute for Silver Jewellery PC-1 and products	
5	Display Centre for Women(Handicrafts)	PC-1
6	Mango Institute in Rahim Yar Khan	PC-1
7	Craft Paper Mill	Prefeasibility

Source: SMEDA

5.10.1 Proposed Projects

The details of proposed projects are enumerated in the following paragraphs. These projects are proposed on the basis of sector reviews, potential for investment, economic growth and job creation with immediate impact on district economy.

Most of the projects and initiatives suggested in the past have been more focused on physical infrastructure and less focused on business processes improvement and creation of new economic opportunities. Hence, diverse projects covering the key economic sectors are being proposed as follows with focus on value addition, employment generation, backward linkage with supply chain and comparative advantage of the district as a part of District Economic Development Strategies.

5.10.1.1 Institute of Cotton Ginning and Management

(A common project with Multan district)

Purpose:

1. Entrepreneurial Development of cotton ginners
2. Development of operational managers through training and capacity building
3. Up gradation of ginning technology to improve yield, quality and reduce contamination levels. Prepare the trade for mechanized picking through development of machines and processes.
4. Train and capacity building of existing technicians; most of them do not have formal training and technical education
5. Research and development to make cotton economy more value driven and address to minimize distortions in supply chain management of raw cotton.

Rationale and Criteria for Selection:

Cotton is the largest cash crop for the district. It has a broad based importance for the farmers as well as cotton ginning sector which is engaged in its processing and trading. At present economies of scale are limited and sector is restricted for cotton processing only with obsolete technology. Value addition through improved ginning process technology and extension in value chain can enhance investment, create more jobs and generate many new trading opportunities.

Activities To Be Carried Out:

1. Training and capacity building of existing and new entrepreneurs of the ginning sector
2. Need based development of existing and new human resource for the sector for technical and managerial disciplines.
3. Research and development on existing technology to improve productivity, quality, reduce electricity consumption, improve business processes, streamline material handling processes and foster automation
4. Research and adaptation of new technologies for technology up gradation of ginning sector
5. Help developing engineering backward linkages of local qualified and trained technicians
6. Develop a centre of excellence for ginning sector business process against the backdrop of all other initiatives are being driven towards seeds development.

Implementation Approach:

A new tripartite entity based on public- private- development agency be established as non profit develop institute. It should have broad based board of directors with own charter of business. It

should have professional CEO selected on merit for a fixed term. Institute should be encouraged to have international linkages and arrangements for knowledge and technology transfer.

Initially it can be established a with seed capital contributed by all parties. It should have an endowment fund and self revenue generation plan to be self sustainable to have independent financial status.

Project location:

Its head office can be located either at Bahawalpur or Multan. Its status should be “a public goods” for the whole ginning sector.

Approximate Cost:

Capital investment – land near the city area:	Rs. 32 millions
Building around 60,000 SQF:	Rs. 60 millions
Equipment, fixtures, support system etc:	Rs. 50 millions
Three year operational cost @ RS. million/month	Rs. 108 millions
Trainings, consultants and other costs;	Rs. 20 millions
<i>Total estimated cost excluding land:</i>	<i>Rs. 238 millions</i>

5.10.1.2 Modern and Mechanized Meat Processing Facility

Purpose: To develop a facility and capability to process the beef and mutton meat at district level for national domestic and export market.

Rationale:

1. To develop a local facility as an upward market linkage to process meat at local level to provide a new regular market for livestock farmers.
2. To ensure value addition by undertaking meat processing at local level
3. To create a new product of Halal Meat exports for the district economy with vast growth possibility in national and export markets
4. Attract investment in the district and develop a new industrial activity which defines the traditional market practices to new modern style of meat processing and selling it as brand at convenience stores.
5. Create job opportunities for local skilled and non skilled workers
6. To support more organized and commercial cattle farming leading a market driven growth in livestock.

Benefits from the Proposed Project:

1. A new industrial activity and trading opportunities for district economy
2. Technology transfer
3. Investment
4. Job creation
5. Market linkage for the farmers
6. A new export product category

Activities To Be Carried Out:

1. Establish a modern slaughter house and meat processing facility of descent economy of scale
2. Establish a marketing process for local, national and international market
3. Promote commercial cattle farming

Implementation Approach:

A nonprofit company be established with a broad based board of directors. Company management be lead by a professional CEO with a team of market driven management.

Project Location:

Project should be based around Bahawalpur city for close proximity to the farmers, market access and ease of attracting the professional management.

Approximate Cost:

It is expected that this project would be a unique and first of its own kind in Pakistan, it would require careful planning and engagement of foreign experts during its preparation and initial production phase.

Building, including cold storage:	Rs. 120 millions
Machinery, equipment, standby power generators:	Rs. 150 millions
Other Fixtures and support infrastructure:	Rs .20 millions
Trail period losses/ development cost	Rs. 25 millions
Working capital:	Rs. 120 millions
Total cost of project excluding land and working capital	Rs.315 millions

(Cost of project can vary with different business models and processes.)

5.10.1.3 Milk Procurement Infrastructure

Purpose: To support ongoing efforts of private sector to outreach to maximum farmers with milk production capacity and provide them an opportunity of better livelihood. To promote commercial dairy farming for small farmers.

Rationale of project: Bahawalpur district has ample capacity of milk production. Easy access to urban areas and milk collection channels are attractive opportunity to develop outreach to those farmers who do not have access to existing channels of milk collection.

Benefits of Proposed Projects:

1. To outreach to those areas where milk produced cannot find market access.
2. To develop milk collection infrastructure for those far flung areas, which are not currently the priority coverage area for national dairy companies.
3. To promote a sustainable economic opportunity to poor masses of rural areas with stable milk collection arrangements
4. Milk production involves larger women participation. This project would empower more women in rural areas through sustainable means of living and economic opportunity.

Activities to be carried out:

1. Survey for mapping ignored or left out milk producing areas from the current milk procurement chain of local and national dairy companies
2. Assessment of additional milk availability for extended milk procurement arrangements
3. Need assessment of number of chilling centers, capacity, transport and electricity

4. Develop business plan of to identify the capital needs, infrastructure, working arrangement etc to develop a sustainable set up
5. Engage a private or nonprofit implementation partner
6. Awareness campaigns to farmers for breed improvement, fodder, veterinary care and marketing channel availability

Implementation approach:

A nonprofit organization should be engaged as implementing partner with clear accountability and deliverable plans. NRSP can be one such partner who is already engaged in numerous rural projects.

Project location: Bahawalpur district

Approximate cost of Project:

Estimated cost of 50 chilling stations: Rs. 50 Millions

Cost of development activities three years

Project running cost: Rs. 42 Millions

Fixtures, Vehicles, delivery mechanism cost: Rs. 45 Millions

Approximate cost of project: Rs. 137 Millions

5.10.1.4 Transformation of E&IP into a Business Promotion Department

Purpose: A comprehensive program is proposed to transform E&IP Department into a vibrant business development, promotion and data bank for the district economy.

Rationale: Develop capacity to promote progressive business policies and provide a learning environment for improved comprehension of business promotion needs and use full economic potential of the district.

Benefits from the Proposed Project: The project would enable Department of E&IP to develop capacity of:

1. Comprehensive information database for investment opportunities in a district
2. Understanding the market mechanism, marketing channels, supply chain management etc for improved understanding of the businesses.
3. Develop capability to collect and maintain vital economic data
4. Develop capability to advise existing and potential investors for investment promotion
5. Prepare pe-feasibilities and offer advisory to SMEs for district specific opportunities

Activities to be carried out: Following activities are proposed:

1. Situation analysis of existing staff and facilities
2. Need assessment for desired capacity and capability
3. Devise training programs for different tiers of staff
4. Develop pool of core specialists to support the department on specialised industry issues, technology, public policy compliance

Implementations Approach: Existing department of E&IP to take lead and charge with initial the help of transformation partners. It proposed that SMEDA, State Bank of Pakistan, Punjab Board of Investment and Trade and a private sector capacity building organization should be engaged as collaborating organization.

Project location: Bahawalpur

Approximate cost of project: Need assessment, training and capacity building, development of data bank, investment pre-feasibilities etc. Estimated amount for one year is expected Rs.50 million

5.10.1.5 Sector Development of Bahawalpur Arts and Crafts

Purpose: To transform the existing silver jewelry, needle work for ladies garments and patch dyeing(commonly known as Chunnery) into value added, creative and contemporary fashion product range.

Rationale: Over five major clusters with an estimated 40,000 workers depend for their livelihood on needle work for ladies garments and patch dyeing. Silver jewellery is unique to Bahawalpur but is facing static growth due to lack of new designs and induction of efficient technology of modernize production processes. Also, market channels need to revisit to provide better market access to the workers.

Benefits from the Proposed Project:

1. Improve the quality through improved designing and production process
2. Provide better market access to the workers and micro entrepreneurs
3. Develop common facilities for designs, dyeing and raw material sharing
4. Training of workers on new patterns and designs for better value addition
5. To develop Bahawalpur Arts and Crafts as a Brand of Fashion Statement for maximum value addition

Activities to be carried out:

1. Mapping of artisans and workers, categories their skills levels to determine the existing pool of skills and skilled workers.
2. Develop the work plan to improve design capabilities and other strengthen other key success factors to the sector
3. Organize series of need based training and capacity building
4. Develop common facilities to improve sector efficiencies
5. Develop alternate marketing channels and market access arrangements

Implementations Approach: A sector development institution with the collaboration of Local entrepreneurs, E&IP, Pakistan School of Fashion Design-Lahore, Trade Development Authority of Pakistan, AHAN- SMEDA, Micro Credit Banks, And Punjab Small Industries Corporation.

Project location: Bahawalpur

Approximate cost of project: Establishing the institution, common facilities, organize training and pool of designers, advisors etc. Estimated cost is Rs. 100 million for three years project.

5.9.1.6 SME and Micro Enterprise Development Initiative

Purpose: To promote and develop entrepreneurial culture in the district for SME's development and Micro Enterprise development. To address the "Entrepreneurship deficit" in the district and develop the new opportunities for nonfarm jobs creation.

Rationale: A recent study of DFID and government of Punjab titled as Private Sector Development Strategy for the Punjab has concluded that many districts of Punjab suffer from sever "entrepreneurial deficit". Low level of enterprises development so far and dismal number of industrial establishment in Bahawalpur confirms the conclusion of this report. It is proposed that SME's and Micro Enterprises development should be focussed through this unique initiative to promote investment and create job opportunities.

Benefits from the Proposed Project:

1. Promotion of entrepreneurial culture
2. Help SME's enterprise development enabling them to play a central role in economic development
3. Help the ongoing efforts of micro enterprises development to promote self employment
4. Help to spur wide ranging economic activities in whole of rural and urban areas of the district
5. Empower women to become economically more engaged and productive

Activities to be carried out:

1. Help develop a broad based initiative with the help of SMEDA, Punjab Government, Bahawalpur Chamber of Commerce and Industry, Micro finance banks, NRSP and other active stake holders.
2. Prepare a working plan for the initiative to have need assessment, identify specific areas for interventions, identify the types of interventions and scope of interventions.
3. Establish a business incubation centre to help establish new entrepreneurs to establish their enterprises.
4. Provide training, advisory, consulting and coaching to new entrepreneurs
5. Provide BDS to such entrepreneurs through an agreed arrangement
6. Promote entrepreneurship as a way of life and tool of meaningful employment for self and others

Implementations Approach:

Help organizing a joint initiative with the help of other key stake holders like SMEDA, TDAP, NRSP, Govt. of Punjab, Islamia University, AHAN, TEVTA, PVTC, SME Banks, Micro banks etc. for broad based program with reach to urban and rural areas. SMEDA may be a suitable choice for as implementation partner and focal point.

Project location: Bahawalpur

Approximate cost of project:

Total program cost including consultants, trainers, management and infrastructure is expected around RS. 80 million for a three year program.

6. District Resource Envelope

The previous chapters contain a number of specific proposals for investment in various sectors in Bahawalpur. These strategic interventions, it has been shown, will remove constraints on economic activity in the district, enable private sector investment, generate employment (in many cases proactively seeking women employment) and create mechanisms for sustained growth. A key question however remains that how these investments are going to be financed. As explained in Chapter 1, district, provincial and federal governments and international aid agencies will have to pool in resources and create synergies to undertake activities mentioned hereinbefore. A key stakeholder here is the district government, which must allocate resources, as much as possible, for investment in proposed interventions. This chapter examines the receipts (and also the expenditure) of the district government (DG) and various Tehsil/Town municipal administrations (TMAs) with the objective of suggesting ways and means to enhance the total available resource with the district so that it can allocate more resources for specific interventions that produce economic development. It examines the resource envelope and proposes measures to enlarge it.

This Chapter brings to light the resource situation of the district Bahawalpur, identifies projected public resources, estimates the resource gap and presents some resource-mobilization tactics/recommendations. After analyzing the existing resource envelope of the district, including the resources transferred from the provincial government and local resource generation (OSR), the chapter includes analyzing the resource gap, identifying problems in public finance and generating a plan for resource mobilization to close the projected resource gap.

6.1 Background

Local governments in Pakistan derive revenues from two principal sources including the funds transferred to them from the provincial government; and funds collected and retained in the local government itself. Funds coming from provincial government are referred to as transfer payments. The rules governing the flow of transfer payments are part of the laws on intergovernmental fiscal relations. In case of Local Government transfer, payments are typically allocated from Provincial Allocable Amount (PAA), through PFC award on an established formula basis. Transfer payments may be stable and predictable over time, or they may vary substantially from year to year. Regardless of their characteristics, transfer payments cannot be categorized as “own source revenue” because they are not under the direct control of the local government. In addition to this each LG carries forward a certain amount of fund to the next financial year for meeting its essential expenses is called opening balance which is mandatory.

6.2 Public Receipts

6.2.1 A comparative analysis

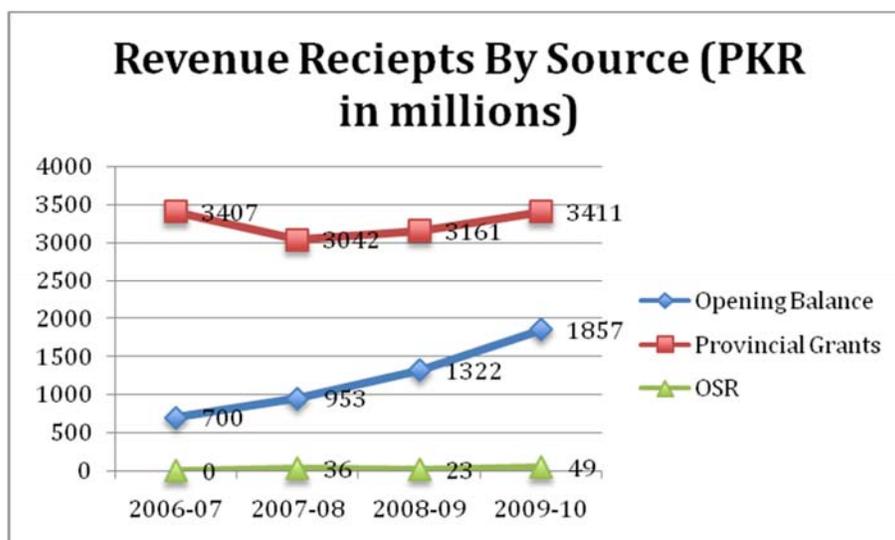
A review of the public receipts during the last four years (**Error! Reference source not found.**) reveals that the opening balance each year from 2006-07 till 2009-10 for district government Bahawalpur is always higher than the mandated 5% ratio of the total budget. Besides this, the Opening balance has been increasing all these years on an average basis of around 20 percent or more. In 2009-10, Opening balance stood at PKR 1856.807 million, which is 35 % of the total receipt. This however, is a negative indicator as funds earmarked could not be utilized where there is a huge gap in the demand and supply of basic services to be made available.

The following table presents the revenue receipt by source of the district government Bahawalpur, for the last three years.

Table 19 Revenue Receipt by Source

.106Sources of Revenue	2009-10	2008-09	2007-08	2006-07
Opening Balance	1856.807	1322.418	952.693	700
Provincial Grants	3410.787	3161.34	3042.327	3406.568
OSR	48.812	23.366	35.707	0
Total	5316.406	4507.124	4030.727	4106.568

PKR in Million

**Figure 52: Revenue Receipts by Source**

Provincial grant is a major source of district government revenue each year. In 2009-10 share of Provincial grant in the total budget is PKR 3410.787 million which is 64 %. The four years comparison reveals that share of provincial grant has been raising at a constant ratio ranging between 4-15% on average. The raise in 2009-10 as compared to 2008-09 was slightly higher which was around 7.31% but a drop in the provincial grant in the year 2007-08 by around 11% was quite noticeable¹⁰⁷. The OSR in case of district government Bahawalpur is quite limited as evident from **Error! Reference source not found.** above. In 2009-10 expected OSR is PKR 48.812 million, which is 0.91% of the total budget. Last four years comparison shows that OSR ratio in the overall receipt of a district government remain less than 1% on average. OSR in 2008-09 dropped from PKR 35.717 million to PKR 23.366 million indicating 35% fall in the revenue. In 2009-10 an increase of 52% is shown over the last year in the OSR but all this would depend on the actual realization. Furthermore, a visible increase in the OSR by enhancing the tax base and minimizing the pilferages in the revenue collection is highly desirable. Slow increases or decreases further widen the gulf and increases dependence on provincial transfers, which leave little room for maneuverability and better planning for overall development. The district government currently depends on provincial transfer for about 70% or more of its budgetary resources. Therefore, greater revenue

¹⁰⁶ Budget documents of respective Financial year For year 2009-10 are Budget estimates and other are revised estimates

¹⁰⁷ Upon enquiry, EDO (F&P) Bahawalpur did not have any plausible reason to support the raise and especially drop in provincial grant. But evidence shows that a minimum raise is allowed by provincial government just to cater for the raise of salaries due to annual increment.

mobilization from taxes and user charges would expand the district fiscal space at the margin and over time would enhance fiscal autonomy.

6.2.2 Own Source Revenue Analysis

In 2007-08 recovery on account of water rate was 172.053 million which went down during 2008-09 to 96.176 million (a drop down of 44%) which is quite serious as far as contribution of district government into the provincial kitty is concerned. Similarly Agriculture income tax recovery in 2007-08 was 50.227 million which went down to 29.912 million in 2008-09 (indicating a loss of 40%.)

Interestingly the only OSR which keeps on rising in case of district government Bahawalpur is the mutation fee which rose from 107.907 million to 114.851 million, registering a 6 % rise. However the raise was due to high property cost as informed by ACR Bahawalpur

District government collects two types of revenue at local level; one is generated by district government but is deposited into account 1 of the Provincial Government and other is retained at district level. In case of the former, the district government has no control over its use once it is deposited into account 1 whereas in case of the latter, the district government has authority on its use as per local requirements. The first categories of revenue include water rate, agriculture income tax, mutation fee and registration fee. The 2nd category of OSR comprises of tender fee, bulldozer charges, rent of building and sale of trees etc.

OSR generation is not fully exploited as evident from the share of revenue raised in the last four years in **Error! Reference source not found.** above. There are a variety of reasons, which have not allowed the tax culture to change or allowed imposition of new taxes at a local level, as these decisions are mostly politically unpopular. District government, under PLGO 2001 2nd schedule, is authorized to levy different taxes for expanding its tax base for more revenue generation and meeting its financial obligation. Non-imposition of new taxes especially OSR, definitely bars the financial capability of district government for meeting its obligatory responsibilities in a better way, resulting in a lack of provision of basic services to the people at large. A review of the last three years receipt under (OSR) raised by district government reveals that none of these taxes allowed under PLGO 2001 were even considered by the district government Bahawalpur, mostly owing to political reasons, since imposition of such taxes is a hard decision to make. Concerted efforts therefore, need to be made for embarking on an effective revenue mobilization strategy, coupled with an extensive communication strategy for promoting tax culture and raising awareness for creating a demand for improved services. This will ultimately pave the way for sustainable tax norms.

PKR in Millio

Table 20 Different categories of Recovery Head in Bahawalpur District

Recovery Head	2009-10	2008-9	2007-8
108Category -1			
Water rate	169.840	96.176	172.053
Agriculture income tax	57.829	29.912	50.227
Mutation fee	114.851	114.851	107.907
Registration fee	59.634	0	0
109Category-2 OSR: Tender fee, CCB Registration, Refund of excess payment, House rent	48.812	23.366	35.717

¹⁰⁸ EDO(Revenue) Bahawalpur

¹⁰⁹ EDO(F&P) Bahawalpur

6.2.3 TMA-wise Comparative Analysis

TMA's derive income from two different sources i.e. Provincial grants through Provincial Finance Commission award in lieu of Octroi and Zilla tax and OSR which is raised /generated locally. All taxes and non-tax revenues are locally collected, except UIPT which is collected by Excise and Taxation department of provincial Government and, after deduction of 15% of collection charges, are transferred to respective TMA's from where tax is collected. Other taxes and non-tax receipts include income from property tax, building plan, cattle fair, parking fee/bus stand, cycle stand, advertisement, municipal rent and water rates.

Table below highlights the combined revenue receipts of all six TMA's in Bahawalpur (source-wise).

PKR In million

Table 21 Combined Revenue Receipts of TMA's in Bahawalpur

Revenue source	2009-10	2008-09	2007-08	2006-07
Opening Balance	651.81	493.41	320.98	186.31
PFC	354.504	379.98	367.52	343.62
UIPT	56.22	57.74	41.81	21.84
Property tax	28.38	27.70	24.71	41.09
Building plan	31.30	20.60	17.04	11.58
Cattle fair	30.00	18.53	15.85	12.60
License fee	3.06	3.37	2.78	3.37
Parking fee /Bus stand	43.33	35.78	30.09	25.88
Cycle stand	0.91	0.96	0.75	.78
Advertisement	4.21	5.13	2.72	1.01
Other fees	6.26	7.35	8.27	3.74
Municipal rent	68.42	41.25	35.74	10.06
Water rate	7.10	7.74	7.37	2.67

6.2.3.1 Opening Balance

Error! Reference source not found. depicts that opening balance is one of the source of receipts in TMA's in all these years. Ideally a minimum of 5% of the total budget is to be carried forward to next financial year as opening balance for meeting operational expenses till the approval of the next year's budget. But in case of the TMA's of Bahawalpur, opening balance has always been quite high than the mandated 5% ratio of the budget. On the other hand it keeps on increasing, ranging between a 20- 50 % increase annually except in TMA Bahawalpur City where a drop of 1.32% is expected to be seen in 2009-10 as compared to 2008-09. Such a huge opening balance on the one hand shows a lack of capacity for timely and judicious utilization of development funds within the TMA's and on the other hand, funds earmarked for CCB projects are also not fully utilized which is explained under the expenditure head of TMA's. TMA Hasilpur's unique status is evident from the fact that in two consecutive years not a single penny was carried forward as opening balance. In both the scenario of having either no opening balance or 20 percent or above opening balance violates the mandated limit of 5% ratio.

¹¹⁰ Budget documents of respective financial years. Figures are budget estimates.

6.2.3.2 Provincial Grant

Provincial grants are another main source of receipts of all TMA's in Bahawalpur given in lieu of octroi/ zila tax for meeting current expenditure. The ratio of provincial grants to the total receipts of TMAs in Bahawalpur ranges between 24-40% on average. The provincial grants are increasing at a slow pace as compared to the increase in the current expenditures of TMAs. The overall increase in the provincial grants was 3% in 2008-09, as compared to last year. However the increase in 2009-10 is expected to be higher than 2008-09 at around 18%, indicating a positive sign, but this would be subject to actual materialization. In TMAs of Khairpur Tamewali and Hasilpur, a drop in the provincial grants has been noticed ranging between 9-13% in 2008-09 as compared to the previous year. But in the subsequent year an increase of 29% and 23% is expected to be received under the provincial grants in both these TMA's respectively.

6.2.3.3 UIPT

Urban Immovable Property Tax (UIPT) is the most important source of receipts in case of all TMAs in Bahawalpur. Across all TMAs in Bahawalpur, a sizeable income is accrued out of UIPT which has been increasing consistently with average increase of 25 percent or more annually. The combined income from this head rose by around 27% as evident from **Error! Reference source not found.** above but it went down by 3% in 2009-10 as compared to last financial year. In Khairpur Tamewali and Bahawalpur Saddar a drop of 18% was noticed during financial year 2009-10 as compared to previous year. Bahawalpur City's share in the combined UIPT ranges between 40-44% of the total receipts under this head in a financial year. Remaining 50% or more collection is made in the other five TMAs of District Bahawalpur with an average share of 9-15% per TMA.

Most of the TMA staff is not satisfied with ongoing mechanism of centralized collection of UIPT by Excise and Taxation Department, without any clear role of TMA. UIPT is a devolved tax and its control should ideally rest with TMAs rather than Excise and Taxation Department where issues of reconciliation, check and balance and information regarding annual collection are frequent and mostly responsible for low revenue collection. Although there is a clear capacity gap at the TMA level but that should not be the sole criteria for depriving it from one of the main robust sources of revenue where it can go up manifold if devolved. However, additional efforts would be needed for building capacities of the TMA staff. Additionally, the government must consider extending the rating areas for fetching more revenues, bringing in areas where new colonies under this tax. Some of these localities in Bahawalpur include Hashim Garden, Gulshen Iqbal, Royal City, Hamza Town, Alama Iqbal Town, Cheema Town, Gulshen Hussain and Shadman Colony.

6.2.3.4 Property Tax

Property tax is another important source of revenue in all the six TMAs of Bahawalpur. **Error! Reference source not found.** above reveals that under this head an amount of PKR 24-28 million is collected annually. The combined revenue under this head registered an increase of 11% over the financial year collection 2008-09. But the pace could not be sustained in financial year 2009-10 as the increase dropped to around 3% as compared to the last year. Out of the total receipts under property tax, share of Bahawalpur City TMA is 70% and remaining 30% is contributed by TMA Hasilpur. Interestingly in the other four TMA's of Bahawalpur i.e. Bahawalpur Saddar, Yazman, Khairpur Tamewali and Ahmedpur East, not a single rupee has been accrued out of property tax over the past few years.

6.2.3.5 Building plan

Building plan is another source of income for all six TMAs of Bahawalpur district. In 2009-10 an amount of PKR 31.30 million is expected to be received from all TMAs as compared to PKR 20.16 million of last financial year, registering an increase of 34%. In 2007-08, PKR 17.04 million was recovered out of this head. Income from this source has been increasing at an average rate of 17-34% annually. In the total receipts of building plan, the share of TMA Bahawalpur City is around 56-79%, followed by TMA Hasilpur with a contribution ranging between 8-20%. Some effort on the part of TMAs especially in Bahawalpur City and Hasilpur can tremendously increase the collection, if the rating areas are extended to newly established housing schemes as recommended for UIPT.

6.2.3.6 Cattle Fair

In 2009-10 an amount of PKR 30 million is expected to be recovered out of the cattle fair head as compared to PKR 18.53 million in 2008-09. Comparison of the trend in **Error! Reference source not found.** shows that income from this head is continuously increasing with an average growth rate ranging between 14-38% on annual basis. The share of Bahawalpur City in the receipt of cattle fair stands at a high volume, ranging between 22-83% of the total receipts followed by TMA Yazman, Hasilpur, Bahawalpur Saddar Ahmedpur East and Khairpurpur Temewali. Given that Bahawalpur district has a large agricultural base, this sector could fetch huge revenues from cattle fair if it is properly designed with facilities both for sellers and buyers, in addition to proper accommodation /places for different cattle brought into the fair.

6.2.3.7 License Fee

Under this head a total income ranging between PKR 2.78 to 3.37 million is recovered annually. Income under this head rose by around 14% in 2008-09 as compared to last year but the pace of raise could not be maintained registering a drop of 9% in the projected revenue receipt of 2009-10 as compared to 2008-09.

6.2.3.8 Parking /Bus Stand Fee

A total income of PKR 43.33 million under this head in 2009-10 is expected to be recovered as compared to PKR 35.78 million in 2008-09. Bahawalpur City's share in 2009-10 is expected to be 51.24% of the total as compared to the previous year where it was 58%. In 2007-08, TMA Bahawalpur city contributed 55% to the revenue under this head. Share of TMA Hasilpur in the income under this head remained in the range of 23-35% on average basis.

6.2.3.9 Municipal Rent

During 2009-10 an amount of PKR 64.42 million is expected to be recovered out of this head as compared to PKR 41.25 million of 2008-09. In 2007-08 a sum of PKR 35.74 million was received out of municipal rent collectively. **Error! Reference source not found.** above, reveals that income from municipal rent has been rising at a better pace which rose by 13% in 2008-09 over the last year. However the rise in 2009-10 seems to be much higher which is expected to be around 40% as compared to 2008-09 (13%).

Income from municipal rent contribution to the OSR is quite substantial in case of the TMAs of Bahawalpur City, Hasilpur, Yazman and Ahmedpur East but in the other two TMAs - Khairpurpur Tamewali and Bahawalpur Saddar - income from this source is nominal ranging between 0.2 to 2% of the total receipts.

The municipal rent collection regime needs to be reformed, whereby age old register system needs to be replaced by a vibrant system to ensure transparency. Proper agreements need to be made with all tenants clearly factoring a revision of rent as per rate prevalent in the market. Furthermore, private sector participation must also be considered to increase the revenues and make the system more transparent and accountable. In TMA Bahawalpur city, annual rent recovered from around 850 shops located in the prime areas of urban centre is too low¹¹¹.

6.2.3.10 Water Rate

Under water rate an amount of PKR 7.1 million is expected to be received during 2009-10 as compared to PKR 7.74 million. In 2007-08, PKR 7.37 million was recovered under water rate. Combined position in **Error! Reference source not found.** shows an increase of 5% in 2008-09

¹¹¹ Upon enquiry TMA staff was unable to give clear cut reply as to why the rent of these shops are not properly revised, as per prevalent market rate where a same sized shop owned by any individual fetches manifold more revenue than the shops owned by TMA. Similarly TMA Yazman is quite rich in having large real estate assets in and surrounding of the TMA jurisdiction. There are more than 600 shops and around 1000 houses. Annual average income out of these 600 shops and 1000 is around PKR 3.5 million annually which hardly comes to PKR 182 per month both for a shop and house on average. A little bit raise in the rent could fetch in a huge amount, which is much needed for provision of municipal services to the 272,700 residents of TMA as per 2009 estimates.¹¹¹ Recommendations for revenue collection are discussed in more detail under the heading "Recommendations for revenue mobilization of district government and TMA's in Bahawalpur" later on.

as compared to 2007-08. However the revenue out of water rate is expected to drop by 8% in 2009-10, which is quite alarming. More detailed analysis of water rate revealed that there has been no recovery in TMA Bahawalpur City and Bahawalpur Saddar. As far as TMA Bahawalpur Saddar is concerned its position is justified as it is not providing water services in its jurisdiction but in case of Bahawalpur City there are more than 2000 connections both domestic and commercial and no recovery under water rate in the last three years has been done.

Revenue under water rate in Hasilpur is comparatively better as it contributes around 48-62%, followed by TMA Yazman with a share ranging between 15-18% in the total income. Khairpurpur Tamewali's contribution in the revenue under water rate is around 11% of the total income on average. The yearly rise in the water rate on average comes to around 6%, which is not even sufficient to meet the increase in the energy prices let alone providing income on account of this head. Monthly electricity bills cost around PKR 1 million to the TMA Yazman alone excluding other expenses of salaries of staff, repair and maintenance of water and sanitation infrastructure, etc.

Although revenues from water rate have been on the rise, great potential exists for more enhancement as demand for potable water keeps on increasing and people are more than willing to pay water rate if the supply of water is reasonable and on time and reaches to the tail enders as well. A lack of trust was noticed between TMA and its water users for variety of reason. Lack of trust between TMA and customers needs a lot of efforts for improvement through extensive capacity building programs including mass awareness campaigns for the promotion of tax culture, etc.

6.3 Public Expenditure

Public expenditure can be broadly categorized as current and development expenditure. Current (or recurrent) expenditure includes salary and non-salary expenditure of staff members involved in the delivery of services to the people of district government Bahawalpur. This expenditure includes salaries of administration, health, education, community Development Department, agriculture, works and services department etc. Non-salary expenditures are utility services, operational expenses and other allowances admissible to a public servant. There are a total of 21,037 personnel available with district government Bahawalpur for the performance of different functions under its administrative ambit. Strength of education department is highest with 14,729 staff members, which is 70% of the total staff in a district followed by health with 2,903 employees (14%) of the total.

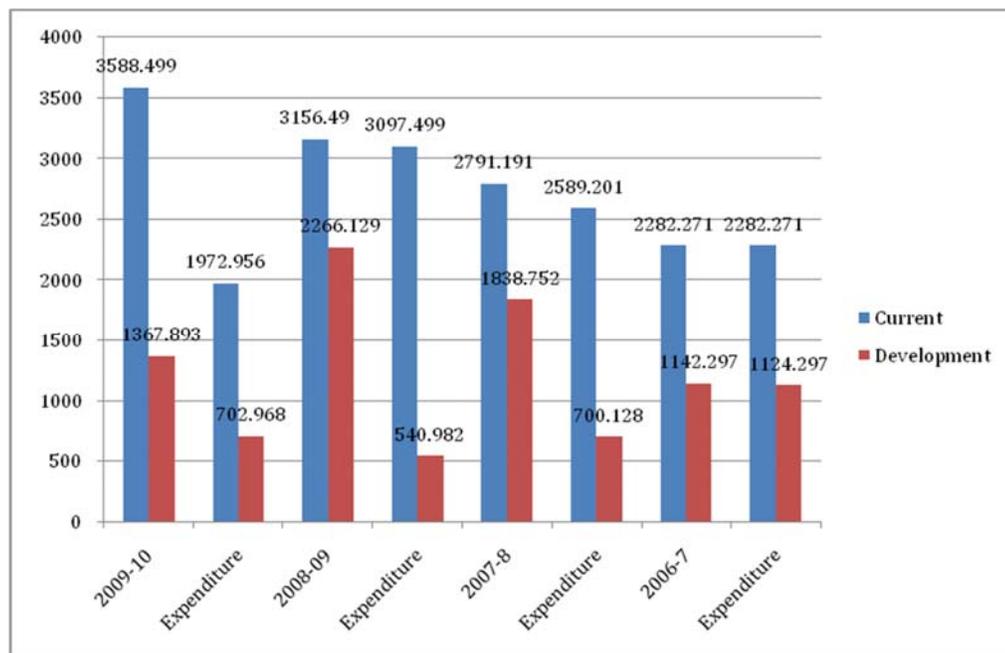


Figure 53 Four years Expenditure Comparison

District government Bahawalpur's total expected expenditure during 2009-10 is PKR 4955.982 million. Out of the total expenditure an amount of PKR 3588.89 million will be spent on establishment charges including salaries and non-salaries expenditures. As evident from the above figure, a major chunk of expenditure goes into establishment head, which comes to around 72%. In comparison, the development expenditure stands at a mere 28%. The development expenditure is further divided into different subheads such as new works, ongoing works, CCB share, payments of securities to contractors and deposit works. During 2009-10 in the development budget no amount is earmarked for new works. PKR 863.956 has been set aside for the completion of ongoing works, which is 53% of the total development budget in the year. Another 25% i.e. PKR 341.974 million is earmarked for the CCB Projects including an unspent balance of last year of PKR 119.067 million bringing the total of CCB share to the tune of PKR 461.041 million.

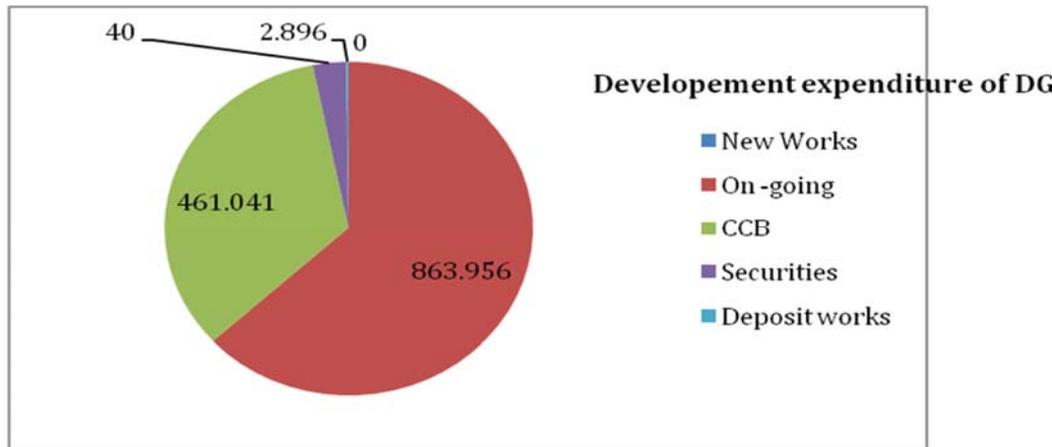


Figure 54 Development Expenditure of District Government 2009-10

In 2008-09 total expenditure both including current and development were PKR 4338.649 million. The share of current expenditure was PKR 2941.051 (68%) as compared to 72% in 2009-10. Development expenditure during 2008-09 was PKR 1397.598 million, which was 32% of the total expenditure. The development expenditure of 32% was further divided into different sub heads. PKR 298.195 million went to new schemes, which are 21% of the development budget for the year. Another PKR 625.581 million were earmarked for the completion of ongoing schemes with a 45% share in the development budget. Share set aside for CCB Project was PKR 460.822 million including an unspent balance of PKR 111.425 million of the previous year.

Comparison of the last three years expenditure reveals that out of the total expenditure of the district government Bahawalpur major share goes into current expenditures, which include salaries and non-salaries expenditure. On average more than 70% of the budget is spent on current expenditure which keeps on increasing at a rate of 9-18% annually during the last three years. The remaining 30% of the budgets are set aside to development expenditure which is further split up into new works, share of ongoing schemes for completion and above all 25% are straightaway allocated to Projects through CCB under section 119 of the PLGO, 2001. By and large, in the last three years, the share of new works in the development budget has been on the lower side and did not cross the limit of more than 20% share in the development allocation in a year. Interestingly, in a year 2009-10 not a single penny has been earmarked for new works, which speaks of the limitations of the district government due to resource constraints. The share of ongoing schemes in all these three years has been more than 40% of the total development budget.

Another glaring issue is the non-utilization of CCB funds. The funds earmarked for CCB Projects could not be utilized due to lack of interest on the part of the political administration. As a result of this policy, utilization of funds under CCB has been very nominal and in all these five years tenure of LG not more than 10-15 schemes may have seen the light of the day.

Table 22: Three year's comparison of expenditure of TMAs in Bahawalpur 112

PKR in million

TMA	2009-10	2008-09	2007-08
Bahawalpur City			
Current	348.003	239.621	152.981
Development	152.86	193.466	73.998
Hasilpur			
Current	93.327	40.086	31.443
Development	71.033	29.119	35.177
Bahawalpur Saddar			
Current	51.92	36.652	17.092
Development	124	109	17.632
Khairpur Tamewali			
Current	35.574	24.317	20.628
Development	44.872	37.11	22.282
Yazman			
Current	51.58	61.805	54
Development	188.297	124.95	64.958
Ahmedpur East			
Current	90.829	70.416	45.516
Development	161.07	181.086	50.049

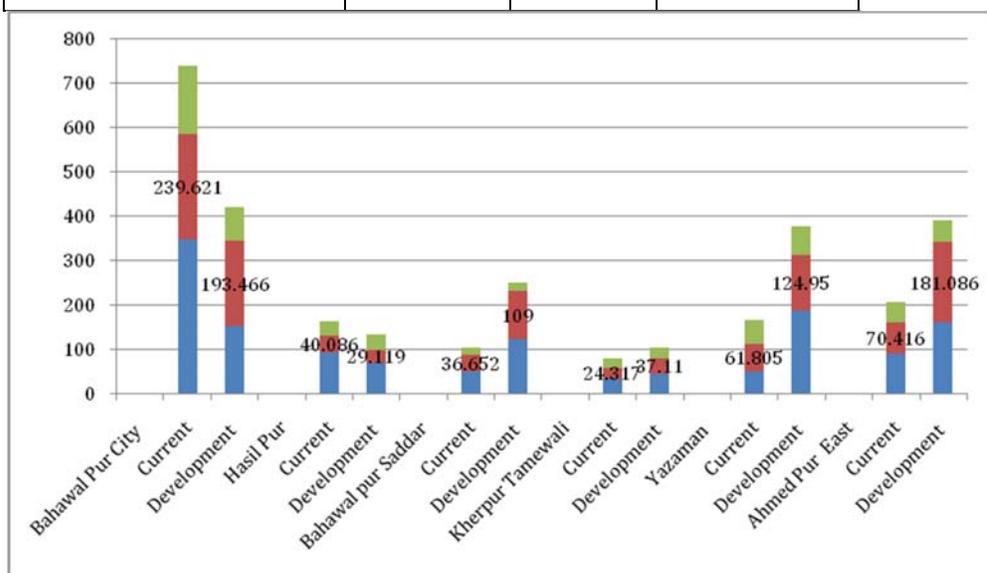
¹¹² Budget documents of respective financial years

Figure 55 Expenditure comparisons of TMAs in Bahawalpur (PKR in million)

In the former categories, TMA Bahawalpur City and Hasilpur fall where is in the other categories are, Bahawalpur Saddar, Khairpur Tamewali, Yazman and Ahmedpur East.

The current expenditure of TMA Bahawalpur City is continuously rising at an average rate ranging between 31-34% annually as compared to Hasilpur, where the increase has been ranging between 22- 57% annually. Development expenditure during this period rose by 62% in 2008-09 as compared to 2007-08 but it went down by 41% in 2009-10. TMA Hasilpur’s development expenditure dropped by 17% in 2008-09 as compared to 2007-08 however in 2009-10 development expenditure has been jacked up by 59%.

In other TMAs including Yazman, Ahmedpur East, Bahawalpur Saddar, and Khairpur Tamewali, the development expenditure are much higher as compared to current one. Majority of these TMA’s e.g. Yazman, Bahawalpur Saddar are diverting current budget to development one for the simple reason that most of the regular posts are lying vacant as no approval could be obtained from provincial government for filling these posts and as a lost options they diverted funds to development. It is not clear though, whether this diversion is allowed under the rule or otherwise.

Development expenditure of TMA Bahawalpur City is further divided as explained in the **Error! Reference source not found.** below:

PKR in million

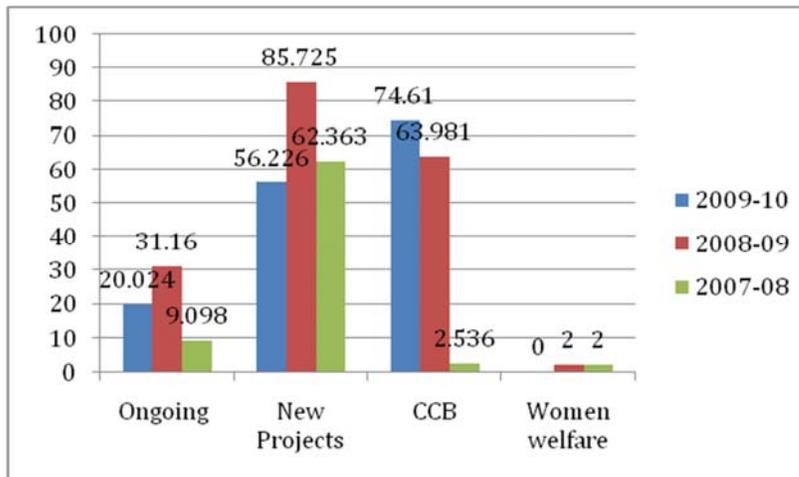


Figure 56 TMA Bahawalpur City

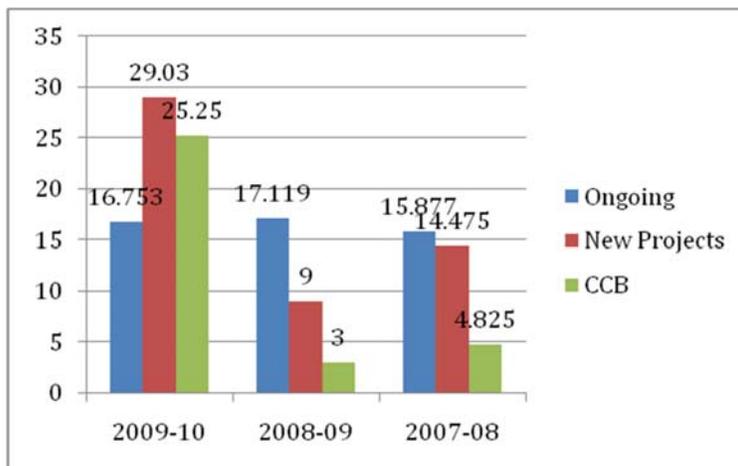


Figure 57 TMA Hasilpur

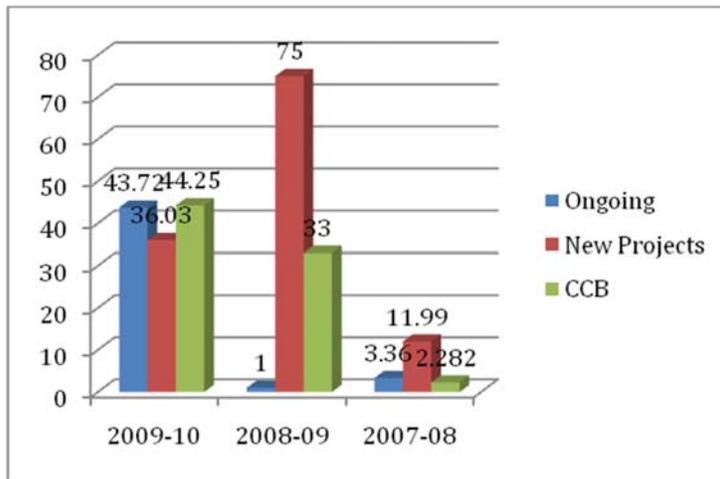


Figure 58 TMA Bahawalpur Saddar

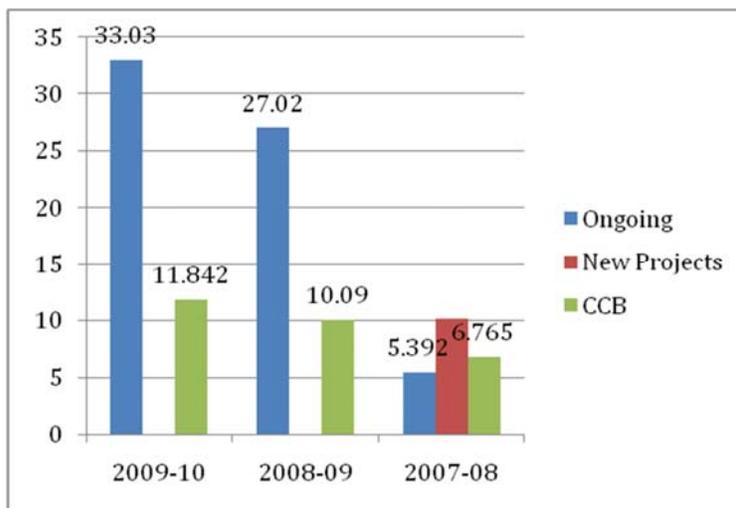


Figure 59 TMA Khairpur Tamewali

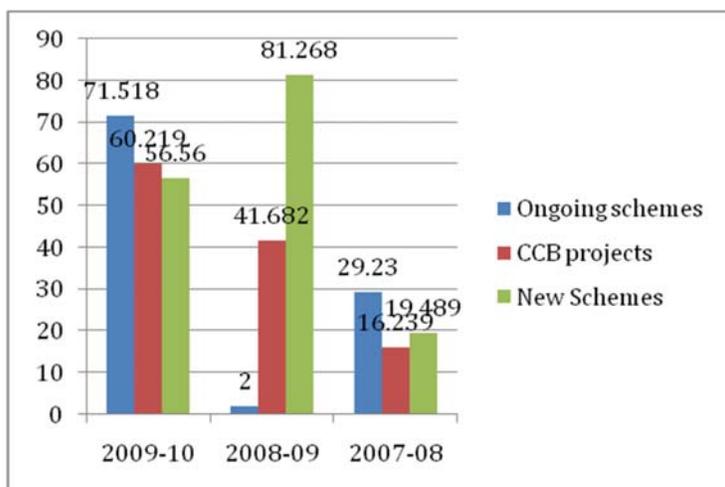


Figure 60 TMA Yazman

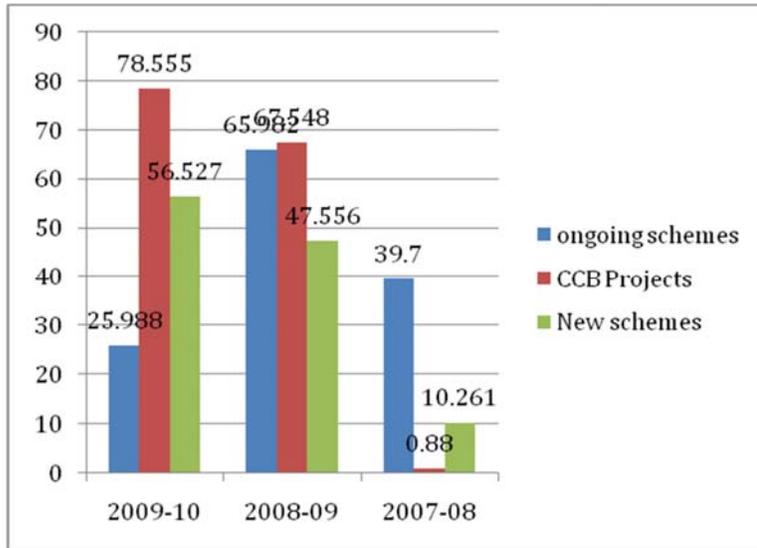


Figure 61 TMA Ahmedpur East

6.4 Business process and Legal regime

The processes in vogue in district government and TMAs in the collection of OSR are quite different from each other. There are four Agencies involved in the collection of OSR i.e. Excise and Taxation Department, which is authorized to collect various provincial taxes for and on behalf of the provincial Government in addition to UIPT for the TMAs. Revenue staff of district government collects various taxes such as Water rate, Agriculture income tax, Mutation fee, Registration fee. TMA staff collects various taxes and non taxes through a contractor and own staff whereas the EDO (F&P) Office staff also collects various fees such as tender fee, CCB registration fee etc.

By law the TMAs are entitled to “collect” the UIPT. In practice, the Excise and Taxation (E&T) Department collects the tax and the Finance Department redistributes the UIPT proceeds to LGs. Many TMAs receive only a small share of the UIPT among government entities in some cases.¹¹³ For instance, the UIPT collected in Lahore provides 5% for collection charges to E&T, 15% to provincial revenue, and of the remainder 50% to WASA, 25% to LDA, and 25% to TMAs. The Province also intercepts UIPT proceeds, and as a result for many TMAs no UIPT revenue was effectively transferred during the last 2-3 years.

Under PLGO 2001, all areas in the TMAs have been declared as rating areas; that is, the UIPT can be levied on all properties within the TMA jurisdictions as the previous division of rural and urban properties has been abolished. Thus, TMAs can now levy the UIPT on all areas including those which were defined as non-rating areas under the old rules. This represents a significant improvement in the definition of the tax base. However, TMAs need to get approval of the provincial government through the Excise & Taxation department to include the previously unregistered properties without which, the rate on these properties remains zero

6.4.1 Billing and Collection of UIPT and Other Taxes

Property taxes are levied in June and July and tax bills are distributed in July and August. As specified by law, anyone who pays the taxes in full before the end of August is entitled to a 5% rebate. This process is acceptable and some of the TMAs would prefer that the management of the tax assessment, billing and collection is done by Excise and Taxation on their behalf for a reason that they don't have the requisite expertise and skill needed on this account. However this point came very strongly that there should be a regular reconciliation and settlement for the pose of transparency which is hence forth found missing. There is a dire need of change in district to

¹¹³ Property Taxes in the Punjab ,Pakistan ,Draft report June 15,2006

organize records and manage collection at the district level under the overall guidance and regulatory oversight of E&T Department in order to enhance consistency, ensure fair tax coverage and encourage joint efforts of district government and TMAs for improved collection.

Under LGO 2001 UIPT was to be collected by district government and after retaining of 10% collection charges, would pass on the 90% to the respective TMAs from where the tax is collected. This resulted in improved collection for some of the TMAs and district government. However through amendment in LGO in June 2005, this power was withdrawn from district government and reverted back to E&T Department under the pretext that LG don't have such capacities. Ideally the capacities of LG should have been built for effective tax collection rather than taking its power back which left it high and dry. The Punjab land revenue act 1976 Section 10 clearly stipulate that Government or Board of Revenue may confer on the DDO (Revenue) of a Tehsil all or any of the powers of the local collectors.

Consumers deposit the UIPT into any Branch of National Bank. The bank sends the paid tax stubs to a central office of E&T where these bills are sorted out by zone and tax circle which are subsequently sent to tax circle for entering into the manually maintain register. From financial point of view this process is full of issues such as lack of control on collection and proper entry of these stubs into the register having plenty chances of errors.

Immovable property tax is collected locally by TMA staff who sits in the office of sub registrar. All transaction made within the jurisdiction of TMA, an amount of 1% is charged on the cost of property sold /bought. The rates are not regularly revised or updated so that fair amount of tax is collected on the actual transaction rather most often rates shown in the registry is less than prevalent market rate to avoid more tax to government exchequer. This way sizeable revenue of the TMA is lost due to underhand dealing of the staff with the connivance of the chase.

Water rates another big source of revenue for most of the TMAs are collected locally through an archaic system where a big register is maintained by the TO (I&S) Office with names and address of all connection holders both domestic and commercial. Rates of domestic and commercial connections always differ and are based on flat rate rather than actual consumption. Manual monthly bills are distributed to all consumers who subsequently pay their respective bills in the TMA office. However this system of manual billing and collections of water rates are full of omission and commission and is subject to a lot of criticism. Proper system of financial management is need of the hour which will not only improve financial revenue but would also restore lost confidence of the consumers on the manually maintain system.

Other fees such as cattle fair, parking fee, advertisement charges, and sewerages charges are collected through a contractor on a monthly basis where consumers are put to a lot of embarrassment and overcharging due to lack of proper system or monitoring mechanism.

As far collection of rent is concerned, tenants deposit their agreed monthly rent with TMA authorities but the system of rent also requires surgical operation for effecting recoveries and making the rent system more transparent and merit based as compare to the one based on personal liking and disliking.

6.4.2 Legal Regime of Taxation

A number of recommendations have emerged from the review of secondary data, budget documents and stakeholder's engagement both at District and TMAs level. District government under PLGO 2001 116 Annex-3 (For reference pose only) SECOND SCHEDULE [See Sections 39(b), 54(l), 67(i) & 88(b)] amended second schedule, can levy taxes, fees rates, rent, etc., on any of the areas subject to a prior vetting of the tax proposal by Provincial Government before its approval by a council.

District government Bahawalpur's past three years history reveals that not a single penny of new taxes has been imposed without any cogent reasons. However during discussion an issue emerged that the district government has no control over the taxes raised locally as these are deposited into Account 1 and for this very reason are reluctant to impose new taxes as it would only add to the misery of the general public without any corresponding benefits. Some

amendment needs to be made to enable district government for retaining the local revenue raised instead of depositing it into Account No 1.

After two terms of LG system, it has become an established fact that LG can't flourish without fiscal autonomy, which is quite limited especially in case of district government in comparison to a TMA. Another important point before levying of any tax/rate/fee vetting from Provincial Government is too tedious and cumbersome which need to be relaxed to enable LG to plan and implement its vision effectively.

Octroi and *Zilla Tax* (OZT) were buoyant levies with the district government and each year more revenues would accrue to it however by abolishing O&Z tax in 1998 with imposition of GST deprived LG from a very effective and efficient tax base. The situation became more exacerbated by freezing the O&Z tax at the level of 1996-97. Ideally LG would have been benefited from the replaced O&Z tax with GST had it not been frozen at a certain base level. Unfreezing the level of GST distribution on basis of actual collection would do wonders for LG in shape of more revenue, which enable LG to plan and execute its programs properly. Financial management system in vogue in district government especially TMAs warrant immediate and more vibrant reforms. The system for Tehsil financial Management introduced by USAID Assisted Project in selected TMAs across Pakistan has worked marvelously registering a sizeable improvement in OSR. In case of a water rate the raise in one of the TMA i.e. Sambrial Sialkot was unbelievable as per DTW Project report. Staff lack basic know how and understanding of rules and regulations. There was no fresh recruitment against most of the newly created posts after the devolution .Most of these posts are filled through adhoc/ stop gap arrangements. Majority of the staff in TMA hold posts on dual charge basis and are promotees without any formal in service trainings or refresher courses in new laws, revenue mobilization techniques, planning and WatSan engineering etc which hamper improved performances. This situation is further compounded by non-availability of essential engineering equipments.

Low yielding taxes are generally not preferred in taxation theory as the hassles of collections, administrative expenditures and settlement of disputes etc. makes the tax inefficient. Such taxes (e.g. copying fee) should be done away with. Similarly certain taxes have been abolished but are being collected presumably with ulterior motives. Collection of such taxes (e.g. *Teh bazari* fee) should be stopped forthwith and these should not be reflected in the budget.

Through a series of interaction with communities and businessmen, consensus found was that people are willing to pay rate and fee provided if they get quality service commensurate to the rate paid e.g. people get quality, uninterrupted water on regular basis. Other points were discussed such as:

- Solid waste are collected in time and disposed of properly.
- Manual collection of water rate /fee needs to be replaced through a systemic process as highlighted earlier and tested in some of the TMAs may be replicated for improved results.
- Valuation tables should be made comprehensive and made public as increased knowledge of the assessments would minimize chances of illegal settlement and gratification.
- Taxation proposals and objections to taxation proposals required under the Punjab Local Government (Taxation) Rules, 2001 should be made public through newspapers as not many people have access to official gazette.

Similarly there is a general need to make taxation as simple and easy to understand for the tax payer as possible. This is the case with user charges as well. As such assessment can be clearly explained with notice as in the case of federal utilities like electricity, telephone and gas bills, where units consumed and rates per unit are given. In case of notices for taxation, on the back of the notice the local government can provide as much information as is appropriate. This has already been attempted recently for UIPT notices.

The potential of the district governments and TMAs to generate OSR is further compromised by the fact that they receive a little (if any) by way of collection charges for many of the levies that

they collect on behalf of the provincial government¹¹⁴. The issue of collection charges was discussed extensively with the local stakeholders. There was a general feeling that while collection charges are deducted by the provincial government for levies that they collect on behalf of local governments, there is no reciprocal arrangement for the local governments. The issue of payment of collection charges is both equity and an efficiency issue. The main argument being that the collection systems would function much better if there was ownership of the work through collection charge payments to the respective office as well as the government for collection of taxes, rates and rents etc. The additional resources would also mean better systems and data bases that would result in more efficient collections. It is, therefore, recommended that depending on the level of difficulty and complexity of collection, a collection charge ranging from 5 to 10 percent of the actual collections may be paid to the local government where collections are made by any LG on behalf of or for the provincial government. E.g. water rate, Agriculture Income Tax, registration fee is collected by revenue staff of district government without any reward or incentive. Thus an incentivized system for revenue staff need to be put in place in addition to a share in these taxes collected at the district level must be given which will enhance OSR and interest of district government which is found missing at the moment.

There also exists the need for an effective system of dispute resolution. Billing invariably leads to disputes. In the absence of a mechanism for such resolution, people at times resort to non-payment and there is general dissatisfaction with the service. As such, a swift mechanism for dispute resolution and grievance settlement is warranted at local level.

6.4.3 Proposal for Reform of Business Processes

The business process of OSR items such as taxes, rents and fees and user charge in the DG and TMAs have mostly been defined a long time ago and the current local government setup has inherited them. There has not been any significant investment in review and reform of business processes of the taxes. Any improvement in the business processes for the assessment and collection of these taxes, cesses, fees and rents will not only facilitate the public at large, it will also increase the resource available at the disposal of DG and TMAs of Bahawalpur to undertake development activities. In some cases, dysfunctional processes are hampering economic growth in the district. There are basically three major sets of issues: first, stale processes make it difficult to provide a growth environment for businesses; and second, lack of awareness of these processes in people due to insufficient dissemination of information regarding these processes makes it difficult for people to understand the process and results in delays. Further, corruption at various levels causes loss to district exchequer. The following specific recommendations are offered to reform the legal regime concerning OSR and business processes for assessment and collection thereof. More details are annexed at Appendix 4.

- Section 116 of PLGO 2001 empowers a local council to impose, increase, reduce, abolish, suspend and/or exempt any tax mentioned in the second schedule. However the section also mentioned that any amendment to taxes is vetted by the provincial government. This process hampers the local governments' autonomy to set their own tax rates as the provincial government plays a controlling role. Although the section mentions that if a tax proposal is not vetted by the provincial government in 30 days, it will be deemed to have been vetted, this is not the case in actual practice. This approval process needs to be made dynamic or automatic once the criterion has been fulfilled. This would require suitable amendments in the PLGO. If full autonomy to fix rates, etc. is not to be devolved, then the issue can be resolved by providing band widths within which the DG and the TMAs would be free to act.
- The collection of UIPT on behalf of TMA is subject to 15% administrative charge whereas the collection done by DG on behalf of the provincial government doesn't result in any administrative charge being deducted by DG. This issue has been discussed with the stakeholders and they showed concern about not being paid for efforts done, furthermore they stated that recoveries could be improved if the DG is incentivized for this task. This

¹¹⁴ Most of the taxes are collected by officers of the LGs. Even large provincial levies such as Agriculture Income Tax, Motor Vehicle Registration, Stamp Duty and Agriculture Income Tax are collected by local revenue staff working under the district governments.

reciprocal arrangement should be put in place to improve the collection process and its efficiency. The additional resources would also mean better systems and databases that would result in more efficient collections. It is, therefore, recommended that depending on the level of difficulty and complexity of collection, a collection charge ranging from five to ten percent of the actual collections may be paid to the local government where collections are made by the DG/TMA on behalf of or for the provincial government.

- Octroi and Zilla Tax (OZT) were abolished and replaced by GST and were set at 2.5 % of the federally collected GST. However it was frozen at the level of 1996-97. It is recommended that the transfers should be based on actual 2.5% of GST collection. Unfreezing the level and building in a healthy increase based on actual 2.5 % of GST collection would work wonders for the local governments.
- Automation of assessment and collection process, and capacity building of DG/TMA staff involved in the process will increase revenue.
 - The automation of business processes would result in better accounting, efficiency in tax collection mechanism hence increasing revenue, provide up to date databases, availability of information to be used by various departments and timely reporting.
 - Without increasing rates of present taxes, the total yield can improve dramatically by maintaining records/registers properly, regular survey and incorporation of changes in tax records, improved monitoring and inclusion of systems of rewards and punishments for tax collecting machinery.
 - Capacity and training of staff are critical to success of any initiative for enhancement of own source revenues. Local government officials dealing with these issues (in many cases) do not have up to date information about government laws and rules. Serious efforts should be made to build the capacity of staff dealing with tax assessment and collection, maintenance of records, preparation of budget, receipt estimates, expenditure management and other aspects of financial management at local level. There is a definite need of training the drawing and disbursing officers on their powers and responsibilities, there is a need of accounting and financial management, there is a need for training of LG staff on legal issue pertaining to cases pending with courts where these staff have to appear before the courts making them fully conversant with relevant rules, there is a need of training on The Punjab Employees, Efficiency, Discipline and Accountability Act 2006 to appraise relevant official on their duties, powers and responsibilities.
- Low yielding taxes/fees are an administrative hassle for the collecting authority and they should be done away with or their rates be revised upwards to increase revenue. These will result in focusing the efforts on taxes that yield considerable revenue for the DG/TMA by diverting committed resources.
- Dissemination of information about process, assessments, valuation table, and fees would help curtail corruption. One of the major reason people fall in the trap of providing kick backs is lack of information. This information could be made available through publicity material, notices in newspapers, display through posters in relevant offices and media awareness campaign.
- There also exists the need for an effective system of dispute resolution. Billing invariably leads to disputes. In the absence of a mechanism for such resolution, people at times resort to non-payment and there is general dissatisfaction with the service. As such, a swift mechanism for dispute resolution and grievance settlement is warranted at local level.
- Assessment and collection of water rate by TMA needs drastic reforms. Manual monthly bills are distributed to all consumers who subsequently pay their respective bills. However this system of manual billing and collections of water rates are full of omission and commission and is subject to a lot of criticism. Furthermore, the actual consumption of water should be

considered for billing by installing meters to gauge consumptions instead of flat billing based on rates as per classification.

6.4.4 PFC Mechanism

Provincial Finance Commission (PFC) has been established with an objective to ensure transparent and formula based intergovernmental transfer to LG from the Provincial Consolidated Fund (PCF). The PCF consists of funds transfer from Federal Government (taxes and non-taxes) and Province OSR. The PCF is divided into two components i.e. Provincial Retained Amount and Provincial Allocable Amount in the ratio of 58: 42, the latter of which is transferred to the local governments into their account (Account 4). This ratio is determined on the basis of expenditure baselines of the province and local governments, taking into account the obligatory expenditures of the province. The Provincial Allocable Amount is transferred to the local government broadly under two separate block grants, one for recurrent expenditures, which constitutes approximately 88% of the allocable amount, and the remainder for development expenditures. The development grant is distributed horizontally across the districts on the basis of a formula that gives equal weights to population and backwardness.

The Provincial grants given to (district government) are of four types:

1. General pose Grant: Distribution mechanisms adopted for general pose grant by Go Punjab are 90 % population and 10% for inverse density of population.
2. Equalization Grant: Fiscal gap between baseline expenditure and share under the general pose grant.
3. Development Grant: Distributed on the basis of under development Index(UDI) prepared from the MICS and population in accordance with percentage of UDI 50% and population of the district 50%,
4. Tied Grants: It is distributed on the basis of two components i.e. Education component population 60% and performance 40%. Health component population 70% Health deprivation index 30%.

In case of a TMA general pose grant distribution mechanism is: Population (80%); Urban Population (15%); but for development grant it is calculated on the basis of their respective total population and urban population with both having equal weight. Whereas for tied grant population is given 70% weight age and water and sanitation index is 30%.

The first comprehensive Provincial Finance Commission (PFC) Award was decreed in July, 2006 as the Punjab Specification and Distribution of Provincial Resources Order, 2006. Prior to the PFC Award 2006, the Punjab Government provided resources to local governments comprising District Governments, Tehsil / Town Municipal Administrations (TMAs), and Union Administrations under the interim PFC Award 2002-03. The interim PFC Award was a stop-gap measure until a new more comprehensive award was announced to ensure a more structured, transparent, and equitable mechanism for resource allocation to the local governments. The term of the PFC Award 2006 which extended over Financial Years 2006-07 to 2008-09 was to expire on June 30, 2009. However, as the constitution of the new PFC is in the final stages; therefore, the PFC Award 2006-09 stands continued for the Financial Year 2009-10 under Section 120-D of the Punjab Local Government Ordinance 2001115.

In 2007-08 an amount of PKR 96962.536 million was transferred to District government through Interim PFC award. Bahawalpur's share in current expenditure was 2.77% of the total transferred amount where tied grants transferred to district government during the same period was 0.010 % of the total tied grants in the province. As a matter of fact Bahawalpur's estimated population as

¹¹⁵ White paper Budget 2009-10

of 2008-09 was 3.15 million people which are 3.42 % of the total population of the Punjab. But the share it got in the Provincial Allocable Amount in, 2009-10, 2008-09 and 2007-08 are 3410.787, 3161.34 and 3042.327 million respectively. Which establishes that whatever share was given to Bahawalpur in three financial years was around + 3% in these years' Provincial Allocable Amount of Punjab. In the same period of time a huge amount of development funds also flew into the district through vertical program but the transfer of resources through the vertical programs and other higher-level government program adversely affect LGs' autonomy in preparing development budgets and undermines accountability and operational efficiency. Similarly an amount of PKR 354.804 million is the share of TMA's of District Bahawalpur in 2009-10.

6.4.5 Analysis of PFC Criteria

Analysis of the PFC mechanism reveals that factors such as population, backwardness and OSR generation potentials or actual rising of resources factor in the distribution of resources. But in general the distributions of resources to LG out of Provincial Allocable funds are based with following weight ages:

Population 80% ,area 5 %, poverty 5% ,development efforts 5 % and curtailment of non development expenditure 5%. Points by point discussion are as under which merit consideration and attention of policy makers for more transparent distribution of resources.

Population: In the PFC award in vogue population plays a more dominating role, taking 80% of the share of the pie leaving a nominal share to other factors. Therefore districts with high population get more in the provincial allocable funds as compare to those with less population even though they might be more deserving and needy being resource constraint. This is true in case of districts which are more urbanized in nature will naturally get more fund due to skewed population pattern. Distributions of resources on the basis of population more often deprive districts because there is no authentic figures are available of population due to non-holding of population census last held in 1998. Weight-age of population needs to be rationalized so that district with lesser population also gets decent share for its development.

Area: In the distribution of PFC award only 5 % weight age to area does not seem justified because districts with more areas need much larger funds for widespread coverage of development activities than districts with limited areas. But currently in Punjab districts whether their area is as large as 24830 sq Km or as less 1773 Sq Km will more or less get same level of funds under this mechanism. Districts with more area will require large amount for the provision of even basic services and infrastructure .but only 5% weight-age would mean a very less share in the pie as in the case of district government Bahawalpur .

Poverty: A mere 5 % weight age to poverty in the distribution of resources out of Provincial Allocable Amount is beyond understanding where around 28.6 % of population in Punjab is living below the poverty line.¹¹⁶ While distributing PFC award it is very difficult to make correct and exact calculation of prevalent poverty ratio due to lack of authentic and reliable data. In such scenarios distribution of resources are more based on estimations instead of empirical evidence. Therefore it is an agreed fact that poverty is not given due place in the distribution of resources like a double edge sword, where in the first instance a 5% weight age is given and secondly, there is nonavailability of accurate data. Low socio economic indicators and high poverty ratios demand more share in the PFC award rather a small percentage of 5% is going to serve the pose in case of district with high incidence of poverty .Poverty needs to be factored in a high weight-age for districts being too poor for bringing it at par with neighboring districts.

Development Efforts: Districts are rewarded through a share of 5% in the PFC award if their developments efforts are considered up to the mark .However, what is the mechanism for determining the efforts of development of a district to qualify for this special grant out of Provincial

¹¹⁶ PSLM 2004-05

Allocable Amount. Most of the districts are cash strapped for development efforts so how can they qualify when a district does not have requisite development funds. In case of district government Bahawalpur, development funds could not be utilized for a variety of reasons e.g. CCB share not fully utilized in the last four years in addition to a long list of ongoing schemes stopping it of even qualifying for grants under this head.

Curtailment of Expenditure: Another qualifying criterion for claiming a share in the PFC award is curtailment of expenditure. district government does not have any authority or control over its expenditures as it only gets funds out of Provincial Allocable Amount only for meeting its current expenditure which is meant for the salaries of staff. There has been constant raise in the salary expenses on account of annual increments, dearness allowance and pay raise allowed by government from time to time. On the other hand if annual increase in provincial grants to district government is taken into account it is negligible without any substantial increase. Of late Provincial government vides notification No: FD.SR/III-4-104 /200/9 dated 25-7-2009 has allowed a raise of 20% in salaries where as it has not been factored in current year release making it more difficult to meet expenditure, let alone curtailing it?

The TMAs consensus was that each TMA has its own peculiar environment therefore a uniform criteria for distribution of resources more often deprives them of their due share as would have been a case based on need and demand. The distribution of resources should more on the provision of municipal services, its existing jurisdiction and future potential vis-à-vis resource generation.

6.4.6 Comparative Advantage of a Formula-Based Transfer Mechanism

The formula based transfers have the following advantages:

1. Factors used can place a premium on performance
2. Transparent environment for resource allocation
3. Allocation of resources to align closely to comparative needs
4. Removal of perverse incentives and creation of positive incentives
5. Institution of issue-based politics
6. Greater certainty of payment

But detailed analysis of PFC award reveals that none of the above advantages has so far been achieved as resource distribution has never been strictly in line with the true spirit of formula-based transfer. Furthermore, the factors for consideration in the formula could not be properly contested by district government due to non availability of relevant data. E.g. how the funds through formula under development head could be claimed without sufficient development funds? Similarly curtailment of current expenditure is not possible as salaries and other expenditure keeps on rising, being in the control of Provincial government. Besides above district government mostly lack lobbying skill and capacity to plead its case with Provincial government.

6.4.7 Effect of PFC Award on District Government Resources

The effect of PFC award on district government resources is instrumental and is of paramount importance as around 90% resources comes through it from the Provincial Allocable Amount and other verticals program from Federal and Provincial governments. With increase in PFC allocation to district situation improves greatly and vice-versa. When district government gets more shares it is in a better position to spend more on its development. However when there is a cut on district share, development expenditure falls inversely affecting the life style of people at large. Thus it is an established fact that there is a strong co relationship between PFC award and district government resources. The more resources district government gets the better it would be and vice versa. The same is true for TMAs which require more funds for meeting their basic mandated functions of municipal services which in turn would become a base for their OSR generation making it more sustainable.

6.4.8 Releases Against Criteria

In the beginning of a financial year Finance Department Go Punjab issued a circular letter indicating a lump sum figure out of Provincial Allocable Amount (PAA) for each district in Punjab. Against this set yearly quota, releases are made on the basis of monthly installment. In 2009-10 share of district government Bahawalpur intimated is 3410.787 million as compared to PKR 3042.324 million in 2008-09 and PKR 3161.34 million 2007-08 respectively.¹¹⁷ A large portion of funding under the interim PFC Award was based on historical expenditure base lines of local governments and the interim PFC Award was rolled over every year with an incremental increase over these historical base lines. Formula-based transfer of resources to local governments was only limited to development funds. 66% of development funding was made on the basis of population and 33% on the basis of “under development indicators” developed in year 2000. Resultantly, over time the award became lopsided towards a particular tier of a local government i.e. district governments and in that case also it could not fulfill the criterion of fiscal need or maintain a hard budgetary constraint over recurrent expenditures. Resultantly, shortfalls in financing were met on every occasion by the Provincial Government.

For TMAs same practice is adopted but from their total allocation deduction at source is made on account of WAPDA dues and any other thing deem essential by Provincial Government as annual repair of traffic signal in 2007-08.

6.4.9 Commitment versus Actual Receipts

During 2009-10 an amount of PKR 3410.787 million is the share of district government Bahawalpur which comes to around PKR 284 million per month. From July 2009 till December, an amount of PKR 1704 million has been released but the share of the months of February to March is still pending with provincial government. In addition to, a 6% cut has also been imposed reducing the monthly share to PKR 266.96 million instead of PKR 284.

In 2008-09, the share of district government Bahawalpur was PKR 3042.324 million with monthly share of Rs 253.53 million .All monthly installments were released in due course of time without any problem. In 2007-08 district government Bahawalpur's share was 3161.34 million (PKR 263.45 million per month) but amount released against the allocated monthly share was 253.527 million.

Last three years comparison shows that except in year 2008-09 there have always been problems, as in 2007-08 a cut of 4% was invariably imposed on all installments and similarly in 2009-10 after the first half, a 6% cut has been imposed in addition to late releases by the Provincial government. Besides this, the effect of inflationary growth has never been taken seriously and a regular increase in salaries and other operational expenditures further made life miserable for the district government in even maintaining the bare minimum standard. Lack of capacity at the district government level for proper pleading of its case with provincial government and non availability of accurate data made the situation more complicated. The department of EDO (F&P) needs to be capacitated for proper pleading of its case for more resources which will in turn enable district government to undertake multi –year planning for demand based development.

Table 23: Development Efforts Of District Government Bahawalpur

PKR In million

Particulars	2009-2010	% share in overall development	2008-09	% share in overall development	2007-08	% share in overall development

¹¹⁷ White paper Budget 2009-10

On-going schemes	906.852	44%	664.781	29%	477.082	26%
New schemes	0	0	523.185	23%	190.861	10%
Tied Grants	677.46	33%	817.341	36%	792.131	43%
CCB Schemes	461.041	23%	460.822	20%	378.678	21%
Total	2045.353		2266.129		1838.752	

Table depicts efforts of district government Bahawalpur through different development initiatives in undertaking development schemes. The share of development budget in 2007-08 was 1838.752 million out of the total budget outlay of PKR 4106.568 million which was around 45%. But the tricky part of development budget exposes as out of this PKR 477.082 million is for the ongoing schemes which was 25% of the development budget. Another PKR 792.131 million under the head of tied grants was for specific objectives of the provincial government further cutting the size of the cake by 26%. Under Citizen Community Board PKR 378.678 million has been earmarked which come to around 21%. Against new schemes funds share stood at PKR 190.861 million which was as a mere 10% of the total development budget. The per capita investment in District Bahawalpur in 2007-8 was PKR 892.164, as compared to PKR 1643 in Punjab during the same period.¹¹⁸.

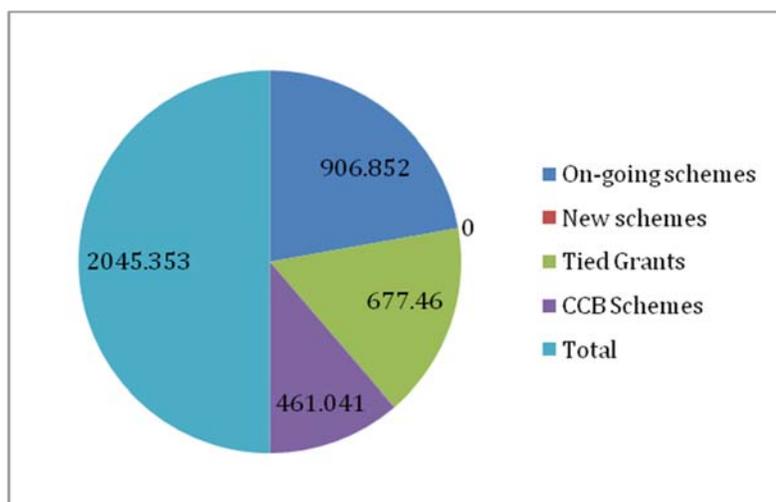


Figure 62 Distribution of Development Budget, 2009-10, Rs in million

Development funds for the year 2009-10 stand at Rs 2045.353 which is lower by almost 11% as compared to financial year 2008-09 depicting poor state of affairs on the part of district government Bahawalpur for allocating lesser amount to development than the previous year, which should have enhanced at a higher pace keeping in view the overall development indicators of Bahawalpur in comparison with other districts of Punjab. Besides this, not a single penny has been earmarked for the new schemes in financial year 2009-10 and on the other hand, the portfolio of ongoing schemes is continuously enhancing at an average rate of 72-73% over last year which itself is a sufficient indicator for alarming situation on the development front as most of the funds goes into throw forward liability leaving nothing for new development initiatives.

¹¹⁸ Development Statistic Punjab 2009

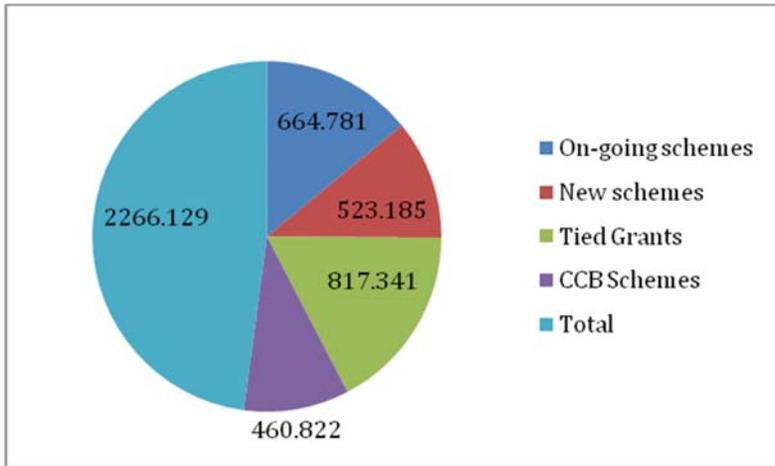


Figure 63 Distribution of Development budget, 2008-09., PKR in million

In 2008-09 development budget was PKR 2266.129 million out of the total budget of PKR 4507.124 million which was 50% of the total budget. Further break up reveals that PKR 664.781 million (29%) was meant for ongoing schemes .Tied grants share was PKR 817.341 million (36%) and PKR 523.185(23%) for new schemes. CCB share was PKR 460.822(20%). In financial years 2008-09 situation on accounts of new schemes was encouraging as its allocation has enhanced by around 37% as compared to financial years 2007-08.In 2008-09 per capita investment was PKR 1099 which was 12.31% higher than the previous year.

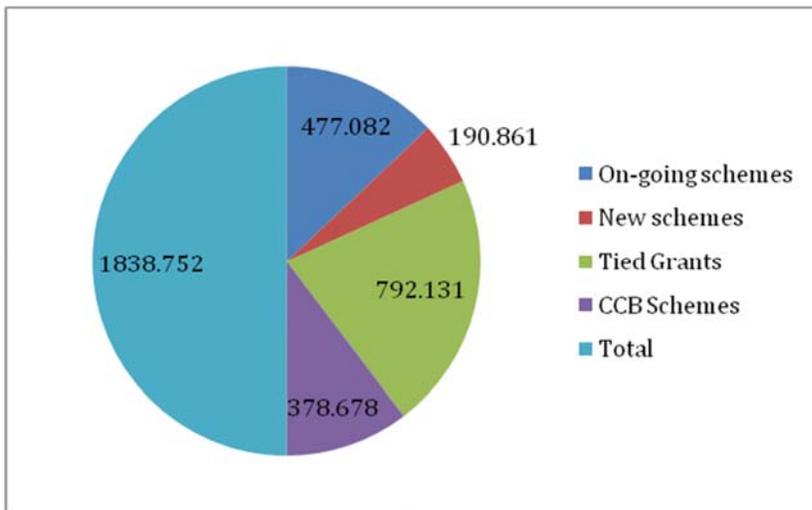


Figure 64 Distribution of development budget, 2007-08, PKR In million

Interestingly, the funds earmarked for the execution of schemes through Citizen Community Board has not been utilized in the last three years as intimated by EDO (F&P), as out of the total funds under CCB only a meager amount of PKR 3.845 million has been utilized against total 4 number of schemes approved during by DDC against a list of 52 proposed projects. Upon enquiry regarding slow utilization of funds on account of CCB Projects no plausible reasons were given except that the then District Nazim out of share extra vigilance could not approve projects for implementation . Even at the moment PKR 400 + million are lying unutilized with district government Bahawalpur as CCB share.

Table 24: Development Expenditure Priorities of District Government Bahawalpur (PKR In million)

No.	Sector	Allocation	Percentage share in overall development budget
1	Building	171.331	20
2	Road	131.293	15
3	Water management	0.7	.08
4	TMAAs	101.834	12
5	CCB	4.227	.49
6	Health	120.32	14
7	Education	318.279	38
	Total	847.984	

Table 28 depicts expenditure priorities of district government wherein allocation for the education sector topped the list with a 38 % share in the whole allocation followed by building with 20%. Road sector in the priority list is at number three with 15% share in the development outlay. Two important sectors of water management and CCB share are quite negligible in the development expenditure with 0.08 % and 0.49 % share respectively in spite of the fact that Bahawalpur is an agrarian district and role of water management is of paramount importance but mere expenditure of 0.08 % would not serve the ever increasing problem of agriculture sector where development of water courses plays a pivotal role in the production pattern. Besides this allocation of funds for CCB was made mandatory under the PLGO 2001 to ensure maximum participation of communities in the their overall development rather than just making block allocation without being timely utilized do not serve the objective of earmarking lump sum allocation for use through community participation.

6.4.10 Vertical Development Programs in Bahawalpur

In addition to regular district ADP a number of different development initiatives are under implementation at various stages for bringing real development through additional pumping of resources from all possible quarters. Worth mentioning among these initiatives are tied grants, Punjab Development Program, Mega projects, MPAs program. Details of all these verticals programs are given in the TABLE BELOW.

Detailed review of last three years revenue and expenditure of both current and development reveals that district government Bahawalpur is trying its level best to maximize the level of services available to the general public with a minimum tax load a common slogan with all political government. But in real terms, the efforts of district government have not been very successful due to resource constraints. Table 25 below compiled from MICS 2008-9 high lights the variation in the basic indicators between Bahawalpur and Punjab as a whole.

Table 25: Social Indicators of Bahawalpur and Punjab

No.	Indicator	Bahawalpur	Punjab
1	Literacy ratio (10+ years)	45	59
2	WatSan coverage (Physical access to drinking water (within dwelling)	91	92
3	Child mortality(Under-five mortality rate (per 1,000 births)	170	111

4	IMR (Infant Mortality Rate)	110	77
5	Birth registration	46	77
6	Unemployment rate (15+ years)	5.0	6.8
7	Use of Sanitary means of excreta disposal	54.7	69.5
8	Solid waste by municipal institution	7.9	7.8.
9	Primary school attending ratio	34.3	43.4
10	Child labour	8.7	5.1

Source: MICS 2007-08

The share of education and health in the establishment budget of Bahawalpur is quite large, where a major chunk goes into addressing the literacy ratio of 45% , which is much lower as compared to 59% in Punjab and similarly child mortality and IMR with 170 and 110 per thousand compared to 111 and 77 in Punjab are gray areas of concern for the district government Bahawalpur policy makers. Similarly other indicators too are found on the lower side in comparison to over all Punjab.

6.4.11 Role and Importance of Throw-forward Liability

District Government spent its resources on two main heads i.e. current expenditure and development expenditure .Current expenditure are those which are spent on the salaries of staff and development expenditure are those which are spent for the creation of new assets for socio-economic development. In case of district government Bahawalpur in 2009-10, 89% of the total funds are spent on current expenditure and a mere 11% on development. Which establishes two important points e.g. low allocation for development expenditure and secondly funds goes into ongoing schemes for completion due to partial releases .The list of ongoing schemes keep on piling leaving little fund for new development which on the one hand deprives people of much needed development and on the other hand entail additional cost due to escalation and cost overrun. This situation is substantiated by the table given below compiled from the Budget document of 2009-10.

Table 26: Throw forward liability of district government Bahawalpur under ADP 2008-09 PKR In million

Sector	No schemes	Allocation 2008-09	Expenditure	Allocation 2009-10
District development Program	206	364.403	128.225	236.178
LDP II	102	1019.74	321.924	697.816
PESRP	75	201.063	104.124	96.939
President Program for ESR	1	9.35	2.075	7.275
40 Million grant to each MPA	69	305.972	76.988	228.984
Total	453	1900.528	633.336	1267.192

It is evident from Table 26 above that out of the total allocation of PKR 1900.528 million in 2008-09 only PKR 633.336 could be spent or released, which is only 33% of the total allocated amount. Resultantly all these 453 schemes which are under different stages of implementation could not be left in-complete as sizeable amount has already been spent on them. Hence all these ongoing schemes can only be completed if a provision is made out of 2009-10 ADP which will automatically cut the size of new scheme in the same period of time under reference.

6.5 Recommendations for Revenue Mobilization

Bahawalpur is an agrarian districts and a lot of potential exists for the enhancement of revenue mobilization both for district government and TMAs. As compared to district government, opportunities of revenue mobilization are more vibrant and robust for TMA. In the first instance a complete tax assessment needs to be made for determining the tax potential on a more methodical basis. Local governments lack the necessary fiscal resources with which to meet their expenditure responsibilities. They face problems with securing timely and adequate transfers from the province. But clearly the credibility of claims by local governments for increased resources would be improved if at the same time efforts are being made to fully exploit opportunities to collect local taxes and levies already assigned to them. Urban Immovable Property tax holds significant revenue potential and there is scope to expand the tax base, rationalize collection and distribution arrangements. Similarly, better tax collection and recovery of user charges – for instance on water supply – would result from better attention to arrears, use of information mapping systems and regular surveys to update the potential base areas of complete and thorough analysis.

Agriculture Tax: This is the most buoyant tax and can accrue sizeable revenue for the provincial government but there is a strong opposition to its imposition by the local landlords who are opposing it tooth and nail.

Local rates on Land: Fee for License and fines can be tried as allowed under Chapter XVI LG sections 141 to 146 D.

Other Industries: District government Bahawalpur may impose taxes on other industries/sectors such as transport, construction, soap factories, etc

6.5.1 Existing Taxes, Rates and Fees

- **Tax on Transfer of Immovable Property:** This is one of the most important sources of revenue for a TMA. Its recovery should be based on valuation table and not on the basis of recorded sale price. The valuation table should be revised regularly, preferably every three years. This power (i.e. the determination of valuation table) should be given to TMAs (instead of DO (Revenue)) as the tax is assessed, levied and collected by the TMAs. For revision of valuation tables, services of professional private sector firms should be engaged. Such third party validations can address concerns for equity and fair play as well as ensure that the local government is not short changed by interest groups. Whatever the manner of determination of valuation of property, the fact that it must be through consultative process involving all the stakeholders cannot be over emphasized. If the valuation table is revised upwards regularly, provincial government will also benefit in terms of enhanced recovery of stamp duty.
- **Urban Immovable Property Tax:** The tax is assessed and collected by the district governments (through Excise and Taxation staff) from the owner of the house. There are certain exemptions e.g. for widows and for retired armed forced personnel. The exemption for retired armed forces personnel does not make sense and needs to be done away with immediately.

Legal confusions regarding assessment and collection of this tax notwithstanding, it is our clear recommendation that UIP Tax must be devolved to TMAs in the real sense¹¹⁹. The TMAs should have full authority to utilize receipts as per budget provisions. Since collection is done by district governments, these should be allowed to retain 10% as collection charges and transfer the rest (through Account 4) to the TMAs.

However before this happens, major capacity building in district government/TMA would be required. Currently Excise and Taxation Department has all the capacity in this area. The same would have to be created at the district government/TMA level. This would also involve automation and data base development to ensure that this major levy is handled in an

¹¹⁹ For example, the requirement by Punjab Government from the TMAs to develop a sustainable plan for water and sanitation before transferring their share from the UIPT is uncalled for and needs to be withdrawn forthwith.

effective and efficient manner. Strategy and action plan needs to be developed immediately in the district government/TMAs to prepare for handling this large responsibility.

- **Adda Fee:** Presently each TMA has one major bus stand in its territorial limits. The receipts from the fee can be increased significantly through establishment of more bus stands within TMA limits. Developing bus stands at a number of places not only creates an additional source of income for the TMA, it also helps the TMA in performing its regulation function. Existence of a bus stand and enforcement would stop the practice of commercial vehicles loading and unloading just about from anywhere, which at times is a serious traffic hazard.

The system of auction needs to address the issue of 'pooling'. Contractors at times create a cartel or 'pool' for bidding and as such the true potential of receipts is not realized. Similarly established contractors seldom allow any other person to compete in the process in a fair manner. There is also a noticeable issue of weak monitoring by TMA staff as well as poor enforcement of the terms and conditions of auction agreement. There is also a general complaint that the contractor does not bother to issue receipts to the vehicle driver after collection of the per trip fee. This has serious implications for audit and can also lead to reduced actual collections in a fraudulent manner. The self collection by TMA has been almost totally disbanded as this invariably leads to corrupt practices and generally is an inefficient manner of collection.

- **Vehicle Tax:** There are a number of issues in the assessment, levy and collection of this tax. At times, through connivance of TMA staff, the collection is not outsourced and the TMA opts for self-recovery for some months. Such self-recovery is invariably less than the one effected by a contractor. As such the system for out sourcing has to be made sufficiently robust so that it cannot be easily avoided by vested interests.
- **Building Fee:** The current volume of building fee in the TMAs notwithstanding, it can potentially be an important source of revenue given the large size of construction activity in the TMA limits. The ambit of building fee needs to be expanded to large villages with considerable construction activity (through a Tehsil Council decision). Monitoring and enforcement of penalties for violations needs to be improved. This can be done through enforcement of completion certificate requirement.
- **Water Rate:** Although there are serious issues of leakages in revenue, the collection of this rate cannot be outsourced/ contracted out as per policy enunciated by the provincial government. Through a notification it has been decreed that there would be departmental collection of all taxes, rates, cesses and fees where specific demand can be created for a particular service. This policy of the provincial government has its merits but needs to be reconsidered at least for the water rate collection by the TMAs.

It would be better if the recovery of the current demand and the arrears is outsourced. The contractor can be paid a specific percentage of the amount recovered. Effective monitoring is important to ensure that all such recovery by the contractor is documented and deposited in the designated TMA account, and receipts are issued to the users. The TMA should regularly issues bills indicating current dues and arrears of water rate. In a similar manner, the identification of illegal water connections and recovery of connection fee can also be outsourced.

There are major issues relating to arrears of charges which are being booked in budgets at actual amounts. There is a need to review such cases on a case to case basis to see the relative merits of the existing claims. In areas, for example, where there has been low quality of service, the arrears can be made more realistic and only a part can be recovered.

The rate is determined by the TMA, but the same rate has been prescribed for all house sizes. Since water meters have not been installed, charging of flat rate causes losses to the TMA in terms of less than due recovery. Water meters should be installed especially for commercial use and large houses. Alternatively, some sophisticated basis can be developed for assessment of the rate through a formula that takes into account the covered area, the total area as well as number of bathrooms etc.

In addition to more realistic rates and improved billing, the receipts for the TMA can also be increased through improving recovery position by extending coverage to un-serviced areas in the cities as well as peri urban areas. If the coverage is increased (which would not require huge additional investment if existing infrastructure is upgraded to some extent), revenue generation may increase considerably.

The issue of quality of water being provided is paramount. End users will not pay enhanced rate if good quality potable water is not provided in sufficient quantity. Enhanced receipts resulting from the above suggested measures may be ploughed back into water distribution system to improve service delivery, which in turn will enable the TMAs to increase water rate and provide the service on cost recovery basis. In addition to this Tehsil Financial management system (TFIS) introduced by one of USAID assisted project i.e. Districts that work (DTW) in TMA Sambrial district Sialkot would do wonder in raising revenue out of water rate besides making the WSS more automatic and user friendly. This model is strongly recommended for replication in all six TMA's of Bahawalpur .

- **Bakar Mandi Fee:** The essential reform in this area is the need to establish more markets for sale/chase of animals. The general complaint of poor facilities being provided by the contractor also needs to be addressed as does the improved monitoring need for the TMA staff.
- **Shop Rent:** Main issue here is the archaic rent level. If the shop rent is fixed at the current market rates and recovery is affected, this can be a very important source of revenue for the TMA. Unfortunately, however, the shop rent remains at abysmally low levels. Issues in the legal system, rent legislation and corruption in lower judiciary effectively thwart any effort at rate enhancement. While a resolution of these issues is unlikely in the short term, the district governments and the TMAs may consider disposing off such property through open auction to potential investors who may provide finances for investment in a transparent manner based on PPP model. By liquidating their assets, the LGs would at least receive substantial one-time revenue as against the nominal rent presently recovered for the very valuable properties
- **Market fee:** This is admissible under 2nd schedule of LG, 2001 but Market Committees are receiving this fee without rhyme or reason. It could be one of big source of revenue for TMA's if tried.

Rate of property tax: Under section 117 of PLGO 2001, TMA can determine the rate of property tax within its jurisdiction but they never do that.

6.6 Capacity Gaps and Development Plan

Two selected offices of the district government and TMAs were reviewed to assess the institutional capacity of these offices.

6.6.1 Office of EDO (F&P)

The office of EDO (F&P) is responsible for finance and planning of the district government. As per sanctioned strength there are total of 97 posts ranging between BPS1-19.

Main Functions:

- Preparation of ADP in line with framework given by the Provincial Government
- Approval of development schemes according to the Delegation of Powers under the Financial Rules.
- Appraisal, evaluation (major/selected schemes) and monitoring of implementation of development schemes in physical and financial terms
- Preparing of Five Year and other District Development Plans.

- Promotion of small business, cottage, industry and medium size enterprise.
- Control, monitoring and stabilization of prices of essential commodities.
- Forward planning promotion and development of medium and large scale Industrial sector.

Existing Situation:

It was revealed during several field visits that out of sanctioned posts some of the key positions are lying vacant, which is adversely affecting performance of the department. Out of the four posts of DO, two posts of DO (Budget) and DO (Accounts) are lying vacant. Besides this the available staff is overburdened with additional duties e.g. coordination, court cases, progress reviews, meetings and visits of high-up. EDO (F&P) Office is placed in a better building with reasonably good number of accommodation. However furniture fixtures are in a shamble. Above all excessive load shedding has virtually paralyze life and staff has to wait for hour and hour for getting a print out or a routine report.

There has been no formal training for the staffs. Different projects from time to time had conducted trainings as a part of their capacity building but these trainings are mostly supply driven rather than the demand based. Filling in of key position is strongly recommended.

6.6.2 Office of EDO (Revenue)

The Office of EDO (Revenue) is headed by Executive District officer in BPS-19 who is normally a civil servant posted by Provincial government. The current incumbent is a DMG officer. A total numbers of sanctioned posts in the revenue department are 933 in district Bahawalpur.

Main Functions:

- Recovery of Government Dues/Agricultural Income Tax, Land Revenue, Water Rate, Ushr, Mutation Fees, Stamp Duty, Registration Fee, Copying Fee, Arrears relating to Banks, Agricultural Development Bank of Pakistan and Cooperative Societies
- Frames Laws/Rules/Policies relating to the revenue matters
- Provides guidelines for maintenance and updating of Record of Rights, Periodical Record for use of the Right-holders/Revenue Department
- Notifies new administrative units such as divisions, districts, sub-divisions and *Kanungo/Patwar* Circles
- Deals with all service matters relating to revenue staff

Existing Situation:

The revenue staff at district level comprises of EDO, DO, ACR, Tehsildar, Naib Tehsildar, Patwari, Gardawar, etc. Their main responsibilities are collection of revenue such as water rate, Agriculture Income tax mutation fee, registration fee and stamp duty etc, but staff of revenue department is involved in everything under the sky and executed in a district. They are arms and eyes of the administration. They are always found in the forefront of organizing political gathering, every sort of campaign launch at a district level, Most of taxes or fees are impose on flat rate where chances of pilferages are more. Huge amount of arrears on account of these taxes and fees are outstanding and full recoveries can't be affected due to weak writ of the government in spite of the powerful instrument of land revenue act. This situation is further compounded by political interference and well of provincial government for giving exemption and reduction just for political gains. The current state of affairs in revenue department is quite archaic where no scientific tool of assessment is in place. There is no dearth of human resources but they are short of mobility. Lack of incentives mechanism in tax collection which will promote efficiency and will kill corruption. As far as training is concern revenue staff learns by peer review and don't have any formal training facilities. Another issue face by revenue staff is lack of equipment for removal for encroachment. Lukewarm attitude of police force during operation hamper their performance to a greater extent. Education

qualifications of staff need to be enhanced for attracting more qualified and competent people. Revenue collection can go up dramatically if the staffs focus on their primary responsibilities rather than other extra duties assigned to them by district administration from time to time such as arranging political gathering, support in various campaigns etc.

6.6.3 TMAs in Bahawalpur

There are six TMA's in Bahawalpur i.e. Bahawalpur City, Bahawalpur Saddar, Yazman, Hasilpur, Ahmedpur East, Khairpur Temewali. Each TMA comprises of four sections/branches. An Organogram of a TMA is at annexure-5

1. Finance
2. Regulation
3. Infrastructure & Services
4. Planning

Main Functions:

- Provision of municipal services
- Prepare budget and, annual and long term town municipal development programs in collaboration with the Union Councils, under the directions of Town Nazim
- Maintain town municipal records and archives; and
- Prepare financial statements and present them for internal and external audit in the manner as may be prescribed
- Collect taxes, cesses, user fees, rates, rents, tolls charges, fines and penalties Prepare financial statements and present them for internal and external audit in the manner as may be prescribed.

Existing Situation:

All TMAs visited were short of staff vis-à-vis their sanctioned strength. Another issue witnessed in all TMAs was that invariably officers in lower grade /scale were allowed to work as a stop-gaps arrangements in senior positions. In some of the TMAs one officer would be looking after two –three TMAs on dual charge basis e.g. TO (F) in Bahawalpur Saddar look after work in Yazman and same was the case with TO (I&S). More often posts are vacant. This state of affairs greatly affects their performance. In TMA Yazman total sanctioned posts are 223. Out of the total sanctioned posts, 159 posts are filled and other 64 are vacant. Reason for the vacant posts was ascertained and reply of TMO was that no recruitment against the vacant posts could be made without a prior approval of provincial Government. A case for approval has since been referred way back to Provincial Government but approval is still awaited. All these posts are from BPS 1-16. Important posts like TO (Regulation) and TO (P) are vacant in the TMA and TO (F) and TO (I&S) work is look after by staff of TMA Bahawalpur City on dual charge basis. Work of TO (Regulation) is to look after Chief Officer (BPS-14) of a CO Unit.

6.6.4 Capacity Gaps in Selected Offices

Staff shortages and lack of appropriate skills are serious constraints to efficient service delivery. The capacity issues are quite evident both at district and TMA level however it is more serious at the TMA level and almost all the TMAs surveyed lacked the capacity to perform their basic functions. Some staff serves in positions that require greater seniority and experience. The key post of Tehsil Municipal Officer (TMO) at a time remains vacant in *tehsi* while officers at a lower grade are serving as TMOs in *tehsils*. Staff capacity was especially weak in the finance departments. The planning capacity was consistently a deficiency of TMA staff strength, and the position of Tehsil Officer (TO) in charge of planning was vacant in some of the six *tehsils*. The TO (Infrastructure) was usually a qualified engineer but all *tehsils* lacked the capacity to deal with

the technical aspects of service delivery. There seems to be little attention paid to the post of TO(R) in most *tehsils*: often the officer was not physically present in the *tehsil* or a junior level staff was assigned these responsibilities. Weak financial capacity especially at the TMA level adversely affects the performance in many ways. First, it hampers the exploitation of new revenue resources, which requires staff and with the skills to assess the new revenue base. Financial planning has been ineffective and there has been no planning beyond the yearly budgets. Provincial governments still hold the Appointment, Promotion and Transfer power over local government and thus exercise a considerable influence over them. Many of the senior staff members at TMAs are appointed by the provincial government. The lack of transparency in the process, in the form of opaque recruitment and promotion criteria, means that the threat of transfer can exert pressure on senior staff to accede to the wishes of the provincial government. Transfers of staff are frequent and few officials are able to complete their full term of office.

In Bahawalpur district, EDO/DO Finance has a lot of capacity issues such as shortage of staff, physical resources (load shedding, shortage of computer etc) and additional work in the shape of meetings, court cases leave little time for their normal work. The whole office of EDO (F&P) is dependent on a superintendent who literally does everything in office. The other staff is available but they lack basic computer skill and other secretarial training for running their work more scientifically. Hence efforts need to build their capacities through on the job training and refresher courses with regular interval. The performance evaluation aspect needs to be given weight age in the promotion and prize posting so that lower staff take keen interest in training. A proper incentive structure has to be implemented in letter and spirit if visible improvement in the performance is to be seen.

Similarly revenue staffs at District level lack basic skill and knowhow and more often resort to coercive tactics, which instead of encouraging tax payer leave them with no option but opt for evasive techniques with the connivance of revenue staff. Communication skills of the revenue staff needs to be improved so that they adopt user-friendly approach toward tax payer rather than extorting techniques. Their level of education at the time of initial recruitment must be enhanced to Bachelor level instead of FA. Furthermore their salary structure and promotion prospects also need to be streamlined for attracting good quality human force from the open market. Proper training institute at a Divisional level exclusively for revenue staff is urgently needed where apart from revenue related trainings other trainings on communication, OSR raising and generation techniques, financial costing and evaluation, etc., could be Imparted besides other customize training on need basis.

6.7 Other Recommendations

Besides enhancing own source revenues and beefing up the capacity of selected offices, in general the District Government should do the following:

- DG and TMAs should rethink their development projects as investment opportunities. As many as possible projects should be designed in a manner that these are able to support themselves from user charges and fees.
- It is strongly recommended that modern tools of information technology be used to facilitate assessment and collection by DG and TMAs. Comprehensive databases of users should be developed on priority and the process of issuance of bills and receipts should be automated. The entire financial outlay of these organizations should be re-organized in a management information system (MIS) and a financial information system (FIS). An effective use of MIS and FIS will not only inform decision making and allocation of resources, but will also facilitate public at large in seeking various services from these organisations.
- A comprehensive capacity building program also needs to be launched. There are serious capacity gaps in all departments/wings. It is recommended that a comprehensive training need assessment (TNA) be carried out. Based on such TNA, a capacity building strategy and a capacity building plan should be developed. The following areas are identified for special attention: use of information technology to store and retrieve information and to communicate internally and externally; strategic planning and resource mapping; financial rules and

regulations, especially on procurement, contractor payments and recovery of arrears. Separate sessions should be held on gender sensitization of DG/TMA employees.

- The comprehensive review of legal and institutional regime for collection of various taxes, fees and rents by the DG and TMAs has shown that there is considerable room for improving collection efficiency in most cases. This would, however, require commitment from the district and provincial governments to create an enabling legal regime, broad contours of which have already been presented.
- Discussion in this chapter has also highlighted the need for reform in the business processes for assessment and collection of various taxes, fees and rents. Such reform will not only increase local resource for future investment, it will also create a friendlier user interface.
- Another step that can generate significant resources for development is efficient management of the property given on rent. The DG and TMA have many shops, stores and buildings that have been rented out. One option to enhance revenue is to revise these rents upwards to bring them at par with the market. Alternatively, these properties can be sold in open auction to generate a one-time income for the DG or TMA, as the case may be.
- Another under-utilised resource is the CCB funds lying with the DG and TMAs. This is a significant resource and the government should allow the use of these funds for development projects.
- Finally, the option to float municipal bonds should be explored. Municipal bonds are issued by a city or other local government, or their agencies. Municipal bonds may be general obligations of the issuer or secured by specified revenues. Interest income is received by holders of municipal bonds. Municipal securities consist of both short-term issues (often called notes, which typically mature in one year or less) and long-term issues (commonly known as bonds, which mature in more than one year). Short-term notes are used by an issuer to raise money in anticipation of future revenues such as taxes, state or federal payments. These allow the issuing local authority to cover irregular cash flows, meet unanticipated deficits, and raise immediate capital for projects until long-term financing can be arranged. Long term bonds are usually sold to finance capital projects over the longer term. This could be another potential resource that could be explored to finance development in the district. The devolution plan in Pakistan pre-empts local governments from raising funds in the capital markets. Hence, municipal bonds are unheard of in Pakistan. Multan being a large urban centre with high-value assets should be permitted to float bonds in open markets to finance development. Amendment in section 120 of the PLGO 2001, which bars the local governments to incur any debt, would be required to enable the launching of municipal bonds by DG or by any of the urban TMAs.

6.8 Resource Mapping for the District and Scope for Private Participation

Although the list of resources/heads for revenue generation by district government is quite huge and impressive but the revenue generated through them is very meager and limited. To ensure sizeable OSR generation, both for district government and TMAs, some innovative approaches need to be adopted. The concept of private sector participation may be explored for optimal utilization of resources where management of assets is transferred to investors through sale. The main objective of such an approach would be to put resources and assets to optimal use and in particular to unleash the potential of the unutilized assets. A comparative analysis of the municipal rent, in all six TMAs combined, comes to around PKR 50-60 million annually which is quite low vis-à-vis the market value of these assets.

The properties of TMAs can be auctioned and according to an estimate more than PKR 1.33 billion could be materialized easily. Through investment, such amount can generate PKR 133.167 per annum or more, which would be 55% greater than the amount earned through

normal rent without much hassle and complication. This way additional amount could be used for improved service delivery and better infrastructure.

Similarly in case of district government Bahawalpur, if the available resources are put to open auction, substantial funds can be raised in addition to saving a lot of expenditure on maintenance of these properties and avoidance of pilferages.

6.7.1 Potential Pilot Projects

6.7.1.1 Capacity Development Program for District Government Bahawalpur

Rationale & Description: To develop the capacity of officials of TMAs and offices of EDO(R) and EDO (F&P) for better service delivery. For improvement in service delivery and raising revenue a rough sketch of basic equipments found missing and trainings need identified are given below which may provide a solid base for designing any effective capacity building plan for officers of district government Bahawalpur. Trainings identified during FGD's with stakeholders are as under:

1. Project planning cycle
2. Financial management system
3. Land use planning
4. Revenue mobilization techniques
5. Communication skill
6. Social mobilization
7. Budget Preparation
8. Procurement process
9. NAM training
10. Participatory development
11. CCB concept

Duration of the Project: Two years 2010-2012

Financial Costing: PKR 15 million

6.7.1.2 Automation of six TMA's Financial Management System in Bahawalpur

Rationale: All six TMAs in Bahawalpur are following archaic system of maintaining record having a lot of omissions. To improve the financial management system of the TMA's which will help generate more OSR for improvement in the provision of basic municipal services to its residents.

Duration: Three years

Financial Costing: PKR 19 million

6.7.1.3 Improvement of OSR by providing water to additional 0.5 million people in all six TMAs of Bahawalpur

Rationale: Because of new areas in and surrounding of all six TMA's, potable water needs to be provided in addition to installation of households meter connection. This will on the one hand result in wide coverage bringing more needed revenue to the cash starved TMA's of Bahawalpur and on the other hand will ensure proper utilization of water resources which are continuously depleting due to excessive usage through the installation of household meters.

Duration: Three years

Financial Costing: PKR 227 million

6.7.1.4 Improvement of Business Processes for district government and TMAs of Bahawalpur

Rationale: A number of issues emerged which warrant immediate amendment and improvement for providing an enabling and user-friendly environment to the residents of Bahawalpur to have easy access to basic facilities offer by district government and TMA's through a range of activities.

Duration: Three years

Financial Costing: PKR 20 million

7. Conclusion and Recommendations

While examining various aspects of the district economy, it is clear that Bahawalpur is one of the major economic hubs in the southern Punjab region, with the potential to play a major role in economy of the neighboring districts. Considering the wide agrarian base of the district, it is evident that Bahawalpur can transform into an agricultural hub for South Punjab, providing both inputs as well as access to market to agricultural produce of the nearby areas. Moreover, agri-business opportunities, based on value addition in agricultural products, can complement the agricultural activities of the region, generate employment and result in sustainable economic growth. Additionally, the district can provide skilled training to the unemployed youth and can then link them up with potential employment opportunities; establish innovative projects for power generation and other areas; act as an investment hub to seek private investment and create unprecedented facilitation protocols for private sector. In summary, the DEEDS envisage that not only the district Bahawalpur would generate medium-to-long term economic growth opportunities for its citizens but would also act as a resource center for the region, while providing a model for the neighboring districts to follow. This indeed can serve as the medium-to-long term vision for the district.

The district economic development strategy for Bahawalpur presents a private sector-led economic growth agenda for the next 5-7 years. This strategy aims at achieving 5-7% average yearly economic growth for the district; reducing unemployment rate by 1% especially focusing on women and youth; mobilizing around USD 50 million of private investment for key PPP projects; increasing new enterprise creation in target sectors by 15%; enhancing crop productivity of selected crops (wheat, cotton) by 25%; and promoting value addition in selected sectors (meat, milk and dairy products) increasing it by 15-20%. In order to achieve this desired impact, the strategy lays out a number of steps including developing an enabling regulatory regime, facilitating private-led growth in key economic sectors; strengthening infrastructure and allied services through focused private-led investments to ensure consistent economic growth; supporting key areas in agri-business value chain and promote value addition for income enhancement; promoting use of technology and business development services to support key manufacturing/trade/commerce sectors; enhancing productivity in key agri-business and trade/manufacturing/commerce sectors; lowering the cost of financing, inputs and infrastructure to facilitate enterprise growth; building sufficient institutional capacity in key govt. and business organizations to sustainably take on the DEEDS implementation; and last but not the least, besides implementing proven techniques, piloting innovative approaches for possible scalability.

The district economic development strategy has earlier proposed some key recommendations and projects, which support this vision and boost agri-business activity in the district. In the infrastructure sector, due importance has been given to establishing farm-to-market roads that can facilitate transport of goods and services in and out of the district, making the logistics easier, smooth and quick. Infrastructure development can be greatly enhanced by focusing on projects that would ensure uninterrupted power supply to agricultural areas and the industries, so that production is not negatively affected by the numerous power outages. The Punjab Irrigation System improvement project (expected to be completed by 2013) in Bahawalpur, D.G. Khan and Faisalabad Zone is expected to greatly benefit the agro-economy in the district.

In the Manufacturing, Trade and Commerce sector, the potential for cottage industries to evolve out of their present primitive stature into a more formal structure with higher volume of production, an enhanced degree of competitiveness and increased value addition has been discussed. Within the agriculture sector, some key recommendations have been given for strengthening the agri-business sector, such as setting up more storage godowns and building the capacity of the agriculture extension services department. Setting up storage facilities in each tehsil for the major crops of the district will help the government in managing surpluses and deficits in agricultural produce and will thus improve crop management. Transferring these facilities later on to the

private sector will provide further avenues for private sector participation in the agriculture sector, easing the government to transfer its resources to other more needed areas. The proposed establishment of Center for Agricultural Research, Innovation and Advocacy is aimed at accelerating the current research capacity of the agriculture sector, to incorporate latest technology for boosting competitiveness in agriculture.

In order to realize the economic growth vision of the district, a wide range of steps need to be taken in various sectors. In general our district economic development strategy for Bahawalpur revolves around the following key dimensions, as evident from earlier recommendations:

- Transforming Bahawalpur into a regional agricultural hub, providing access to markets to nearby districts and facilitate wealth creation through value addition
- Enhance private sector participation in various aspects of the economy to ensure sustainable long-term growth
- Creating capacity within government as well as private sector to implement the DEDS as well as to evolve programs for future growth
- Developing a well-trained high skilled workforce not only for the district but also for other regions
- Strengthen infrastructure and support key sectors in agriculture and trade, manufacturing and commerce
- Pilot innovative approaches to address key constraints
- Mobilizing adequate resources to fund development initiatives

Also, the implementation plans for three selected projects have been outlined in the appendix. Similarly, the implementation plans should also be clearly laid out for all recommendations/projects and rolled out accordingly.

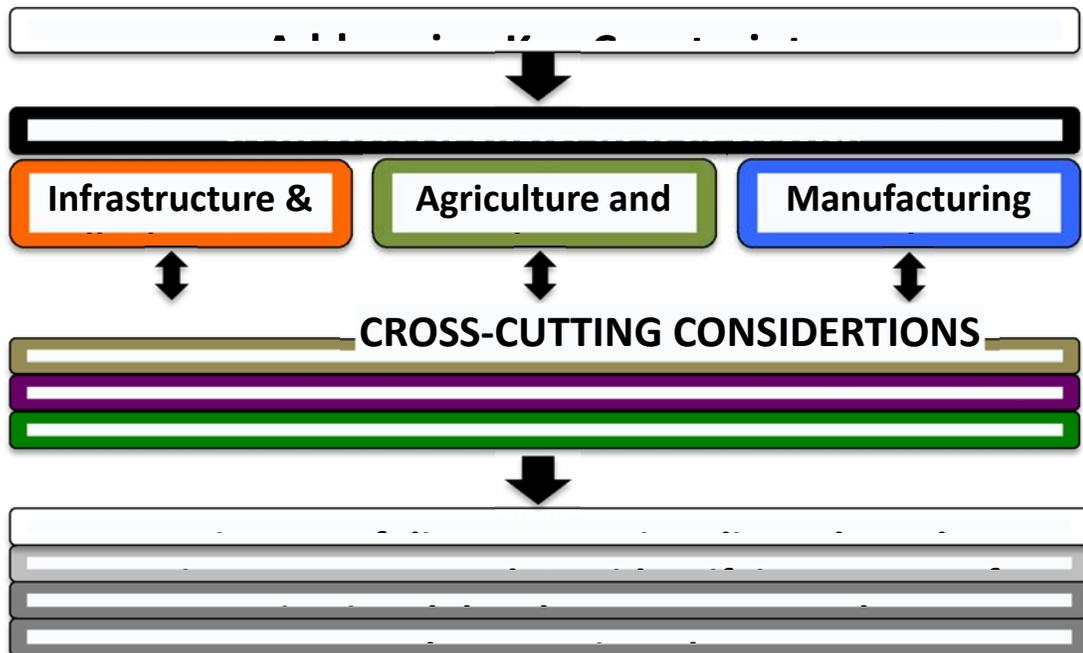


Figure 65 District Economic Development Strategy

Approach to Implementation of Proposed Strategy

The Planning & Development Board needs to take ownership of the strategies and institutionalize them in their plans and execute them. To implement the district economic development strategy, we propose that an overall District Steering Committee comprising of officials of relevant

departments be constituted. This committee is to be headed by a leading local businessman. The advisability of including office bearers of local chamber of commerce and industry as well as other selected associations on the Steering Committee may be considered. The Steering Committee is to be assisted in its work by a full time dedicated project management unit (PMU) with expertise in relevant areas headed by an experienced Team Leader with sufficient delegation of authority to manage project activities. One possible home for the PMU may be the Bahawalpur Development Authority. The short and long term TA advisors and other resources will be assigned to the PMU by the USAID contractor. Once assigned, the deployment of these resources to the field and/or individual departments will be the responsibility of the PMU.

PMU will be answerable only to the Steering Committee. All meetings of the Steering Committee will be announced ahead of schedule and open to public. Proceedings of the meetings will be recorded and available to anyone interested in such information.

Last but not least, a district Advisory Committee comprising of important stakeholders is to be constituted. This Committee will provide expert advice to the Steering Committee and remain available for consultation throughout the life of the project. Without the mandate, the Advisory Committee may also play an important watchdog role of monitoring the performance of those directly responsible for project execution with the intent to keep project activities on course.

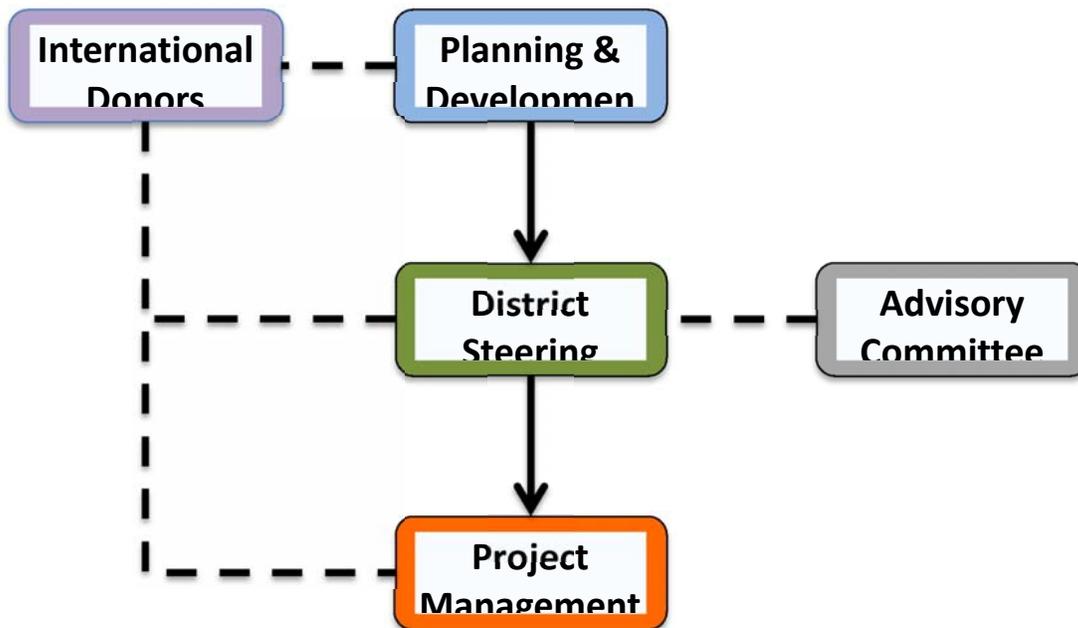


Figure 66 Project Implementation Diagram

8. Annexure

Annex-1 List of People Met

1. Naeem Rauf Dr., District Coordination Officer, Bahawalpur
2. Muhammad Akram, Executive District Officer, F&P, Bahawalpur
3. Abdul Hafiz, TO(I&S), TMA City, Bahawalpur
4. Atif Aziz Chaudhry, CEO, Aziz Bottling Company, Bahawalpur
5. Jahanzaib Mr., Joint Director, Small Industries, Bahawalpur
6. Jamil Shahid, Secretary, (and other Executive Members) CCI, Bahawalpur
7. Javed Hassan, TO(Finance), TMA City, Bahawalpur
8. Mahmood Majeed, Member Bahawalpur Chamber of Commerce & Industry
9. Maqbool Ahmad Dr., District Livestock Officer, Bahawalpur
10. Mohammad Yaqoob Dr., Livestock (Poultry), Bahawalpur
11. Muhammad Afzal Ch., President, Chamber of Commerce and Industry, Bahawalpur
12. Nasir Mehmood Bashir, Executive District Officer, Revenue, Bahawalpur
13. Sajid Masood Shah, Botanist, Cotton Research Station, Bahawalpur
14. Saud Majeed, Member Bahawalpur Chamber of Commerce and Industry
15. Shafqat Mahmood, Superintendent, EDO(F&P) Office, Bahawalpur
16. Shahid Majeed, District Officer, Revenue, Bahawalpur
17. Shoaib Ahmad, Regional Manager, TDCP Bahawalpur
18. Tanveer Ahmad Ch., Executive District Officer, Agriculture, Bahawalpur
19. Chaudhry Afzal, President, Bahawalpur Chamber of Commerce and Industry
20. Malik Sarfraz Nazam, MD, M Nazam Oil Mills
21. Jamil Arshad, Secretary, Bahawalpur Chamber of Commerce and Industry
22. Ikramullah Khan, MD, Cholistan Development Authority
23. Pervaiz Faheem Bokhari, DO E&IP, Enterprise and Investment Promotion
24. Masood Majeed, CEO, Asia Group of Companies
25. Chaudhry Waheed Akhtar, CEO, Bismillah Cotton Factory
26. Dr. Abdul Latif, Chairman, Department of Business Administration, Islamia University
27. Mohammad Shafi, Joint Director, Punjab Small industries Corporation
28. Dr Rana Tariq, CEO, Shamim Feed Mills
29. Fatima Ejaz Malik, Principal, PVTC, Vocational Training Institute
30. Zahoor Hussain Khan, Regional GM, NRSP
31. Afzal Gill, Area Officer, Engro Foods
32. M Tauseef Asim, Regional Head, Allied Bank
33. Qaiser Nadeem, Operations Manager, Khushhali Bank
34. M Mohsin Bhatti, Business Dev. Officer, Khushhali Bank

35. Syed Zahid Ali, Chief Engr, Irrigation
36. Sukhawat Ali, DO Planning
37. Ali Raza Abassi, Dep Dir Livestock
38. Azra Mahmood Shaikh
39. Muhammad Ali Durrani, Senator, Political Activist Landholder (Public funds inequalities)
40. Waheed Murad, Solid Waste Management, Bahawalpur (Environmental projects)
41. Malik Illahi Baksh Bohar, Nazim Union Council Mirana (Tobas)
42. Imtiaz Hussain Lashari, XEN Cholistan Development Authority (CDA) (Water pipe lines, solar electrification, desalination plants, shikargah's)
43. Ahmad Nawaz Khan Bakhtiari Baloch, Nazim Union Council Bakhtiari (Water in distributaries)
44. Faiz Rasul Shah, Manager Zarai Taraqiat Bank Ahmadpur Sharquia Lending System
45. Iftikhar Khan Lashari, Deputy District Officer Agriculture
46. Engr Muhammad Akram Bhatti, Principal College of Engineering and Technology, Bahawalpur(BTech, DAE, vocational education)
47. Rubina Iqbal, Bahawalpur Rural Development Project
48. Muhammad Yasin, Main Collection Centre, Haleeb Milk(Cool tanks collection system)
49. Muhammad Jamil, New Sabzi Mandi,Bahawalpur (Market system)
50. Noorul Haq, Entrepreneur, Embroidery Business Cluster Bahawalpur(Supply chain)
51. Manzoor Ahmad Chaudhry, EDO Works, Building and Roads, Bahawalpur
52. Syed Zahid Ali, Chief Engineer Irrigation
53. Mian Maqbool Ahmad, SE Bahawalpur Canal Circle
54. Shahid Iqbal
55. Sharique Akhtar, Project Manager Highways and FM Road Projects, ACE Transportation Consultants
56. Muhammad Shafqat Nawaz, Deputy District Officer Accounts
57. Abdul Majeed, Superintendent, Physical Housing and Town Planning Department
58. Mehr Manzoor Hussain Sial, SE MEPCO
59. Jamil Arshad, Secretary, Bahawalpur Chamber of Commerce

Annex -2 List of Documents Collected

1. District budgets for 2007-08, 2008-09, 2009-10, Bahawalpur
2. Annual Development Programme 2009-10, Government of Punjab
3. Agriculture Marketing System in the Punjab (2006), Directorate of Agriculture
4. Cotton Production, Marketing and Export (2006), Directorate of Agriculture
5. Wheat Production, Marketing and Export (2006), Directorate of Agriculture
6. Brief on Agriculture District Bahawalpur by EDO Bahawalpur
7. Brief on Livestock and Dairy Development, Bahawalpur
8. Punjab Economic Report – Towards a Medium Term Development Strategy (2005), Government of the Punjab, World Bank, ADB and DFID
9. Cholistan Power Point Presentation, Cholistan Development Authority, BWP
10. Pakistan Cotton and Textile Economy (2008)
11. National Economic Survey – Agriculture (2006)
12. Cotton and Textiles in Pakistan (1998)
13. Agriculture Research and Development in Pakistan, ASTI Country Report 2007
14. Agriculture Development Perspective and Policy (2004), MINFAL
15. Punjab Canals Line Diagram
16. Punjab Canals Map
17. MEPCO Electric Power Distribution Line Diagram
18. MEPCO Electric Power Distribution Map
19. Multan Zone Irrigation Canals, Distributaries, and Channels Data
20. Bahawalpur Zone Irrigation Canals, Distributaries and Channels Data
21. MEPCO Load Dispatch Data
22. Bahawalpur Solid Waste Project Outline
23. Bahawalpur Airport Expansion Project Outline
24. Medium-Term Development Program 2007-10
25. Punjab Economic Reports 2007
26. The State of Pakistan's Competitiveness Report 2010-2011
27. Doing Business in Pakistan, 2010

Annex -3 Bahawalpur's Irrigation System's Designed Capacity and Drainage Data

Sr. No	Channel Name	Designed Cusecs	RDS	Channel Type	Flow Type	Actual Cusecs	Cost Remodeling (PKR millions) of
1	Ahmedpur Branch	2380		BC	NP	980	
2	Bahawal Qaim Feeder	348		BC	NP	143	
3	Dera Nawab Branch	850		BC	P	345	
4 *	Derawar Branch	577	22000	BC	GM	242	11
5 *	Desert Branch	3050	70700	BC	NP	1210	35.3
6	1AR/AP Disty	11		D	NP	0	
7	1-L/AC Disty	411		D	NP	161	
8	1-L/AP Disty	41		D	NP	16	
9 *	1-L/D.B Disty	11	30000	D	NP	0	15
10 *	1-L/Derawar Disty	17	21740	D	GM	0	10.9
11 *	1-L/DNB Disty	30	2200	D	P	12	1.1
12	1-R /AP Disty	94		D	NP	38	
13	1-R/AC Disty	45		D	P	18	
14 *	1-R/D.B Disty	67	29300	D	NP	27	14.7
15	1-R/DNB Disty	46		D	P	18	
16 *	1-R/Israni Disty	26	18700	D	NP	10	9.3
17 *	2-AR/D.B Disty	10	15200	D	P	0	7.6
18	2-BR/D.B Disty	15		D	P	0	
19 *	2-CR/D.B Disty	9	118660	D	P	0	59.3
20 *	2-DR/D.B Disty	7	64500	D	P	0	32.2
21 *	2-L/AP Disty	7	34500	D	NP	0	17.2
22 *	2-L/D.B Disty	29	144000	D	NP	12	72
23 *	2-L/Derawar Disty	56	60000	D	GM	18	30
24 *	2-L/Salary Disty	60	68000	D	GM	20	34
25	2-R/AP Disty	7		D	NP	0	
26 *	2-R/Bahawal Disty	9	65000	D	NP	0	32.5
27 *	2-R/D.B Disty	59	64500	D	NP	24	32.2
28 *	2-R/Mahal Disty	98	30600	D	P	40	15.3
29	2-R/Mithra Disty	19		D	GM	0	
30	3-L/AP Disty	129		D	NP	52	

Sr. No	Channel Name	Designed Cusecs	RDS	Channel Type	Flow Type	Actual Cusecs	Cost of Remodeling (PKR millions)
31	3-L/B.C.Disty	227		D	NP	10	
32	3-L/D.B Disty	116		D	P	45	
33 *	3-L/Derawar Disty	21	41700	D	GM	0	20.9
34 *	3-R/D.B Disty	32	60500	D	P	13	30.2
35	4-L/AP Disty	170		D	NP	68	
36	4-L/D.B Disty	75		D	P	30	
37	5-L/AP Disty	42		D	NP	16	
38	5-L/D.B Disty	19		D	P	0	
39	6-L/AP Disty	396		D	NP	162	
40	7-L/AP Disty	6		D	NP	0	
41	8-L/AP Disty	25		D	NP	10	
42	9-L/AP Disty	10		D	NP	0	
43	Ahmed Wah Disty	198		D	NP	78	
44	Bagh Ali Disty	113		D	NP	45	
45	Bahawal Disty	320		D	NP	126	
46	Bahawalpur Disty	181		D	P	75	
47	Ballar Disty	32		D	NP	12	
48	Banwah Disty	100.15		D	NP	41	
49	Bukhari Disty	13.35		D	NP	0	
50	Channiwah Disty	4.2		D	NP	0	
51	Chown Disty	14		D	NP	0	
52	Derawar Mithra Link	66		D	GM	26	
53	Dhari Disty (P)	13		D	P	0	
54	Fordwah Disty	158		D	P	65	
55	Furrukhwah Disty	8		D	NP	0	
56	Gillani Disty	14		D	NP	0	
57	Jhandani Disty	104		D	NP	41	
58	Karamwah Disty	57		D	NP	23	
59	Katora Disty	15		D	NP	0	
60	Mamoon Disty	14.63		D	NP	0	
61 *	Mithra Disty (P)	75	38560	D	P	31	19.2
62	Mithra Disty NP	41		D	GM	20	

Sr. No	Channel Name	Designed Cusecs	RDS	Channel Type	Flow Type	Actual Cusecs	Cost of Remodeling (PKR millions)
63	Noor Wala Disty	21		D	NP	0	
64	Qaim Wah Disty	199		D	NP	80	
65	Shahdad Disty	20		D	NP	8	
66	Shahiwala Disty	405		D	P	162	
67	Shallar Disty	5		D	NP	0	
68	Shehikh Wah Disty	38		D	NP	16	
69	Shikrani Disty	30		D	NP	12	
70	Sultan Disty	415		D	NP	165	
71	Tallar Disty	12		D	NP	0	
72	Uch Disty	347		D	NP	140	
73	Zorkot Disty	18		D	NP	0	
74	1-L/1-R/3-L/BC	6		M	NP	0	
75 *	1-L/1-R/AP Minor	5	14376	M	NP	0	7.1
76 *	1-L/2-L/Salary Minor	14	18070	M	GM	0	9
77 *	1-L/3-L/AP Minor	26	18070	M	NP	0	9
78 *	1-L/3-L/D.B Minor	9	15050	M	P	0	7.5
79 *	1-L/4-L Minor	50	23500	M	NP	20	11.7
80 *	1-L/4-L/D.B Minor	23	81000	M	P	0	40.5
81	1-L/6-L Minor	12		M	NP	0	
82	1-L/Hamaity Minor	33		M	NP	13	
83 *	1-L/Mithra Minor	15	81000	M	P	0	40.5
84	1-L/SHW Minor	120		M	P	48	
85	1-R/1-R/3-L/BC	9.5		M	NP	0	
86	1-R/2-R/D.B Minor	29		M	P	12	
87	1-R/6-L Minor	34		M	NP	13	
88 *	1-R/Mithra Minor	21	29000	M	P	0	14.5
89	1-R/SHW Minor	37		M	P	15	
90 *	2-L/4-L/D.B Minor	42	33900	M	P	16	17
91	2-L/6-L Minor	10		M	NP	0	
92 *	2-L/Chowni Minor	20	94000	M	NP	0	47
93	2-R/6-L Minor	42		M	NP	17	
94 *	2-R/Wislan Minor	6	55500	M	NP	0	27.8

Sr. No	Channel Name	Designed Cusecs	RDS	Channel Type	Flow Type	Actual Cusecs	Cost of Remodeling (PKR millions)
95	3-L/6-L Minor	9		M	NP	0	
96	3-R-/6-L Minor	22		M	NP	0	
97	4-L/6-L Minor	6		M	NP	0	
98	Ablani Minor	12		M	NP	0	
99	Ahmed Minor	14		M	NP	0	
100	Bair Minor-II	37.61		M	P	16	
101	Bakhat Minor	24		M	NP	0	
102	Faiz Minor	45		M	NP	0	
103	Fazal Minor	21		M	NP	0	
104	Ghazi Minor	30		M	NP	12	
105	Ghous Minor	46		M	NP	18	
106	Gudpur Minor	14		M	NP	0	
107	Haleem Minor	22		M	NP	0	
108	Hamida Minor	6		M	NP	0	
109	Haqqani Minor	113		M	NP	45	
110	Hasilpur Minor	6.6		M	P	0	
111	Hatti Minor	5		M	NP	0	
112	Inaity Minor	11		M	NP	0	
113	Jadid Minor	14		M	NP	0	
114	Jamalpur Minor	42		M	NP	16.8	
115	Kabira Minor	19		M	NP	0	
116	Khair Minor	19		M	NP	0	
117	Khalifa Minor	22.97		M	NP	0	
118	Laddan Minor	16.29		M	NP	6.8	
119	Lower Sadiq Wah	45		M	NP	18	
120	Mahi Tiba Minor	7		M	NP	0	
121	Nithal Minor	61.61		M	P	25	
122	Pir Minor	5		M	NP	0	
123	Polin Minor	16.66		M	P	0	
124	Qutab Minor	10		M	NP	0	
125	Rasool Minor	142		M	NP	57	
126	Sahu Minor	4.93		M	P	0	

Sr. No	Channel Name	Designed Cusecs	RDS	Channel Type	Flow Type	Actual Cusecs	Cost of Remodeling (PKR millions)
127	Summer Minor	30		M	NP	12	
128	Talib Minor	21		M	NP	0	
129	Tami Minor	8		M	NP	0	
130	Tasneem Minor	7.64		M	NP	0	
131	Upper Sadiq Wah	23		M	NP	0	
132	Wetting Channel	11		M	NP	0	
133	Zaman Minor-I	13.01		M	P	0	
134	Zaman Minor-II	29		M	P	12	
135	Abbassia Canal	1394		MC	P	560	
136	Lower Bahawal Canal	5338		MC	NP	2250	
137	Qaim Canal	483		MC	NP	180	
138	1-L/1-L/SHW Sub	24		SM	P	0	
139	Rawan Sub Minor	8.88		SM	P	0	
140	Gujju Hatta Branch						
	Total						731.5

Note: Channels on which RDs are shown are those where remodeling is proposed in shape of a Project.

Some channels need desilting, others embankment repair,

Still others lining and some head re-do.

RDs = Reduced distances in ft

BC = Branch Canal

D = Distributaries

P = Perennial

NP = Non Perennial

Annex -4 Detailed Analysis Of Legal Regime For Assessment And Collection Of Osr

The Punjab Local Government Ordinance (PLGO), 2001 is the over-arching legislation that provides for the systems and the processes for efficient and effective local governance. Good governance, in turn, entails efficient fiscal management and requires carefully framed laws for revenue generation. Sections 116, 117 and 118 of the PLGO, 2001 govern the levy and collection of taxes. The provisions are enabling in nature, and envision a rational, equitable and progressive local taxation regime. In this way, the PLGO, 2001 caters to the requirements of the well-known '*canons of taxation*'. It is desirous of a regime wherein taxes are levied after careful consideration and after incorporating public objections. Any taxes levied without consulting the public or incorporating its objections will be in defiance or contravention of the spirit of the PLGO, 2001. The Council process is also given its due place in the scheme of things. The requirement of getting the taxation proposals vetted by the Provincial Government (required under Section 116) signifies the importance of the fact that the Local Governments, while striving to develop their fiscal capacity, need to work within the policy parameters laid down by the Provincial Government. Failure to pay taxes has been declared an offence and the arrears are recoverable under the processes adopted for recovery of arrears of land revenue under The Land Revenue Act, 1967.

The relevant sections are reproduced below for ready reference.

116. Taxes to be levied

- (1) A Council may levy taxes, cesses, fees, rates, rents, tolls, charges, surcharges and levies specified in the Second Schedule.

Provided that the Government shall vet the tax proposal prior to the approval by the concerned Council:

Provided further that the proposal shall be vetted within thirty days from the date of receipt of the proposal failing it would be deemed to have been vetted by the Government.

- (2) No tax shall be levied without previous publication of the tax proposal and after inviting and hearing public objections.
- (3) A Council may, subject to provisos of sub-section (1), increase, reduce, suspend, abolish or exempt any tax.

117. Rating Areas and Property Tax

- (1) On commencement of this Ordinance every Tehsil and Town shall be rating areas within the meaning of the Punjab Urban Immovable Property Tax Act, 1958 (V of 1958).
- (2) The Tehsil or Town Council, as the case may be, shall subject to the provisions of section 116, determine the rate of property tax in an area within the Tehsil or Town:

Provided that in the areas within a Tehsil or Town where rate has not been determined, the rate shall remain as zero.

- (3) Unless varied under sub-section (2), the existing rate in the areas within a Tehsil or Town shall remain in force.

Explanation: For the purpose of this section the "rate" shall mean the tax leviable under the Punjab Urban Immovable Property Tax Act, 1958 (V of 1958).

118. Collection of Taxes

- (1) All taxes levied under this Ordinance shall be collected as prescribed.
- (2) Failure to pay any tax and other money claimable under this Ordinance shall be an offence and the arrears shall be recovered as arrears of land revenue.

There are other sections of the PLGO, 2001 that relate to collection of taxes or income generation by a local council (e.g. 118-A, 120, 120-M, 124, 142). The same are not being reproduced here

and only a reference to the relevant section shall be made, wherever deemed necessary. The full text can be seen in the PLGO, 2001.

Other Laws and Rules Regulating Local Taxation

Listed below in table are other Laws and Rules frames there under that govern some distinct aspect of taxation at local level. The table briefly describes each Law/ Rules and the purpose that it serves. This is done with a view to indicate the deficiencies and suggest improvements required to streamline the procedures further so that the fiscal capacity is enhanced.

LOCAL GOVERNMENT TAXATION RULES/ LEGISLATION and RESOURCE GENERATION

Sr. No.	Rules	Legal Framework	Concerned LG	Purpose	Relevant Legal Provisions	Description
1.	Punjab Local Rate (Assessment & Collection) Rules, 2001	Section 191 (1) of PLGO, 2001	District Government/ City District Government	To generate revenue with a view to enhancing the welfare of the local population	Rule 2: Levy of tax Rule 3: Assessment of local rate Rule 4: Collection of local rate	These Rules, in essence, complement the Land Revenue Act, 1967. Assessment and collection of local rate find a mention in broad terms and same is the case with the roles of the revenue officials. They, however, do not contain any provision that can be called enabling.
2.	Punjab Local Government (Tax on Transfer of Immovable Property) Rules, 2001	Section 191 (1) of PLGO, 2001	Tehsil & Town Municipal Administrations	It is aimed at providing legal cover to the transaction concerning immovable properties while contributing to the objective of generating revenue for enhancement of the welfare of the people.	Rule 3: Levy of tax Rule 4: Assessment & collection of tax Rule 5: Liability to pay tax Rule 6: Credit of tax Rule 7: Recovery of arrears of tax Rule 8: Appellate provision Rule 9: Exemption	These Rules contain provisions about assessment and collection of tax where the property is transferred through a registered deed and where it is transferred orally. The provisions of these Rules are enabling and the language formal.
3.	Punjab Local Government (Taxation) Rules, 2001	Section 191 (1) of PLGO, 2001	District and City District Governments, Tehsil and Town Municipal Administrations	To prescribe procedure for taxation in the light of review of the financial position of the concerned LG	Rule 3: Framing of preliminary taxation proposals Rule 4: Publication of preliminary taxation proposals Rule 5: Notice of objections and suggestions to the preliminary taxation proposals Rule 6: Convening of meeting of the Local Councils Rule 7: Finalisation of taxation proposals Rule 8: Sanction of the tax Rule 9: Post-sanction publication Rule 10: Taxation Bill Rule 11: Notice of Demand Rule 12: Recovery as arrears of land revenue	The Taxation Rules are meant to introduce a system in which taxation is done in accordance with the well known canons of taxation. For this the taxation proposals are looked into carefully and even the preliminary taxation proposals are required to be published. It is mandatory, under these Rules, that all the objections and suggestions are heard by the Nazim in public before they are taken to the Local Council. The language of these Rules is formal and provisions are enabling.

Sr. No.	Rules	Legal Framework	Concerned LG	Purpose	Relevant Legal Provisions	Description
4.	Punjab Local Government (Appeal) Rules, 2002	Sections 190 & 191(1) of the PLGO, 2001	District and City District Governments, Tehsil and Town Municipal Administrations	All appeals preferred against orders passed under the PLGO, 2001 and the Rules or by-laws framed there under except service matters; Section 190 (3) (d) of the PLGO, 2001 requires that "natural justice and due process of law" must be ensured in this context.	Rule 2: Appellate authority Rule 3: Limitation Rule 4: Manner in which appeals are to be filed Rule 5: Hearing and decision of appeal Rule 6: Transfer of appeal Rule 7: Disposal of pending appeals	These Rules apply to all appeals preferred against orders passed under the PLGO, 2001 or Rules framed therein. The limitation period prescribed is thirty days and it is also laid down that the appeals shall be preferred in the form of a memorandum. The appeal so preferred has to be decided within a period of ninety days.
5.	Punjab Local Government (Fees for Licensing & Permits and Licensing of Professions & Vocations) Rules, 2002	Sections 191 and 116 of the PLGO, 2001	District and City District Governments, Tehsil and Town Municipal Administrations	To generate revenue by bringing professionals and people working in lawful vocations within the tax net with the objective of enhancing the welfare of local people.	Rule 3: Power to issue licenses or permits Rule 4: Fees for the licenses or permits Rule 5: Procedure to grant licenses or permits Rule 6: Power to impose fine on violations	These Rules provide the power or competence of the different tiers of LG to issue licenses or permits for professions and vocations. The fees can only be levied after approval of the concerned Local Council. These Rules will become enabling if by-laws are framed in accordance with the procedure given in the Taxation Rules.
6.	Punjab Local Government (Auctioning of Collection Rights) Rules, 2003	Sections 191 (1) and 118 of the PLGO, 2001	District and City District Governments, Tehsil and Town Municipal Administrations	To outsource revenue collection rights to capable and competing parties through a transparent process	Rule 3: Auction of collection rights Rule 4: Prohibition clause Rules 5 to 7: Auction procedure Rule 8: Manner of awarding Contracts Rule 9: Reserve Price Rule 10: Attempts to award the Contract Rule 11: Acceptance of Bid Rule 12: Proceedings of Negotiations Rule 13: Intimation of Acceptance of Bid Rule 14: Terms and Conditions of the Contract Rule 15: Eligibility of Contractor Rule 16: Earnest Money Rule 17: Dues and Deposits Rule 18: Other Deposits	These Rules assist a LG in collecting its revenue as specified in the Second Schedule of the PLGO, 2001. The intention is to make the auction process as transparent and fair as possible. It lays down the manner of awarding contracts and lays down provisions about the reserve price. To maximize the amount, there is scope for negotiations with the participants. The Rules also provide the eligibility criteria for the contractors. After the award of the contract, the contractor shall be responsible to maintain accounts and official record appropriately and implement the collection procedure as well as the by-laws. In case of a dispute between the contractor and the LG, the Arbitration Act, 1940 will be invoked. These Rules are enabling and the language is formal.

Sr. No.	Rules	Legal Framework	Concerned LG	Purpose	Relevant Legal Provisions	Description
					Rule 21: Implementation and Collection Procedure and by-laws Rule 22: Overcharging Rule 23: Rights and Responsibilities of the Contractor Rule 24: Disputes Rule 25: Sureties and Guarantees Rule 26: Cancellation of Contract Rule 27: Rebates	
7.	Punjab Private Site Development Schemes (Regulation) Rules, 2005	Section 191 (1) of the PLGO, 2001	District and City District Governments, Tehsil and Town Municipal Administrations	To provide a framework for facilitating development of private housing schemes while safeguarding the legitimate interests of land owners, potential buyers and general public	Rule 3: Submission of application Rule 4: Pre-requisite of scheme Rule 5: Inviting objections Rule 6: Planning standards Rule 7: Scrutiny of scheme Rule 8: Sanction and its conveyance Rule 9: Approval of design and specifications Rule 10: Farm Housing Schemes Rule 11: Release of Mortgaged Plots Rule 12: Modification Rule 13: Execution of Scheme Rule 14: Appeal Rule 15: Supervision and Control	These Rules are meant to regulate development of private site schemes. They give the constitution of the Scrutiny Committee and the pre-requisites for a scheme as well as the need for inviting public objections to such a development. The developer is required to include a host of things in the advertisement to be given in the Press. It necessitates the implementation of the 'National reference Manual on Planning and Infrastructure Standards' for the purpose of roads and residential use. It also lays down the requirement of detailed designs and specifications.
8.	Punjab Local Government (Commercialization) Rules, 2004	Section 191 (1) of the PLGO, 2001	District and City District Governments, Tehsil and Town Municipal Administrations	To regulate land use in terms of prohibiting use of residential buildings for commercial purposes (the basic idea is to make life of the local people more comfortable and nuisance free); selection of roads and streets as commercial and to put in place setback requirements.	Rule 3: Regulation of land use Rule 4: Declaration of Roads and Streets Rule 5: Setback requirements for the Roads selected for Commercialization Rule 6: Established Commercialization Rule 7: Partial Commercialization Rule 8: Submission of Application Rule 9 Commercialization Charges Rule 10: Temporary Commercialization Rule 11: Regularization of Unauthorized Commercial Buildings	These Rules provide for regulation of land use in accordance with the land use plan. They also give a list of factors to be considered before selecting a road or street to be commercial. The setback requirements are also mentioned clearly and the procedure for helping the Commercialization Committee to decide about partial and temporary commercialization is also given. The process of paying the commercialization charges is also given in reasonable detail. It can be said that these Rules are least stifling of the legislations done in our context.
9.	Punjab Marriage Functions	Section 11 of the Punjab Marriage	District and City District	To take effective measures to check	Rule 3: Constitution of Committees Rule 4: Functions of the Committees	These Rules assist in taking cognisance of offences committed under the Act and require

Sr. No.	Rules	Legal Framework	Concerned LG	Purpose	Relevant Legal Provisions	Description
	(Prohibition of Ostentatious and Displays and Wasteful Expenses) Rules, 2003	Functions (Prohibition of Ostentatious Displays and Wasteful Expenses) Act, 2003	Governments, Tehsil and Town Municipal Administrations	the culture of ostentation and wasteful expenses on social events like marriages. This is also done with a view to assist the lower and middle income classes to increase their savings and bolster their fledgling income position.	Rule 5: Provide information regarding violations Rule 6: Cognizance of offences Rule 7: Undertaking of abiding by law Rule 8: Joint responsibility of owners Rule 9: Committee not to cause disruption	undertaking from the owners, managers or proprietors of wedding/banquet halls, clubs, hotels, restaurants, community centres, caterers etc. about the number of guests, nature of function and food to be served. It lays down joint responsibility of the owners/managers etc. and the person in whose favour booking was made for any breach of the law. It is observed that the Rules are enabling but the language used is not strictly formal.
10.	Punjab Local Government (Property) Rules, 2003	Section 191 (1) of the PLGO, 2001	District and City District Governments, Tehsil and Town Municipal Administrations	It aims at maintaining and managing properties vested in the LGs in the best interest of the public. It also aims to ensure that the rented property fetches the maximum rent as well as to prevent the impairment of the value and utility of the rented property.	Rule 3: Management of Property Rule 4: Responsibilities of the Manager Rule 5: Maintenance of Property Rule 7: Verification and Stock Taking of Property Rule 8: Committee for Identification of Redundant/Encroached Property Rule 9: Procedure for Auction of Redundant/ Encroached Property Rule 11: Approval of Auction Rule 12: Utilization of Proceeds of Auction Rules 13 to 15: Disposal of Movable Property Rule 16: Lease of Immovable Property	These Rules give the responsibilities of the 'Manager' of the property; principal of which is that he has to ensure that the rented property fetches maximum rent. A long list of registers is prescribed for the maintenance of the property. Encroachments and redundant properties are dealt with separately. The Rules aim to make the auction of the property as transparent a process as possible. The same objective is found in the rule governing the lease of the immovable property which needs to be undertaken through a competitive bidding process.
11.	The Punjab Urban Immovable Property Tax Act, 1958	An Act to consolidate the law relating to the levy of a tax on urban immovable property in the Province of the Punjab	District and City District Governments, Tehsil and Town Municipal Administrations	Its purpose is to collect revenue for the welfare of the people and to create fiscal space for the Government. It is restricted to buildings and lands within the limits of cities and sizable towns only. Generally speaking	Section 3: Levy of Tax Section 4: Exemptions Section 5: Ascertainment of Annual Value Section 5-A: Valuation Tables to ascertain Annual Value Section 6: Assessing Authority Section 7: Making and Operation of Valuation Lists Section 8: Draft Valuation List Section 10: Appeal and Revision Section 12: Tax when Payable	Under this Act, the Provincial Government issues notification declaring several towns, cities and rating areas for levying property tax. The District Excise & Taxation Officer has been declared as Assessing Authority for every rating area. It is levied on the basis of annual value of buildings and lands in a rating area at the rate of twenty percent of such annual value. The annual value is the aggregate annual value of all buildings and lands owned by the same person in a rating area. Where a building is occupied for residential purpose by the owner

Sr. No.	Rules	Legal Framework	Concerned LG	Purpose	Relevant Legal Provisions	Description
				it is levied in the case of a rented building or land on the basis of its actual annual rent and in case of others on their estimated notional annual rent.	Section 13: Collection of Tax Section 14: Recovery of Tax from Tenants Section 15: Recovery for Default in Payment Section 16: Recovery of Unpaid Dues Section 23: Government's Powers to make Rules for carrying out the purposes of this Act	himself, the tax is levied at the rate on one half of the annual value of such building.
12	The W.P. Urban Immovable Property Tax Rules, 1958	Section 23 of the West Pakistan Urban Immovable Property Tax act, 1958	District and City District Governments, Tehsil and Town Municipal Administrations	Its purpose is to collect revenue for the welfare of the people and to create fiscal space for the Government. The objective is to streamline the process of collecting as well as recovering tax on urban immovable properties. The law is restricted to buildings and lands within the limits of cities and sizable towns only. Generally speaking it is levied in the case of a rented building or land on the basis of its actual annual rent and in case of others on their estimated notional annual rent.	Rule 3: Assessing Authority Rule 5: Duties of Assessing Authority Rule 6: Preparation of Draft Valuation List Rule 7: Publication of Draft Valuation List Rule 8: Filing of Objections Rule 9: Amendment of Correct Valuation List and the Filing of Objections Rule 10: Hearing of Objections Rule 11: Authentication and Custody of Final Valuation List Rule 13: Appeal and Revision Rule 14: Appointment of Valuers Rule 15: Demand Notice and Payment of Tax Rule 16: Collection of Penalty Rule 17: Recovery of Tax from Tenants Rule 18: Collection of Tax through Tax-collecting Staff Rule 19: Collection of Tax and Penalty as Arrears of Land Revenue Rule 20: Custody and Payment into Government Treasury of sums received by the Collecting Authority under these Rules Rule 21: Refund and Remission of Tax Rule 24: Charitable Institutions Rule 26: Mode of Service of Notice, Summons or Order Rule 27: Exemptions	These Rules give a detailed procedure for assessment of the tax, the responsibilities of the Assessing Authority (getting a property register repaired in Form PT-I for the rating area, proper maintenance and safe custody of all prescribed registers and records, taking necessary steps for recovery of tax etc.) and these very delegated duties of the subordinate staff. Draft valuation is prepared in accordance with the information gathered. This is followed by the publication of the draft valuation list. Objections are called for thereafter before the final authentication. The Assessing Authority is supposed to give hearing to a defaulter under Rule 16 before the recovery is made.

Sr. No.	Rules	Legal Framework	Concerned LG	Purpose	Relevant Legal Provisions	Description
13.	Punjab District Government Rules of Business, 2001	Section 31 of the PLGO, 2001	District and City District Governments	To facilitate conduct of official business and streamline procedures relating to official matters and business	Rule 7 (1) (d): Sector EDO to submit all proposals for taxation and the by-laws to the Zila Council through the DCO and the Zila Nazim Rule 13 (1) (c): No District Office to authorize any order, without consulting the District Finance & Budget Office, which involves levy of taxes, duties, fee or cesses listed in Part 1 of Second Schedule of the PLGO, 2001	The Rules of Business is a fundamental piece of legislation and puts forward the manner of conducting business within the District Government offices.
14.	Punjab Tehsil/Town Municipal Administration Rules of Business, 2002	Section 191 (1) of the PLGO, 2001	Tehsil and Town Municipal Administrations	To facilitate conduct of official business and streamline procedures relating to official matters and business	Rule 7 (1) (d): Tehsil/Town Officer to submit all proposals for taxation and the by-laws to the Tehsil/ Town Municipal Officer and Tehsil/Town Nazim after scrutiny by the Tehsil/ Town Officer (Finance) Rule 12 (1) (c): No Tehsil/ Town Officer to authorize any order, without consulting the Tehsil/ Town Finance Office, which involves levy of taxes, duties, fee or cesses listed in Part II of Second Schedule of the PLGO, 2001.	The Rules of Business is a fundamental piece of legislation and puts forward the manner of conducting business within the various Tehsil/Town Municipal Administration offices.

Recommendations for Legal Reform

The Table above and the analysis done by virtue of it assist in coming up with a viable set of recommendations to bridge the deficiencies in the taxation system at the LG level. The following suggestions should contribute in improved revenue generation by removing the deficiencies and streamlining the processes involved in it:

- Computerised recording of the property related transactions should be made a legal requirement. It would result in generating greater revenues as direct interface with the revenue staff at this stage implies payment of commission and kickbacks to the revenue and excise staff. The registration fees can also be enhanced as the clients would prefer paying to the government exchequer and saving precious time that is ordinarily consumed/ lost in visiting the revenue and excise offices frequently. This suggestion, basically, applies to the Punjab Local Government (Tax on Transfer of Immovable Property) Rules, 2001.
- Valuation tables should be made public and more comprehensible as greater understanding of the assesses would decrease the likelihood of illegal settlements and rent seeking.
- Taxation proposals and objections to taxation proposals required under the Punjab Local Government (Taxation) Rules, 2001 should be made public through newspapers as not many people have access to official gazette.
- Amendment is advisable in Rule 9 of the Punjab Local Government (Auctioning of Collection Rights) Rules, 2003. The reserve price should be 25% more than the average of the preceding three-year income of the respective LG, instead of the average of the preceding three-year income as required at present. This is suggested keeping in view the expectation that outsourcing of the collection process would inevitably enhance proceeds.
- Amendment is also required in Rule 6 of the Punjab Private Site Development Schemes (Regulation) Rules, 2005. In the list of '*land uses*', the following category should be added: '*Minimum size of residential plots*'. The implication of this addition would be that in case of plots measuring five *marla* or less, no map would be required for construction purposes and instead the owners would be required to pay Rs. 1000/- per *marla* for construction of house. In case of a double-storied construction, the owner would be required to pay Rs. 1500/- per *marla*. Owners of already built houses measuring less than five *marla* should also be required to pay the same fees for regularising their construction when they plan to sell off such properties. This would save the small house owners the un-necessary hassle of preparing building designs and getting the same approved from local town planning authorities. To avoid, unplanned and chaotic construction of small (less than five *marla*) houses, necessary by-laws can be framed which provide general guidelines for such construction. In Rule 10, pertaining to the farm housing schemes, valuation of the plot should be undertaken and given out as well.
- Slight amendment in the Punjab Local Government (Commercialization) Rules, 2004 can help in enhanced resource generation. In Rule 10(1), Temporary commercialization may be allowed for a period of not more than three years (instead of a maximum of one year) at the rate of 5% (instead of 3%) of the value of urban land based on valuation table prepared under the Stamp Act, 1899. Buildings commercialized for the purposes of schools, colleges and hospitals should be excluded from this list as such commercialization is likely to be permanent rather than transitory.
- Rules 6 and 8 of the Punjab Marriage Functions (Prohibition of Ostentatious Displays and Wasteful Expenses) Rules, 2003 should be amended with a

corresponding amendment in the similar clauses in the Punjab Marriage Functions (Prohibition of Ostentatious Displays and Wasteful Expenses) Act, 2003. There should be explicitly laid down penalties in the shape of fines for violations in terms of food being served to the guests as well as the number of guests invited to the function.

- Rule 6 of the Punjab Local Government (Appeal) Rules, 2002 governs the transfer of appeal. Amendment should be made to the effect that justification for transfer of an appeal should be provided in the transfer order.

Overlaps in Schedule II to the PLGO, 2001

The above review of the Laws and Rules will remain incomplete if we do not look into the overlaps which invariably creep in while laws and rules are being framed. These overlaps can result in District Governments and Town/Tehsil Municipal Administrations working at cross purposes and need to be removed to avoid multiple jurisdiction issues.

- Fees for licenses or permits on penalties or fines for violation is the subject of the District Council as given in Part-I Sr. No. 3 while it is a subject of the Tehsil Council as per Part-III Sr. No. 9
- Rent for land, buildings, equipment, machinery and vehicles is the subject of District Council as laid down in Part-I Sr. No. 7 and of the City District Council of Part-II Sr. No. 6, while it is also given as a subject of the Tehsil Council as per Part-III Sr. No. 13 and of the Town Council according to Part-IV Sr. No. 9. Presumably, the framers of law had intended that rent for land, building, equipment, machinery and vehicles shall be recoverable by the local council in which the ownership of such property vests. But this intent is not coming up clearly by the phrasing and a clarification is warranted.
- Fees for approval of building plans, erection and re-erection of buildings is a subject of the City District Council as laid down in Part-II Sr. No. 10, while it is also an assigned subject of Town Council under Part-IV Sr. No. 13
- Fee for advertisement is a subject of the City District Council as per Part-II Sr. No. 8 while it is also a subject of the Town Council according to Part-IV Sr. No. 6 (in the form of *“fees on advertisement-other than on radio, television and bill boards”*). An important issue here is that of bill boards, which have been specifically taken out of the purview of TMAs. Prima facie, this was required only for City District Governments, where the Provincial Parks and Horticulture Authority is responsible for collection of such fee and to use the same for city beautification and maintenance of parks. For other districts, this should remain the responsibility of TMAs. This confusion needs to be removed as in practice all TMAs (except the ones in City District Governments) are recovering advertisement fee on bill boards situated in their territorial jurisdiction.

Instructions and Circulars to Clarify Issues Pertaining to OSR

A host of letters, instructions, and circulars have been issued from time to time (copies placed as Appendices) to clarify, elucidate, interpret or reiterate (in a few cases) issues pertaining to LG taxation. These constitute important part of the policy transmittal from the Provincial Government. These need to be looked into and analysed carefully.

Registration of Deaths and Births; No. SO (ELEC) 1-7/2001, dated 15.11.2001, LG&RD Department

This aims to prevent issuance of fake certificates, usually acquired through illegal gratification, and at the same time aims to put a check on the discretion of the Secretary, Union Council and his subordinate staff. There is an obvious need to remove this element of discretion and it is proposed that the LG&RD Department should issue a Schedule with by-laws. By-laws are needed so that the procedure is made fool proof as they will contribute towards gathering and compiling authentic information on deaths and births. The Schedule will be part of the by-laws and will serve the purpose of prescribing rate of fees for registering deaths and births. Moreover, a progressive surcharge will be incurred in case of delay in registration of death. Computerisation of the process shall help remove the undesirable element of discretion as well. It will also help the Council stay out of uncalled for litigation. In addition to this, people should be made more aware of the procedure and advised strongly to follow it. A behaviour change is required in all the stakeholders so that the improvements to be introduced in the procedure take solid foundations.

1. Improvement in General State of Cleanliness; No. SO.III (16)/2-69-97, dated 1.12.1999, LG&RD Department

This letter is addressed to all the Administrators of the local bodies in the Punjab. It talks about efficiency of the sanitary staff and the need for daily cleaning of urban local councils and solid waste management in them. It alludes towards the need of monitoring and inspections of the work but clearly stops short of giving any methodology for doing this. Therefore, it is felt that by-laws are needed for both drainage system and solid waste management. Without by-laws improvements will be quite limited and at best sporadic and revenue generation will be marginalised.

2. Levy of Toll Tax by TMA; No. SO-VI (LG) 2-82/97, dated 9.11.2002; LG&RD Department

It reiterates that TMAs are not competent to levy toll tax on any road. Laws i.e. the PLGO, 2001 and Taxation Rules, 2001 need review in the light of this letter. Sections 67 and 67-A of the PLGO, 2001 include 'tolls' for Tehsil and Town Municipal Administrations respectively. These Sections of the PLGO, 2001 need to be amended as well as the Taxation Rules, 2001. However, Parts III and IV of the Second Schedule are in consonance with this particular notification.

3. Notification No. SOV (LG) 5-10/2003, dated 17.3.2003 concerning powers under Section 5 of the Punjab Prohibition of Dangerous Kite Flying Activities Ordinance, 2001

This Notification authorises the Deputy District Officer (Revenue) and the Assistant District Officer (Revenue) to 'accompany' the Police for enforcing the Ordinance. It is suggested that the Committee envisaged under Section 5 of the Ordinance should be formed and given a schedule to impose fines/ penalties.

4. Taking Cognizance of Undesirable Activities; No. SOV (LG) 5-19/2003, dated 10.4.2003

The context of this letter, addressed to Tehsil Nazims and the Tehsil Municipal Officers (TMOs) is civic degradation. It talks about regulating the affixing of signboards and advertisements as well as sanitation and solid waste collection and disposal of industrial waste. It alludes towards the relevant provisions of the PLGO, 2001 in this context and reminds that Chapter VI of the PLGO, 2001 provides for the legal procedure for taking cognizance of municipal offences. It is suggested that by-laws should be made for solid waste management (in terms of imposing fines to those who litter the streets/ environment) and also for placing sign-boards.

5. 10% Annual Increase in Rent of Land/ Shops leased by the LG; No. SO III (LG) 2-11/80 (P), dated 30.5.2003

It lays down that all agreements made prior to the promulgation of the PLGO, 2001 shall be governed in accordance with the instructions issued vide letter No. SO.III/2-11/80, dated 7.7.1982, and all agreements made after the promulgation of the PLGO, 2001 shall be governed by the terms and conditions settled therein. Not denying the importance of this Notification, it is suggested that procedure in such important issues should not be prescribed through instructions/ notifications. Instead, Rules should be framed and by-laws adopted by the LGs. Framing of Rules is important since the issues involved here are those of competitive bidding and public auction.

6. *Instructions regarding implementation of Punjab Local Government (Collection Rights) Rules, 2003; No. SOVI (LG) 2-253/97, dated 22.7.2003*

This letter spells out the importance of implementing Rule 3 of the Punjab Local Government (Auctioning of Collection Rights) Rules, 2003. It is proposed that the Punjab LG (Collection Rights) Rules, 2003 need amendment to the effect that they should clearly lay down, in the form of Schedule, as to which taxes, fees, rates, cesses and other levies of a LG can be auctioned and which cannot be auctioned. The Schedule should, obviously, form part of the (Collection Rights) Rules. This will have a salutary effect on revenue generation and will also remove any misunderstanding on this score.

7. *Provincial/ Local Taxes Issues; No. SO VI (LG) 1-1/2001-P, dated 19/22 September, 2003*

This letter deals with a serious issue i.e. charging of exorbitant rates of license fees for professions and vocations. It is believed that such an issue cannot be dealt with through an executive order of sorts as doing so gives the impression of rather flippant handling of a serious matter. The letter can impinge strongly on revenue generation and own source receipts. It is also concerned with the larger decentralisation debate. Using such affirmative language in a letter can call into question the spirit and essence of the LG laws and rules. Therefore, it needs to be reviewed.

8. *Auction of Different Taxes; No. SO VI (LG) 2-253/97, dated 21.10.2003.*

It reiterates the importance of implementation of the Punjab LG (Auctioning of Collection Rights) Rules, 2003. As discussed earlier (at Serial No. 7 of this part), the Punjab LG (Collection Rights), 2003 needs to be amended, to clearly bifurcate levies into auctionable and non-auctionable categories.

9. *Registration of Contractors under Punjab Local Government (Auctioning of Collection Rights) Rules, 2003; No. SO VI (LG) 2-253/97, dated 30.10.2003*

This provides qualifications for registering the contractors. Qualification of contractors needs to be part of the Rules and, therefore, an amendment in the Rules is necessary. Qualification should not be communicated through a letter of the Provincial Government. As for the registration of contractors and renewal of fees, they should be part of the Schedule to the Rules, which is not the case at the moment.

Annex -5 Implementation Plan for Selected Projects

Energy Conservation Plan - Implementation Plan

Project Owner: District Govt. Bahawalpur

Other Agencies/Organizations Involved: Planning & Development Department; Relevant industry associations; Bahawalpur Chamber of Commerce & Industry

Funding Sources:

- Initial funding can be sought from provincial govt. or a multi-lateral or bilateral donor agency. Funding through local revenue generation may also be explored. This initial funding would be required to establish an institutional base (District Energy Office) and to seek some technical assistance.
- Subsequent funding would be generated through user fees and use of carbon credits. For awareness campaigns or specific projects, funding can also be sought from govt./donors.

Key Steps:

- Development of a detailed concept paper (and PC-I, if public funding is required), laying out targets for the medium term
- For public funding, approval of PC-I by government and release of funds. For other funding, identifying the source and seeking funds.
- Establishment of District Energy Office; recruitment, equipment, hiring of technical resources (consultants, if required). The District Energy Office would primarily engage in three sets of activities: a) Awareness campaigns for rationalizing energy use; b) Facilitating energy audits of key public facilities and private industrial units; c) Working with other agencies to undertake projects conserving energy or use of carbon credits
- Awareness Campaigns: Campaign designing, launch, impact assessment; campaign modification, re-launch
- Facilitating Energy Audits: Developing a resource base of consultants and resources to conduct energy audits; Coordinating with donors, etc. to provide incentives to industries for conducting such audits; Linking the clients with auditors; Developing a database of key facilities and industries and tracking energy audits and their benefits for respective industries; Potentially linking industries with vendors (and financiers) of energy efficient equipment.
- Working with Other Agencies: Identifying areas, where carbon credits can be used or energy conservation can be achieved (areas may include solid waste management projects, etc.); Seeking technical expertise to employ use of carbon credits to make such projects viable.

Privatizing Extension Services - Implementation Plan

Project Owner: Office of EDO (Agriculture) Bahawalpur

Other Agencies/Organizations Involved: Agriculture Department

Funding Sources:

- For project preparation (feasibility preparation, transaction execution, etc.), funding may be sought from Project Development Facility (PDF), established under PPP Cell of Government of Punjab.
- Subsequent funding for establishing initial operations to be provided by the private partner.
- In case, the users fees cannot be recovered/imposed (as laid out in feasibility), the ongoing operational expenses may be paid through district government on 'number of farmers accessed' basis. (Subsequently, the govt. may consider offsetting this cost through downsizing of extension services department)

Key Steps:

- Development of a detailed concept paper
- Preparation of detailed PPP feasibility
- Pre-market sounding
- Selection of private partners through open bidding
- Contract negotiations, contract award and financial closure of the project
- Mobilization by the private partners
- Regulation and monitoring and evaluation by the govt., either through a special management unit within the office of EDO (Agriculture) or through outsourcing
- Project evaluation after 1 year and possibly scaling up the project to other crops or tehsils

Milk Procurement Infrastructure - Implementation Plan

Project Owner: Office of DO (Livestock) Bahawalpur

Other Agencies/Organizations Involved: Livestock and Dairy Development Department; Pakistan Dairy Association; Pakistan Dairy Development Board; Pakistan Dairy Development Company

Funding Sources:

- The project only needs some technical assistance to design the project and initially provide some incentives to attract private investment. Ideally, such funding should be sought from a donor. However, public funding may also be sought.

Key Steps:

- Development of a detailed concept paper and PC-I (if required)
- Establishment of a Project Steering Committee to lead the project and to engage with major UHT milk processors
- Social mobilization and formation of farmer groups
- Installation of cooling tanks, financed either by milk processors or through credit to farmer groups
- Provision of extension services and support through these farmer groups to enhance productivity

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