Extent of Unemployment in the Border Districts of Punjab: A Case Study of Rural Ferozepur District

Baldev Singh
Sukhwinder Singh
Jaswinder Singh Brar

PUNJABI UNIVERSITY PATIALA

Department of Economics
and
Centre for Research in Economic Change
Punjabi University, Patiala
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Preface

Employment generation is the most natural and the cherished way to achieve the objectives of economic growth, poverty eradication, regional parity, social justice, social stability and harmony. To earn and fulfill the basic needs of life, every human being must be gainfully and productively employed in the economy. Providing gainful and productive employment to all eligible persons is one of the avowed objectives of India's planned development strategy. 'Right to Work' as a constitutionally guaranteed right has gained significance and is worthy of serious considerations.

In India, the economic policies pursued under the different Five Year Plans, before and after 1991, have focused on maximisation of economic growth rate which is assumed to create employment or reduce unemployment **through a percolation process or trickle-down effect**. However, to present a human face in its policy, a variety of welfarist and target-group oriented unemployment eradication programmes were initiated, revised and updated from plan to plan. These safety-net programmes had, obviously, a limited reach. Consequently, unemployment crisis has increasingly become complex and deepened in India.

The adverse economic effect of unemployment in terms of the potential output loss to the economy is quite marked in the developed world. For instance, one percent point increase in unemployment rate leads to two percent decrease in the GDP in the USA economy. The story must be similar for Indian economy.

For, unemployment causes severe economic, social and psychic stresses among its victims. Besides, unemployment leads to hardship for individuals and their families, and causes stress, ill health and disruption of family life. It strains social life and community relations (disorders, crimes, etc.) and impedes progress towards pious societal goals. The unemployed persons, **particularly the educated unemployed youth, develop a felling of being 'left behind' or 'excluded' from the mainstream developmental activities of the society.** In addition, it is associated with poverty and hunger, wastage of government expenditure on education, training and employment generation schemes. Its other manifestations are lower living standards, high degree of income inequality and poverty. Put together, these create an environment that threatens social cohesion and peace in the country. Reducing unemployment to the minimum possible level, therefore, is major challenge before the planners and policy makers in India.

Punjab state, despite being one of the advanced states of India, has emerged as **an area with high degree of unemployment, particularly among educated youth.** The alarming state of unemployment in Punjab has been projected and noted at the national level by the Planning Commission of India and at the state level by the Punjab government.

The solution of unemployment problem in any country/region necessitates extremely judicious planning of the underlying development process. This requires a unique blend of market and non-market strategies that help to create a responsive institution structure. Such an institutional structure is a prerequisite to accomplish the task of employment creation, economic growth and social harmony.

The task of generating employment in a situation of glaring and multiple inequalities (economic and non-economic) demands (i) complete knowledge about the working of the whole economic system; (ii) re-newer and innovative modes of state intervention in the development process; and (iii) information on the persons classified as unemployed, for how long they are unemployed, how they earn their subsistence level, from which demographic, social, educational and occupation groups they come, what type of employment/ occupation they want, what type of jobs available in the labour market, etc. Accordingly, appropriate economic policy prescriptions and strategies to meet the challenge of eradication of unemployment will have to be identified and implemented.

However, research on employment and unemployment trends in India and Punjab is constrained by the non-availability of long-term time series and reliable up-to-date data of the unorganised sector, particularly at the sectoral and district levels. In the absence of proper data base, it becomes very difficult to suggest and undertake viable and specific policy measures to remedy the unemployment situation of a border region.

In appreciation of these ground realities, the Planning Commission of India has initiated research studies aimed at measuring the extent of unemployment among the border districts of Punjab. One such study was allocated to the Institute of Applied Manpower Research, New Delhi and the other to the **Department of Economics,** and the **Centre for Research in Economic Change** of the Punjabi University, Patiala. Incidentally, the Department of Economics enjoys the status of Department of Special Assistance (DSA) under the Special Assistance Programme (SAP) of the University Grants Commission and an endowment chair for "Planning and Development" from the Planning Commission of India.

The work attempts to provide an exhaustive all-round diagnostic analysis and policy imports of all unemployment issues of the border region of Punjab. It tries to develop an analytical and scientific framework, time disposition strategy to measure extent of unemployment by distance from the international border and generate data base at the district level. We hope, the study will create enough interest and follow up action, notwithstanding the deficiencies in the work, if any.

For initiating us into this work by providing financial support and coaxing us to complete it, we are grateful to SER Division of the Planning Commission. **The preliminary draft of the project findings was presented and discussed in the Planning Commission on September 30, 2002. In the light of deliberations during the presentation, the work has emerged in its present form.** We are particularly grateful to Dr. Shailendra Sharma of Planning Commission and Dr. H. Ramachandran of I.A.M.R. However, Planning Commission is not responsible for any omissions & commissions in the work.

The collection of data was facilitated by Shri Sudhir Mittal, Secretary, Planning, Government of Punjab, Shri L.R. Ladhar, Deputy Commissioner, Ferozepur, Mr. Harvinder Singh and Mr. Jain, Deputy Directors, Economic and Statistical Organisation, Punjab. **The field work was done untiringly and primarily by Mr. Rajwinder Singh**. He was assisted by Surinder Singh Yadav in putting it on the computer. We are indeed grateful to the 434 sampled households spread across 30 sampled villages that provided data base, hospitality, patience, goodwill and interest in the study. The support and cooperation extended by the Sarpanches and Panches needs a special mention. We are

convinced that the villagers in Punjab are yet the finest human material that has survived the ravages of time.

During the formulation of the work, we had the advantage of discussions with a number of colleagues, particularly Professor J. R. Gupta and Professor Sucha Singh Gill from the Department of Economics, Punjabi University, Patiala; Professor P.S. Raikhy and Professor H. S. Sidhu from Punjab School of Economics, Guru Nanak Dev University, Amritsar; and Professor Karam Singh and Prof. Joginder Singh from Department of Economics and Sociology, Punjab Agriculture University, Ludhiana. We have benefited from discussions with Professor A.S. Dhesi, Visiting Fellow and Dr. Lakhwinder Gill, Reader, in the Department of Economics.

For the efficient secretarial support, Mr. Neeraj Khanna, Mr. Dimple, Mr. Lovely and Ms. Rajni need a special mention. The field workers of NSSO office located at Patiala and Jalandhar helped us to crystallize our thoughts about unemployment related ground realities.

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CHAPTER 1

Introduction

Generating adequate employment opportunities has undoubtedly emerged as one of the major concerns of India's planned development strategy. During the different Five Year Plans, the planners are confronted with twin tasks of providing employment not only to clear the already existing backlog, but also to the expected additions of unemployed persons during that Plan. In India, despite assigning high priority and making huge investments to achieve the objective of creating employment opportunities, the unemployment problem, particularly among the educated youth - **prized human resources of a nation -** has shown little signs of being reduced.

1.1 Unemployment: The Background Setting

In fact, the problem of unemployment has become more acute in India as the anticipated additions to the existing unemployed persons' backlog have been increasing at a disquieting pace over the last few years. The expected unemployment additions are mainly due to the difference between the high growth of labour force and the low growth of employment opportunities in the economy. Even the planned estimates of overall growth rate of the labour force in the country vis-à-vis created employment opportunities have been conscious of this reality. For example, during 1997-2002, while the growth rate of labour force was estimated around 2.51 percent per annum as compared with the 2.24 percent per annum growth rate of planned employment growth opportunities. Consequently, the labour force, which was 397.22 million in 1997, increased to 450.23 million in 2002 (Planning Commission, 1999). This means an addition of about 53.01 million of labour force in just five years. Recently, the Planning Commission, on **current daily status** basis, has recorded the growth rate of 1.31 percent per annum in the labour force as compared to the employment growth rate of 1.07 percent per annum in Indian economy during the period from 1993-94 to 1999-2000 (Economic Survey, 2002-03).

From the macro-perspective, a large number of unemployed persons imply: (**i**) a colossal waste of the nation's human resources, (**ii**) a high potential loss of output, and (**iii**) a serious social-cum-economic burden on the society. From the micro-perspective, confronted with unemployment, individuals and their families encounter problems with their maintenance of standard of living and their social respectability. No wonder, **the educated young unemployed persons, being an explosive material for uses and abuses of all kinds, pose a serious threat to the stability of the economy and civil society**. The acuter the problem becomes, the serious and dangerous consequences manifest in the form of degeneration of manpower resources, the spread of violence and the political and economic bankruptcy. Empirical evidence, though limited, suggests that the states/regions having high unemployment rates, especially among the educated youth, have given rise to the crime, militancy and separatist movements in India (Chand, 1993).

1.2 Unemployment Scenario in Punjab

The development dynamics of Punjab economy has witnessed divergent trends. While the initial driving force was employment oriented that was led by the high yielding varieties of food crops in the agriculture sector and small scale industry in the industrial sector, it was the mechanisation of agriculture and medium scale industry at the later stage that slow down the growth in employment opportunities. However, in both these phases higher education expanded in Punjab. While development generated employment opportunities attracted migratory labour from the poor states like U.P. and Bihar, it failed to involve local educated youth as creators of wealth. In fact, the highly seasonally characterised and mechanised development process of agriculture has led to the considerable decline of the labour-absorption capacity of this sector on the one hand and creation of underemployment among the cultivators on the other hand (Gill, 2002). Even the employment opportunities created by the growing secondary and tertiary sectors have failed to compensate for this shrinkage.

Let us have a look at the facts. As per 2001 Census, Punjab's total population was 2.43 crore. Of them, 66 percent resides in the rural areas and 34 percent in the urban areas. Based on the Usual Principal Status criteria, the 55th Round of NSSO's survey (1999-2000) has recorded **work participation rate** of 29.2 percent for rural areas and 32.5 percent for urban areas. The unemployment rate of persons in rural Punjab stood at 2.6 percent (2.3 percent for males and 6.2 percent for females) compared to rural India's 1.9 percent (2.1 percent for males and 1.5 percent for females). In urban Punjab, the unemployment rate was low at 3.2 percent (3.1 percent for males and 3.5 percent for females) than that of urban India's rate of 5.2 percent (4.8 percent and 7.1 percent of males and females respectively). Thus, the border state of Punjab lags behind the nation's average rate of employment creation, more so, in rural areas. Interestingly, the urban females, probably being educated, display lower rates of unemployment compared those of their rural female counterparts in Punjab.

The alarming state of unemployment in Punjab is even acknowledged by the Planning Commission of India in its projected estimates. As per the estimates, the annual rate of employment expectedly registered the growth of the 0.73 percent per annum compared with the labour force growth rate of 2.27 percent per annum during 1997-2002 (Planning Commission, 1999). Consequently, numbers of unemployed persons are likely to increase sharply. These expectations have, in fact, been vindicated by a survey conducted by the Government of Punjab. As per the estimates of this survey, there were 14.72 lakh unemployed persons (age-group 18-35 years) who sought work in self-employment activities (Economic Advisor, 1998). Of them, 10.41 lakh (70.72 percent) represented rural areas and 4.31 lakh (29.27 percent) represented urban areas. Of the 14.72 lakh unemployed persons, three-fifths (61.01 percent, 8.98 lakh) had education of matriculation and above level. Among educated unemployed, 5.84 lakh were in the rural areas and 3.14 lakh in the urban areas.

The existence of such a large number of unemployed persons is a serious economic burden on the state's economy. Being forced to depend on others for their existence, they, instead of vanguard of progress and social change, have become a social problem in Punjab. In fact, **the instability of the economy, the social unrest and the prevalence of terrorism in Punjab have been attributed by a section of the**

mainstream academicians to the problem of unemployment, especially among the educated youth.

1.3 Need for the Study

Punjab has a long active international border with Pakistan. The continuous tensions on the border and two open wars (1965 and 1971) have seriously harmed development activities in the border areas as compared to non-border areas of Punjab. As a consequence, we find that the three border districts (Amritsar, Gurdaspur and Ferozepur) account for 33.52 percent of the share of unemployment of the state (Economic Advisor, 1998) despite the fact that their contribution to the state population was only 28.47 percent (Census, 2001). This is a serious scenario for the Nation that calls for a close and urgent attention of planners and policy makers.

Although research on employment and unemployment is of vital importance, yet it is constrained by the non-availability of long-term time series and the reliable up-to-date data on trends and structure of unemployment/employment in the unorganised sectors, particularly at sectoral and district levels in Punjab. At the moment, some estimates (as quoted above) are available about the unemployment level, but **there is no in-depth study to examine the extent and causes of unemployment; skills and capabilities of the unemployed persons; local resource base; and employment expectations of the unemployed persons in the border districts of Punjab**. In the absence of proper data base, it is difficult to suggest and undertake viable activity-specific policy measures to remedy the situation of a border state.

In appreciation of these ground realities, the Planning Commission of India has proposed that a few research institutions should take up research studies to measure the extent of unemployment and suggest specific policy measures to mitigate the problem of unemployment in the border districts of Punjab. The present study is an outcome of such an initiative. The significance of the study is, therefore, obvious.

1.4 Scope and Objectives of the Study

The major emphasis of the study is to depict or reconstruct the main contours of reality of economic, social and cultural factors/conditions that have a bearing on the measurement of unemployment and capturing its extent, particularly in rural border districts of Punjab. It takes into account a number of different and complementary perspectives of unemployment that are expected to add to the knowledge base from which the planners and policy makers can develop appropriate policy measures to deal with the problems associated with the development process of the state. Within this framework, the specific objectives of the study are:

1. *to capture the nature and measure the extent of unemployment among rural people by age-profile, education level and socio-economic status;*
2. *to measure and compare the incidence of unemployment in border and non-border areas of state;*
3. *to assess the impact of border risk on the local resource base in the border district;*
4. *to indicate the skills and capabilities of unemployed persons and their expectations; and*
5. *to suggest the viable activity-specific policy interventions.*

1.5 Chapter Scheme

The study has been divided into **eight Chapters**. Chapter 1 has already outlined the scope, significance and objectives of the study. Chapter 2, details the reasons for the choice of Ferozepur district, research design and methodology. The details of emerging issues associated with employment and unemployment scenario of Punjab are presented in Chapter 3. Chapter 4 examines the impact of border risk on income, infrastructure and employment among the border and non-border districts in Punjab. The next three chapters of the study present the results of the rural field survey. Chapter 5 deals with conceptual issues that go into the measurement of unemployment and capture its extent with focus on rural areas of Ferozepur district. The impact of border risk on rural resource endowment behaviour is investigated in Chapter 6. Chapter 7 deals with the analysis of border risk on rural employment search behaviour. The concluding remarks and policy recommendations follow in the last chapter, Chapter 8.

CHAPTER 2

Research Design and Methodology

The Punjab State has a long stretch of *active international border*. The entrepreneurs, particularly farmers, faced two wars (1965 and 1971) in the border belt and, since then, they live continuously under the threat of aggression. Unlike Indian border with Nepal which is porous, the Punjab side of Indian international border with Pakistan is sealed, on our side, by a barbed wire fence that **blocks flow of merchandise across international border**. Even farmers who have their cultivable land inside the barbed wire fence and up to the actual border are allowed access only during a part of the day-time. For, the border remains flooded with searchlights at the night-time. Such a situation is, obviously, least conducive to the build up of individual resource base on the part of private entrepreneurs.

2.1 Rationale for the Study

The economic implications of a sealed land locked border are a man-made blockade of natural flow of economic goods and services across regional territorial boundaries. In other words, *the demand for production produced in these bordering regions/districts enjoys either limited local demand or demand from the rest of the country*. To harvest the demand from the rest of the country for the produce of the region, the production technology of the region must, however, take care of *additional costs associated with transportation of the produce* as well as *associated transaction costs arising from perceived risks of uncertain supplies*, more so, when tempers rise high on the border. This requires, in turn, a large production base which, to retain its cost advantage, must continuously upgrade its technology. Given relative risk proneness of the area, the huge capital investment required on continues basis for such an economic base would, however, be shy. This applies equally to the private entrepreneurs and the state as an entrepreneur. For, the capital shuns perpetual risk situations, particularly when alternative regions provide better investment opportunities. Consequently, **border regions will lag behind in attracting medium and large-scale industrial units. Even those units which are there are likely to be shifted to other areas or will continue to operate without substantial enhancement of their production base**. This is corroborated by the fall in the share of industrial workers employed in border districts in the state of Punjab   from 31.1 percent in 1970-71 to 13.8 percent in 1996-97 (Raikhy and Mehra, 2000).

Employment implications of such a scenario are obviously damaging for the Border State of Punjab as well as Border Districts within the State. In terms of **Employment Exchange statistics**, 5.45 lakh persons were registered in 1999 with employment exchanges of Punjab for prospective openings (job vacancies) and are treated as unemployed (Table 2.1). Out of these, 4.00 lakh (73.3 percent) had matric and above education attainment level (educated unemployed). The skill-wise division of unemployed indicates that 4.22 lakh (77.3 percent) had sufficient exposure to skill acquisition process (skilled unemployed). As per the Economic Census conducted during April-June 1998 in Punjab, **14.72 lakh unemployed persons belonging to 18-35 years**

Table 2.1: Unemployed persons on the live-register of employment exchanges in the border and non-border districts of Punjab in 1999

Salient Features	Gurdaspur	Amritsar	Ferozepur	Border Districts	Non-border Districts	Punjab
Unemployment Persons Desirous of Seeking Employment in Punjab						
Total (Numbers)	61,898	59,564	35,812	157,274	387,743	545,017
	11.36	10.93	6.57	28.86	71.17	100.00
	39.36	37.87	22.77	100.00		
a) Educated applicants (matric & above)	48,625	40,994	27,184	116,803	282,815	399,618
	12.17	10.26	6.80	29.23	70.77	100.00
	41.63	35.10	23.27	100.00		
b) Uneducated applicants (Below matric)	13,273	18,570	8628	40,471	104,928	145,399
	9.13	12.77	5.93	27.83	72.17	100.00
	32.80	45.88	21.33	100.00		
Percent share of matric & above	78.56	68.82	75.91	74.27	72.94	73.32
Percent share of below matric	21.44	31.18	24.09	25.73	27.06	26.68
a) Skilled applicants	48,240	53,370	26,245	127,855	293,706	421,561
	11.44	12.66	6.23	30.33	69.67	100.00
	37.73	41.74	20.53	100.00		
b) Unskilled applicants	13,658	6194	9567	29,419	94,037	123,456
	11.06	5.02	7.75	23.83	76.17	100.00
	46.43	21.05	32.52	100.00		
Percent share of skilled	77.93	89.60	73.28	81.29	75.75	77.35
Percent share of unskilled	22.07	10.40	26.72	18.71	24.25	22.65

Source: Economic Advisor, *Statistical Abstract of Punjab*, 2000, Government of Punjab, Chandigarh, pp. 460-61.

age group opted for self-employment opportunities (Table 2.2). Of them, 10.40 lakh (70.7 percent) belonged to the rural Punjab and 8.98 lakh (61.02 percent had matric and above educational level. Employment Exchanges register, it may be noted, those persons who opt for wage employment, that too, in the organised sector of the economy. Assuming all those persons who are reported as unemployed and willing for self-employment, the number of unemployed registered with the employment exchanges represent only a fraction (37.0 percent) of the **unemployed pool** of Punjab's youth. In the alternative scenario, the pool of unemployed will be larger than that reported by the Economic Census. In fact, it is a larger pool. For, Economic Census unemployed pool contains a relatively lower percentage of matric and above persons (61.02) compared to that of Employment Exchange pool (73.3) suggesting that only a part of them had opted for self-employment opportunities while others continued to wait for wage employment openings. In other words, educated as well as skilled persons are available for jobs in substantial numbers in Punjab. Alternatively viewed, **Punjab economy has either failed to generate enough demand to employ these, particularly educated and skilled**

Table 2.2: Self-employment preference behaviour of unemployed youth (18-35 years) in the border and non-border districts of Punjab during April-June 1998

Salient Features	Gurdaspur	Amritsar	Ferozepur	Border Districts	Non-border Districts	Punjab
Unemployed Persons (18-35 years) Desirous of Seeking Self-Employment in Punjab						
Total (Numbers)	143,471	216,204	133,519	493,194	978,333	1,471,527
	9.75	14.69	9.08	33.52	66.48	100.00
	29.09	43.84	27.07	100.00		
Percent share of rural	80.34	61.11	75.80	70.69	70.70	70.69
Matric & above	96,797	136,233	66,173	299,203	598,657	897,860
	10.78	15.17	7.37	33.32	66.68	100.00
Percent of matric & above	67.47	63.01	49.56	60.67	61.19	61.02
Occupation Preference in Punjab (Number of Households)						
Agro-based	9,948	13,576	9,711	33,235	57,471	90,706
Animal husbandry	16,263	25,546	17,539	59,348	144,152	203,500
Manufacturing	2,924	6,526	2,809	12,259	24,161	36,420
Artisan	9,061	10,661	4,055	23,777	43,082	66,859
Repair services	5,375	6,964	3,544	15,883	33,685	49,568
Trade	5,464	12,578	3,529	21,571	45,233	66,804
Transport	3,678	7,002	2,002	12,682	27,524	40,206
Dhaba, tea stall, etc.	4,236	6,005	2,519	12,760	21,955	34,715
Others	22,370	40,873	31,382	94,625	199,550	294,175
Total	**79,319**	**129,731**	**77,110**	**286,160**	**596,793**	**882,953**
	8.98	14.69	8.74	31.41	67.59	100.00
Occupation Preference in Punjab (Percentage Share of Households)						
Agro-based	12.54	10.46	12.60	*11.62*	<u>9.63</u>	**10.28**
Animal husbandry	20.50	19.69	22.75	*20.74*	<u>24.15</u>	**23.05**
Manufacturing	3.69	5.03	3.64	*4.28*	<u>4.05</u>	**4.12**
Artisan	11.42	8.22	5.26	*8.31*	<u>7.22</u>	**7.57**
Repair services	6.78	5.37	4.60	*5.55*	<u>5.64</u>	**5.61**
Trade	6.89	9.70	4.58	*7.54*	<u>7.58</u>	**7.57**
Transport	4.64	5.40	2.60	*4.43*	<u>4.61</u>	**4.55**
Dhaba, tea stall, etc.	5.34	4.63	3.27	*4.46*	<u>3.68</u>	**3.93**
Others	28.20	31.50	40.70	*33.07*	<u>33.44</u>	**33.32**
Total	100.00	100.00	100.00	*100.00*	100.00	**100.00**

Source: Economic Adviser, *Report on Unemployed Persons (Age Group 18-35 Years) Desirous of Seeking Self-Employment in Punjab State* prepared, from Fourth Economic Census conducted during April-June, 1998, by **Economic Census Section, Economic and Statistical Organisation, Punjab.** Derived from Annexure –1.

Table 2.3: Extent of unemployment scene in the set of border and non-border districts of Punjab: Economic Census data versus Employment Exchange data

Salient features	Gurdaspur	Amritsar	Ferozepur	Border Districts	Non-border Districts	Punjab
Estimated population 1998 (lakh)	19.47	27.48	18.55	65.50	166.01	231.51
	8.41	11.87	8.01	28.29	71.71	100.00
	29.73	41.95	28.32	100.00		
Estimated workers 1998 (lakh)	5.47	8.43	5.96	19.84	51.65	71.48
Workers' share in population 1998 (percent)	28.09	30.68	32.13	30.29	31.11	30.88
Extent of Unemployment : Economic Census Data, 1998						
Unemployed seeking self employment (number)	143,471	216,204	133,519	493,194	978,333	1471,527
Percent share of workforce	26.23	25.64	22.40	24.86	18.94	20.57
Percent share of population	7.37	7.87	7.20	7.53	5.89	6.36
Extent of Unemployment: Employment Exchange Data, 1999						
Unemployed registered (Number)	61,898	59,564	35,812	157,274	387,743	545,017
Percent share of workforce	11.32	7.06	6.01	7.92	7.50	7.62
Percent share of population	3.18	2.17	1.93	2.40	2.33	2.35

Source: Derived from the Tables contained in 1) Economic Advisor, *Statistical Abstract of Punjab,* 2000, Economic and Statistical Organisation, Government of Punjab, Chandigarh.
2) Economic Adviser, *Report on Unemployed Persons (Age Group 18-35 Years) Desirous of Seeking Self-Employment in Punjab State* prepared, from Fourth Economic Census conducted during April-June, 1998, by **Economic Census Section, Economic and Statistical Organisation, Punjab.** Derived from Annexure –1.

manpower resources or the demand generated by it fails to create enough value additions so as to offer a wage rate above their reserve price level of expectations.

As per Employment Exchange statistics of 1999, the **contribution of border region/districts to the unemployed pool of Punjab** (28.9 percent) **is slightly higher than that of its population share** (28.2 percent as per 1991 Population Census). While the contribution of border region to unemployed pool of Punjab is relatively pronounced in the case of educated unemployed category (29.2 percent) as well as skilled unemployed category (30.3 percent), it is markedly less in the case of unskilled unemployed category (23.8 percent) and uneducated (below matric) category (27.8 percent). In other words, **though insufficient still border areas offer relatively more opportunities to unskilled and uneducated workers compared to their non-border counterparts but far less to its educated and skilled workforce categories**.

Regarding the extent of unemployment in Punjab measured on the basis of Economic Census data, 1998, Table 2.3 shows that one-fourth of workforce (24.9 percent) in border districts is unemployed and seeking self-employment, whereas among the non-border districts, it is less than one-fifth of workforce (18.9 percent). Similar differences have emerged between the border districts and non-border districts (7.5 percent against 5.9 percent) when percentage share of those unemployed of the total population has been

taken into account. Employment Exchange data also show a slightly higher unemployment rate among the unemployed seeking employment in border districts as compared to non-border districts in terms of both the ratios (7.9 percent against 7.5 percent of workforce, and 2.4 percent against 2.3 percent of population).

As per **Economic Census of 1998**, the **border region** alone reported 4.93 lakh unemployed youth, a number in the vicinity of total unemployed persons in Punjab (5.45 lakh) that is registered with the employment exchanges. Of 4.93 lakh unemployed youth seeking self employment of border region, 70.7 percent (3.49 lakh) belongs to the rural areas and the remaining 29.3 percent to the urban areas. Rural border region accounted for 54.6 percent of unemployed persons as matriculation and above level of education, whereas urban border region had 75.3 percent of unemployed persons having matriculation and above level of education. In terms of occupation preference in rural border districts, animal husbandry (28.4 percent), agro-based (14.4 percent) and artisan (7.6 percent) occupations are preferred compared to other (Table 2.4), whereas in urban areas of border districts, trade (16.23 percent), artisan (10.0 percent) and repair services (7.2 percent) are preferred occupations of unemployed youth (Table 2.5) **Border region contribution to the state's unemployed pool is** 33.52 percent, a share **higher than its population share (28.20 percent) by 5 percent points. There exists, thus, substantially large number of unemployed youth in Punjab, particularly in its border belt**. The justification for the present study is, thus, obvious.

2.2 Choice of Ferozepur District: Rationale

Three districts of Punjab State share the international border with Pakistan. These are Ferozepur, Amritsar and Gurdaspur. As per district maps contained in the District Population Census Handbook, 1991, a community development block-wise demarcation is available for each of the three districts. Ferozepur district had 9 blocks, Gurdaspur district had 13 blocks and Amritsar district had 15 blocks. When a **border block** *is defined loosely* as the one that had at least one village directly located on the international border and all the villages within the border belt (fully border block) or had a village in the 16 Km. international border belt range (partial border block), the **maximum percentage of border blocks belonged to Ferozepur district** (89.9 percent, 8 out of 9 blocks) *followed, in descending order*, **by Gurdaspur** district (69.2 percent, 9 out of 13 blocks) **and Amritsar** district (53.3 percent, 8 out of 15 blocks). Even when the **border block** *norm is made more stringent*, the block that had at least one village on the international border and all the villages within the border belt, the border districts' relative order remain unchanged, i.e., Ferozepur (55.8 percent, 5 out of 9 blocks), Gurdaspur (46.1 percent, 6 out of 13 blocks) and Amritsar (33.3 percent, 5 out of 15 blocks). **Ferozepur district has**, thus, **the maximum exposure to international border** *followed, in descending order, by the districts of Gurdaspur and Amritsar*. **For an in-depth analysis of the study, accordingly, the Ferozepur district will be focused at**.

Table 2.4: Self-employment preference behaviour of rural unemployed youth (18-35 years) in the border and non-border districts of Punjab during April-June 1998

Salient Features	Gurdaspur	Amritsar	Ferozepur	Border – Districts	Non-border Districts	Punjab
Unemployed Persons (18-35 years) Desirous of Seeking Self-Employment in Rural Punjab						
Total (Numbers)	115,276	132,124	101,218	**348,618**	691,651	1,040,269
	11.08	12.70	9.73	**33.51**	66.49	100.00
	33.07	37.90	29.03	**100.00**		
Matric & above	75,556	72,774	41,995	**190,325**	393,526	583,851
	12.94	12.47	7.19	**32.60**	67.40	100.00
Percent of matric & above	65.54	55.08	41.49	**54.59**	56.90	56.12
Occupation Preference in Rural Punjab (Number of Households)						
Agro-based	9,307	10,984	8,765	29,056	51,071	80,127
Animal husbandry	15,370	22,697	16,724	54,791	131,487	186,278
Manufacturing	2,444	2,992	2,024	7,460	14,489	21,949
Artisan	7,377	5,108	2,863	15,348	29,001	44,349
Repair services	3,925	3,234	2,659	9,818	20,990	30,808
Trade	2,826	3,371	1,736	7,933	14,276	22,209
Transport	2,967	5,293	1,594	9,854	20,787	30,641
Dhaba, tea stall, etc.	3,351	3,219	1,688	8,258	14,091	22,349
Others	14,986	23,724	20,882	59,592	127,364	186,956
Total	**62,553**	**80,622**	**58,935**	202,110	423,556	625,666
	10.00	12.89	9.41	**32.30**	67.70	100.00
Occupation Preference in Rural Punjab (Percentage Share of Households)						
Agro-based	14.88	13.62	14.87	*14.38*	12.06	**12.81**
Animal husbandry	24.57	28.15	28.38	*27.11*	31.04	**29.77**
Manufacturing	3.91	3.71	3.43	*3.69*	3.42	**3.51**
Artisan	11.79	6.34	4.86	*7.59*	6.85	**7.09**
Repair services	6.27	4.01	4.51	*4.86*	4.96	**4.92**
Trade	4.52	4.18	1.25	*3.93*	3.37	**3.55**
Transport	4.74	6.57	2.70	*4.88*	4.91	**4.90**
Dhaba, tea stall, etc.	5.36	3.99	2.87	*4.08*	3.32	**3.57**
Others	23.96	29.43	35.43	*29.48*	30.07	**29.88**
Total	100.00	100.00	100.00	*100.00*	100.00	**100.00**

Source: Economic Adviser, *Report on Unemployed Persons (Age Group 18-35 Years) Desirous of Seeking Self-Employment in Punjab State* prepared, from Fourth Economic Census conducted during April-June, 1998, by **Economic Census Section, Economic and Statistical Organisation, Punjab.** Derived from Annexure –1.

Table 2.5: Self-employment preference behaviour of urban unemployed youth (18-35 years) in the border and non-border districts of Punjab during April-June 1998

Salient Features	Gurdaspur	Amritsar	Ferozepur	Border Districts	Non-border Districts	Punjab
Unemployed Persons (18-35 years) Desirous of Seeking Self-Employment in Urban Punjab						
Total (Numbers)	28,195	84,080	32,301	*144,576*	286,682	**431,258**
	6.54	19.49	7.49	*33.52*	66.48	100.00
	19.50	58.16	22.34	*100.00*		
Matric & above	21,241	63,459	24,178	*108,878*	205,131	**314,009**
	6.76	20.21	7.70	*34.67*	65.33	100.00
Percent of matric & above	75.34	75.47	74.85	*75.31*	71.55	**72.81**
Occupation Preference in Urban Punjab (Number of Households)						
Agro-based	641	2,592	946	4,179	6,400	10,579
Animal husbandry	893	2,849	815	4,557	12,665	17,222
Manufacturing	480	3,534	785	4,799	9,672	14,471
Artisan	1,684	5,553	1,192	8,429	14,081	22,510
Repair services	1,450	3,730	885	6,065	12,695	18,760
Trade	2,638	9,207	1,793	13,638	30,957	44,595
Transport	711	1,709	428	2,848	6,717	9,565
Dhaba, tea stall, etc.	885	2,786	831	4,502	7,864	12,366
Others	7,384	17,149	10,500	35,033	72,186	107,219
Total	**16,766**	**49,109**	**18,175**	**84,050**	**173,237**	**257,287**
	6.52	19.09	7.06	32.67	67.33	100.00
Occupation Preference in Urban Punjab (Percentage Share of Households)						
Agro-based	3.82	5.28	5.20	*4.97*	3.69	**4.11**
Animal husbandry	5.33	5.80	4.48	*5.42*	7.31	**6.69**
Manufacturing	2.86	7.20	4.32	*5.71*	5.58	**5.63**
Artisan	10.05	11.31	6.56	*10.03*	8.13	**8.75**
Repair services	8.65	7.59	4.87	*7.22*	7.33	**7.29**
Trade	15.73	18.75	9.87	*16.23*	17.87	**17.33**
Transport	4.24	3.48	2.36	*3.39*	3.88	**3.72**
Dhaba, tea stall, etc.	5.28	5.67	4.57	*5.35*	4.54	**4.81**
Others	44.04	34.92	57.77	*41.68*	41.67	**41.67**
Total	100.00	100.00	100.00	*100.00*	100.00	**100.00**

Source: Economic Adviser, *Report on Unemployed Persons (Age Group 18-35 Years) Desirous of Seeking Self-Employment in Punjab State* prepared, from Fourth Economic Census conducted during April-June, 1998, by **Economic Census Section, Economic and Statistical Organisation, Punjab.** Derived from Annexure –1.

The **district Ferozepur** derives its name from the district headquarter town, Ferozepur which is located historically on the Lahore-Delhi communication route. About its founder, there are two versions; while one ascribes it to Ferozeshah Tughlaq (1351-1387), the other ascribes it to Feroze Khan (middle of 16ᵗʰ Century), a Bhatti Chief. It was a part of the Empire of Mahraja Ranjit Singh. Around the time of Punjab's annexation by British (1845 and 1846), around it British fought and won a number of Anglo-Sikh battles, namely at Mudki, Ferozeshah, and Sabraon. They established a Cantonment and Divisional Headquarters of Railways at Ferozepur.

From the *geographical perspective*, located in the South-West corner of the Punjab State, Ferozepur district shares (a) **international border** with Pakistan on its *West and North-West side*, (b) **inter-state border** with Ganganagar district of Rajasthan in the South and West side, and (c) **inter-district boundaries** with six districts, namely Amritsar and Kapurthala (North side), Jallandhar (North-East side), Faridkot, Muktsar and Ludhiana (East side). The natural flow of rivers helps it to form its boundaries with Pakistan and the district of Amritsar (united stream of Sutluj and Beas rivers) and the districts of Jallandhar and Kapurthala (the stream of Sutluj river). Its geographical area varies between 514 sq. kms. (village papers) and 585 sq. kms. (Surveyor General of India).

Compared to the state of Punjab, the Ferozepur district is thinly populated (274 persons against 403 persons per sq. km.) that too is dominated by rural areas (74 percent against 70 percent) and by non-scheduled castes population (79 percent against 72 percent). The literacy rate is lower among the general population (48 percent against 58 percent) and scheduled castes (24 percent against 41 percent). However, it enjoys workforce participation rate (30 percent) as that of the Punjab state (Table 2.6). The industrially backward economy of Ferozepur district is dominated by small scale units and unregistered manufacturing units. This is well displayed by the low percent contribution of its manufacturing production in the net domestic product originated at district level (4.8 percent) compared to that of its counterpart at the state level (14.4 percent) during 1996-97. Also, by a very high proportion (71.7 percent) of product contribution of unregistered units to the manufacturing output in the district compared to its counterparts share at the state level (36.0 percent).

2.3 Choice of Sample Villages and Households

2.3.1   Rationale

Since 74.4 percent of the population resides in rural areas of Punjab where agriculture provides employment and livelihood to 68.1 percent of its main workers (cultivators – 39 percent, agricultural labourers – 28.1 percent, and those engaged in livestock, forestry, etc. 0.9 percent as per 1991 Census), the scope of the study is restricted to rural areas. To measure the *extent of unemployment*, the scope of the study is further restricted to rural Ferozepur represented by **434 sampled households** from **30 sampled villages**.

Rural Ferozepur district consisted of 10 Development Blocks[*] during the reference year of study (2001). Using the development index developed by the Economic and

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[*]   As per 1991 Census Handbook, Ferozepur district has 9 Development Blocks. Presently, there are 10 Development Blocks.

Table 2.6: Salient features of border versus non-border districts of Punjab

Salient Features	Gurdaspur	*Amritsar*	*Ferozepur*	**Border Districts**	Non-border Districts	Punjab
Area (Sq. Km.)	3,570	5,088	*5,316*	**13,974**	36,388	50,362
	7.09	10.10	*10.56*	**27.75**	72.25	100.00
Population (Lakhs)						
1991	17.58	25.05	*14.57*	**57.20**	145.62	202.82
Percent share	8.67	12.35	*7.18*	**28.20**	71.80	100.00
1981	15.14	21.89	*11.72*	**48.75**	119.14	167.89
Percent share	9.02	13.04	*6.98*	**29.04**	70.96	100.00
Compound growth rate per annum	*1.51*	*1.35*	*2.20*	***1.61***	*2.03*	*1.91*
Rural Population Weight in Total Population (Percent)						
1991	78.02	65.92	*74.44*	**71.80**	69.61	70.23
Population per Inhabited Village						
1991	887	1371	*1124*	**1106**	1165	1147
Population density per sq. km., 1991	492	492	*274*	**409**	400	403
Percentage Distribution of Inhabited Villages as per 1991 Population Census						
Up to 199 persons	*11.84*	*8.55*	*12.02*	***10.82***	*10.41*	*10.53*
200-499 persons	*26.65*	*14.54*	*19.69*	***20.92***	*20.14*	*20.37*
500-999 persons	*34.15*	*27.16*	*29.02*	***30.55***	*28.44*	*29.07*
1000-1999 persons	*19.40*	*30.98*	*23.52*	***24.23***	*25.58*	*25.18*
2000-4999 persons	*7.31*	*15.78*	*14.61*	***11.95***	*13.57*	*13.08*
5000- 9999 persons	*0.52*	*2.82*	*0.93*	***1.37***	*1.79*	*1.67*
10,000 or more persons	*0.13*	*0.17*	*0.21*	***0.16***	*0.07*	*0.10*
Villages (numbers)	1546	1204	965	**3715**	8698	12413
Workforce (main) Distribution (Percent) According to Industrial Categories as per 1991 Census						
Cultivators	*29.71*	*29.18*	*39.14*	***31.92***	*31.25*	*31.44*
Agricultural labourers	*25.85*	*24.86*	*28.05*	***25.98***	*22.99*	*23.82*
Agricultural allied activities	*0.73*	*0.52*	*0.87*	***0.66***	*0.87*	*0.81*
Mining & quarrying	*0.04*	*0.00*	*0.00*	***0.01***	*0.01*	*0.01*
Household industry	*0.67*	*0.45*	*1.02*	***0.66***	*1.59*	*1.33*
Non-household industry	*6.83*	*11.62*	*5.47*	***8.65***	*11.85*	*10.95*
Construction	*3.97*	*1.88*	*1.83*	***2.47***	*2.59*	*2.56*
Trade & Commerce	*9.69*	*12.38*	*9.18*	***10.77***	*10.46*	*10.55*
Transport & communication	*4.01*	*4.43*	*3.22*	***4.00***	*3.77*	*3.83*
Other activities	*18.50*	*14.68*	*11.22*	***14.88***	*14.62*	*14.70*
Workers (Lakh)	4.90	7.68	4.41	**16.99**	43.99	60.98
Share (percent)	8.03	12.60	7.23	**27.86**	72.14	100.00
Work participation rate (percent), 1991	*27.89*	*30.67*	*30.27*	***29.71***	*30.21*	*30.07*
S.C. population as percentage of total population, 1991	24.71	28.01	21.16	**25.25**	29.52	28.31
Literacy rate (percent), 1991	61.84@	58.08@	48.03@	**47.01***	49.73*	58.51@
Literacy rate of S.C. (percent)	47.60@	33.71@	24.40@	**29.50***	34.66*	41.09@

* Literacy rate is literate population divided by total population including 0-6 age-group population.
@ Literacy rate is literate population divided by total population excluding 0-6 age-group population.

Statistical Organisation, Punjab, the 10 Development Blocks of the district are divided into three development layers (categories), i.e. Developed Blocks**, namely Mumdot, Ferozepur, Zira, Makhu and Ghall Khurd;** Medium Developed Blocks**, namely Jalalabad and Guru Har Sahai; and** Least Development Blocks**, namely Abohar, Fazilka and Khuian Sarver.**

At the initial stage, a block-wise list of border villages (that lie up to a distance of 16 kilometers from the inter-national border with Pakistan) was obtained from district administration. The villages in the list did not, however, contain the *Hadbast* identification numbers. Besides, the list contained a substantial number of villages that were recently created by putting together settlements (called *Dhanies/ Basties/ Deras*) that individually or jointly had a minimum of 200 voter's population. Consequently, it was not possible to distinguish border villages from non-border villages from the village directory. In fact, we could identify and match, with our best efforts, three-fourths of the villages from the list of border village with villages listed in the village census directory. We were, thus, forced to substitute *village directory* by the *list of border villages* as a *population base* for drawing the proposed 30-village sample.

Since all the five Tehsils and all the ten Development Blocks of Ferozepur district share international border with Pakistan, it was decided to give a dominant representation to border villages. This decision was also guided by our desire *to capture the impact of nearness of the border on employment*. After consultations with knowledgeable persons, border villages were planned to be trifurcated into *zero-border villages* (that fall within border's 2 kilometer vicinity), *near-border villages* (that lie in 2 to 6 kilometer range of border) and *other-border villages* (that lie in 6 to 16 kilometer range of border). Accordingly, it was decided to have a **sample of 25 villages from amongst border villages** and **5 villages from amongst non-border villages**.

In case the reader wants to have a feel of the salient demographic, cropping pattern & farm equipments, industrial, education and health infrastructure of sampled villages, he/she may refer to **Appendix A**.

2.3.2   Village Sample

A few ground rules were laid down before initiating the process of drawing the sample of border villages. Each of the 10 border development blocks should get representation provided it has at least a set of 10 border villages. Each development block will be represented by a proportional sample of border villages. Each of the three sets of border villages, namely *zero-, near-, and other-border villages*, should have a sample of at least seven villages. Accordingly, **nth village in the list of border villages from each development blocks was chosen**. Since the border village list did not contain the distance of the village from the international border, such a *sampled list of villages* from each development block was treated as tentative. The *sampled list of villages* required hardly any substitution for the set of *other-border village's* category. However, it required marginal substitution by an adjoining village to duly represent the set of *near-border village's* category and the set of *zero-border village's* category. The non-border villages were, however, randomly picked in the field from within the blocks where their feasibility existed. The block-wise number of villages, border villages and sampled villages is displayed vide Table 2.7.

Table 2.7: Village sample from Ferozepur district: Block-wise

Development Block	Number of Villages							n[th] Border Village Sampled
	Total	Inhabited	Panchayats in 1997-98	Border Belt**	Sampled			
					Total	Border Belt	Substituted	
1	2	3	4	5	6	7	8	9
Ferozepur	131	124	111	136	5	5	2	27
Guru Har Sahai	113	110	112	110	4	3	1	36
Ghall Khurd	100	100	100	61	3	2	1	30
Mamdot	129	120	94	104	3	3	-	35
Fazilka	101	94	92	82	3	3	-	27
Jalalabad	106	98	99	111	5	4	-	28
Abohar	57	57	63	6	1	0	-	-
Khuian Sarvar	49	49	52	53	2	2	-	26
Zira*	~~110~~	~~109~~	~~106~~	26	2	1	-	26
Makhu*	~~136~~	~~128~~	~~102~~	43	2	2	-	22
Dharamkot*	~~122~~	~~121~~	~~102~~	-		-		-
District				732	30	25	4	29

*   Moga district on creation got all the 122 villages of Dharamkot Block, 16 villages from Makhu Block and 12 villages from Zira Block. Thus, 150 villages have been transferred to Moga district.

**   It includes newly created Bastis having 200 voters population that were carved as villages and had village Panchayats in the year 2000-2001. Consequently, Column 5 numbers may not tally with that Column 2 based on 1991 Census data.

Source: Government of Punjab, *Blocks at a Glance: District Ferozepur, 1997-98,* Publication No. 840, Chandigarh: Economic Advisor to Government, Punjab, pp. 2-3.

2.3.3   **Households Sample**

To draw the household sample for detailed investigations from the sampled villages, we needed a list of households for each of the 30 sampled villages. The village officials, however, officially maintain no such list, although Sarpanch, Lambardar and Chowkidar possess sufficient knowledge about the village households. In the absence of official household list, village-wise voters' lists were collected from the Election Office and used as proxies for the respective household lists. Every **n**[th] household from the voter list was *tentatively* sampled; the value of **n** varied between 5 to 21 depending upon the number of voter households in a village. The list was shown to the village elders and officials as to verify its representative character of different socio-economic segments of the village population and where suggested a few households of the tentative sample list were substituted, added or deleted. In majority of the villages, the tentative list got approval without any changes. A **minimum of 7 sampled households** (Dhole Wala village of Ghallkhurd block) **and a maximum of 29 households** (Ferozeshah village of Ghallkhurd block) **represent a sampled village**. The village-wise list of households, sampled households, and village distance from the international border is displayed vide Table 8.

Table 2.8: Salient traits of sampled villages of Ferozepur district

Tehsil name	Block name	Village						
		Name	Distance from Inter-national Border	Sampled and Surveyed House-holds (Nos.)	House-holds as per Voters List[2], 1999	n^{th} House-hold Sampled	House-holds[1] as per 1991 Census	Voters as per Voters List[2], 1999
Abohar	Abohar	Abohar Rural*	20	14	100	7	1167	500
	Khuian Sarver	Roop Nagar*	2	19	400	21	459	2,300
		Haripura	10	21	400	19	389	1,828
Fazilka	Fazilka	Gharmi	2	9	90	10	83	350
		Hasta Kallan*	3	18	210	12	890	980
		Singhpura	16	14	190	14	177	795
Jalalabad	Guruhar Sahai	Rana Panj Grian	0.5	10	147	15	154	872
		Shanga Rai Outarr*	5	20	316	16	443	1,762
		Guru Har Sahai/ Basti Kalle Wali*	12	10	62	6	2479	270
		Fathegarh	25	14	130	9	147	700
	Jalalabad	Dhani Khurd/ Dhani Phool Singh*	1.7	10	82	8	156	350
		Kerian Wali	6	14	160	11	163	630
		Chak Singh Wala	8	14	130	9	138	550
		Chak Sarian	14	9	100	11	99	350
		Ladhu Wala Uttar	22	17	300	18	270	1,100
Ferozepur	Ferozepur	Maste Ke/ Basti Ram Lal*	0.5	14	125	9	517	553
		Vier / Gatti Rajoke	0.5	20	400	20	349	1600
		Attari	4	17	158	9	106	576
		Dulchi Ke*	8	15	145	10	453	800
		Fattu Wala	14	15	220	15	210	850
	Mumdot	Savai Bokharri	4	13	140	11	94	471
		Gatti Basta No.2	0.3	9	102	11	106	460
		Mattar Hittar	1.5	14	170	12	180	775
Zira	Ghallkhurd	Ferozeshah	23	29	475	16	497	2,200
		Dhole Wala	6	7	65	9	51	315
		Sodi Nagar/ Sultankhan	14	20	400	20	400	1,887
	Makhu	Walit Shah Wala	9	10	50	5	39	175
		Malla Wala/ Basti Bishan Singh*	12	8	38	5	1719	270
	Zira	Manochahal Khurd	6	16	118	7	139	697
		Jhattre/Jhatra	30	14	140	10	135	834
Total			9 [a]	434	5,563	13 [b]	12,209	25,800

* 9 Sampled villages are part of the original villages reported in 1991 Population Census. In Punjab, one or more settlements (called *Dhanies*, *Basties* or *Deras*) having 200 voters have been declared as independent Panchayats and, accordingly, villages.

[a] stands for average distance of a sampled village from inter-national border, and [b] stands for n^{th} sampled household.

[1] Village–wise information supplied by the office of Deputy Economic and Statistical Advisor, Ferozepur.

[2] District Returning Officer, Ferozepur.

Thus, **the sampled households were approached through a pre-tested and well-designed questionnaire to solicit the required information**. (For details of the information content base, refer **Appendix C**). On the whole, 434 rural households from 30 sampled villages had been surveyed. On re-arranging the sample households as per distance of the village from the inter-national border, there are 105 households from 8 villages that are up to 2 kilometers distance from the border, henceforth referred as **zero-border villages.** Similarly, there are **near-border villages** that lie between 2 to 6 kilometers distance from the border (represented by 7 villages and 91 households); **border vicinity villages** that lie within the 0 to 6 kilometers range from the border (represented by 15 villages and 196 households); **other-border villages** that lie between 6 to 16 kilometers distance from the border (represented by 10 villages and 150 households); **non-border villages** that lie from beyond 16 kilometers from the border but within the Ferozepur district (represented by 5 villages and 88 households).

2.4 Secondary Data Sources

The primary data base of the study has been supplemented with the secondary data support, both published and unpublished. Secondary data are collected from the various official and semi-official published reports and works of individual scholars. **Population Census reports**, various issues of **Statistical Abstract of Punjab** and **National Sample Survey Organisation's publications** have been the major sources of the secondary information. Besides, the files of Economic and Statistical Organisation Punjab were also consulted for the district-wise income data and socio-economic information on the Development Blocks.

CHAPTER 3

Employment and Unemployment Scenario in Punjab

In India, there is amply evidence to suggest that the backlog volume of unemployed persons have been continuously increasing during the past few decades (Bhole and Dash, 2002) and has attained new horizons during the 1990s (Planning Commission, 2002). Moreover, the proportion of educated unemployed (secondary and above level of education) among the unemployed persons has increased from 47.0 percent in 1983 to 63.6 percent in 1993-94 (Planning Commission, 1999). Even the Eighth Five Year Plan and the Ninth Five Year Plan documents recognise the seriousness of the problem of educated unemployed. The situation is expected to worsen in the country for another decade or more partly because of the demographic structure of the population that would favour those that will join the workers age-group which, in turn, would lead to a fast growth rate of labour force, and partly due to the slow down in the growth rate of labour employment in the industrial and service sectors. The two major reasons behind the slow down of labour absorption in economy are the adoption of cost-effective technology to acquire a level playing field in the face of global competition and the reduced public sector expenditure to minimize fiscal deficits under pressure from international organisations.

The issues pertaining to growing number of unemployed persons, particularly educated unemployed, have been widely discussed in the last two decades by policy makers and development economists. The steadily increasing unemployment among the educated brings forth the basic flaws in the country's strategy to develop human resources (Visaria and Minhas, 1991; Ahuja, 1995; Singh, 1996; and Hashim, 2000). The analysis of employment structure in India in the post-liberalisation era has been attempted by many studies which revealed the increased trend of casualisation and declining employment elasticity of output, employment growth in the urban informal sector, and setbacks to rural employment generation owing to mechanization (Alam and Mishra, 1998; Bhole and Dass, 2002; and Chadha and Sahu, 2002). Besides, a sharp divide has been observed between rural and urban areas both in terms of consumption expenditure and employment opportunities (Bhalla, 2000; Ruddar Datt, 2002; and Ray and Mittal, 2002). A temporal analysis of labour productivity in agriculture and in other rural sectors points to displacement of workers from non-farm sectors due to closure of small scale and tiny units and, consequently, a growth in unemployed persons among the major states and in India as a whole.

The Chapter is organised in five sections. Section I presents the growth performance of Punjab economy across different sub-sectors. Section II is devoted to structural shifts both in terms of output and employment. The emerging employment scenario is analysed in the Section III. Section IV draws inferences regarding unemployment trends in Punjab. And, the concluding observations are set forth in Section V.

3.1 Punjab Economy: Growth Performance

Punjab is one of the relatively prosperous and dynamic states of India. During the earlier phase of green revolution, the economy of Punjab witnessed an accelerated economic

growth and steadily rising per capita income as compared with the growth experience of the Indian economy in general and other major states in particular. Consequently, Punjab continued to occupy the first position in terms of per capita income among the major Indian states up to 1992-93. No wonder, Punjab was projected as a **model** for other states. **Agriculture development led strategy model of Punjab has certain inherent weaknesses and has, overtime, shown visible signs that constrain future growth potentials**. It is owing to these inherent weaknesses, the economy of Punjab has witnessed a deceleration of economic growth during the 1990s both in terms of the overall state income and the per capita income parameters (Ahluwalia, 2000). This is despite the hype built around Punjab's economy that it would not only retain the past growth performance in the post-economic reforms era and maintain the lead, but it would also get the big-push towards more economic prosperity.

The growth experience of the Punjab economy since 1966-67 has remained quite impressive. The real NSDP has steadily increased at 4.98 percent per annum during 1966-67 to 1998-99 (Table 3.1). In the meantime, the real per capita income has grown

Table 3.1: Sectoral rates of economic growth in Punjab (1966-67 to 1998-99)

Sectors	Growth rate percent per annum			
	1966-67 to 1998-99	**1966-67 to 1979-80**	**1980-81 to 1990-91**	**1991-92 to 1998-99**
Agriculture and livestock	4.29	3.79	5.15	2.16
(a) Agriculture	3.63	3.18	4.87	0.37
(b) Livestock	5.68	6.10	5.70	5.10
Forestry and logging	5.03	12.48	-0.11	5.10
Fishing	11.44	4.17	15.30	18.54
Mining and quarrying	2.18	-0.51	9.60	-40.07
Manufacturing sector	8.64	8.22	9.12	8.49
Electricity, gas and water supply	9.78	8.12	11.96	6.32
Construction	2.52	10.06	0.46	6.19
Trade, hotel and restaurants	2.11	7.56	2.93	4.31
Transport, storage and communication	7.05	7.55	6.92	11.64
Banking and insurance	10.11	9.04	12.04	10.50
Real estate, ownership of dwelling and business services	2.64	1.03	2.86	0.65
Public administration	8.27	6.21	7.60	8.11
Other services	3.25	4.92	2.39	2.55
Net state domestic product (NSDP)	4.98	4.56	5.36	4.68
Per capita income (PCI)	2.92	2.39	3.42	2.72

Source: Singh, Lakhwinder and Sukhpal Singh, 2002:

at the rate of 2.92 percent per annum. Across the different sectors, there are substantial differences in the rates of economic growth. The below state average growth performing sectors were trade, hotel and restaurants; mining and quarrying; construction; real estate, ownership of dwelling and business services; other services and agriculture sector proper. With the exception of agriculture and livestock, activities associated with most of these sectors suffered substantially due to the unfavourable economic environment created by political turmoil and violence that the state witnessed during the 1980s. Those sectors that had small base to begin with not only survived adverse consequences of unfavourable economic environment but consolidated their growth performance behaviour. These were the fishing sector (11.44 percent per annum) followed by, banking and insurance (10.11 percent); electricity, gas and water supply (9.78 percent); manufacturing (8.64 percent); transport, storage and communication (7.05 percent) and livestock (5.68 percent).

Across the three development phases, namely green revolution phase of the 1970s (1966-67 to 1979-80), pre-reform phase of the 1980s (1980-81 to 1990-91) and post-reform phase of the 1990s (1991-92 to 1998-99), the macro growth performance behaviour depicts a parabolic formulation. Measured in terms growth performance of NSDP as well as per capita income, per annum growth rates tends to rise as one move from the phase of the 1970s (4.56 & 2.39) to the phase of the 1980s (5.36 & 3.42) and shrinks thereafter during the 1990s phase (4.68 & 2.72, see last two rows of Table 3.1).

Across the three development phases, different segments of the economy have responded differently to different under-currents. For instance, growth rate of agricultural sector dwindled from 5.15 percent growth rate in the 1980s to 2.16 percent per annum during the 1990s. 'The agriculture sector proper' (i.e. excluding livestock), amazingly, recorded as low a growth rate as 0.37 percent during the 1990s compared with that of 4.87 percent achieved in the 1980s. Even the livestock sector's growth rate declined marginally during the 1990s. Other important sectors which have shown deceleration of growth rate in the post-reform period are manufacturing; electricity, gas and water supply; banking and insurance; real estate; and other services. And the sectors which recorded accelerated growth rates during the post-reform period are forestry and logging; fishing; construction; trade; hotel and restaurants; transport, storage and communication; and public administration. The dynamism shown by these sectors could not be reflected in the overall growth rate of the NSDP because of the fact that their weight in NSDP is very low and most of them are only supporting service sector (Table 3.1).

3.2 Punjab Economy: Structural Shifts

What are the implications of the growth performance of the economy on its structure? Those sectors that have grown at a relatively faster rate (service related sectors) are expected to consolidate their relative position in the structure of the economy at the cost of those that have lagged behind (major commodity producing sectors). The structure of the economy may be visualized in terms relative contribution of the sector to domestic product (from the perspective of output flows) or to employment (from the perspective of input inflows). Data lend support to these expectations.

From the perspective of output flows, for instance, the primary sector, a representative of commodity producing sectors, consisting mainly of agriculture and livestock has, on expected lines, experienced a decline in its share in the NSDP from 51.61 percent in

(1970-71) to 48.20 percent (1980-81) to 46.48 percent (1990-91) to 42.71 percent (1997-98, Table 3.2). The fall is marked when the livestock component of agriculture sector is excluded. To be specific, the fall in its share in the NSDP is from 41.56 percent (1970-71) to 27.44 percent (1997-98). And the share of service sector related activities, represented by tertiary sector, have witnessed consolidation, particularly during the thirds phase (from around 30 percent between 1970-71 and 1990-91 to 35.73 percent during 1997-98). Within the tertiary sector, banking and insurance; real estate and dwellings; and public administration have improved their shares by 4.30 percentage points, 2.14 percentage points and 1.42 percentage points respectively between 1970-71 and 1997-98. In contrast with this, the secondary sector, another representative of commodity producing sector, shows a mixed behaviour. It consolidates its share in the initial round, from 16.63 percent (1970-71) to 24.38 percent (1990-91) but shrinks thereafter to 20.11 percent (1997-98). This divergent behaviour is primarily attributable to its non-organised, but substantially large component. For, the registered manufacturing sub-sector of secondary sector has, on expected lines, consistently consolidated its share in the NSDP from 5.49 (1970-71) to 9.32 (1997-98). It can, thus, be concluded that the economic structure of the state economy has shown the positive changes from the agrarian base to more diversified industrial and tertiary-oriented one.

Table 3.2: Percentage distribution of net state domestic product (NSDP) of Punjab at factor cost

Sector	1970-71	1980-81	1990-91	1997-98
Agriculture	41.56	33.76	31.25	27.44
Livestock	10.05	14.44	15.23	15.27
Forestry and logging	0.22	0.88	0.53	0.14
Mining and quarrying	0.04	0.02	0.04	0.00
Fishing	0.02	0.03	0.08	0.31
Sub-total (Primary)	51.89	49.13	47.13	43.16
Registered manufacturing	5.49	6.70	10.13	9.32
Unregistered manufacturing	5.52	4.96	6.70	5.23
Construction	4.49	5.71	3.25	5.67
Electricity and water supply	1.13	2.64	3.80	0.89
Sub-total (Secondary)	16.63	20.01	24.38	21.11
Transport storage & communication	4.04	2.61	3.12	3.45
Trade, hostels and restaurants	16.21	13.10	10.39	13.93
Banking and insurance	1.49	2.30	4.07	5.79
Real estate and ownership of dwelling	1.61	4.77	3.50	3.75
Public administration	3.34	2.85	3.35	4.78
Other services	4.79	5.30	4.06	4.51
Sub-total (Tertiary)	31.48	30.86	28.49	35.73
Grand total	100.00	100.00	100.00	100.00

Source: Gill, Singh and Brar, 2001

From the perspective of input flows, the observed structural changes are not that well marked. It ought to be so when labour, the supply of which is determined by demographic factors, is used as an input. For instance, the share of labour force employed in agriculture sector in terms of Census data has, on expected lines, declined from 62.67 percent (1971) to 58.02 percent (1981) to 55.26 percent (1991) to 39.36 percent (2001). This fall is noteworthy for the workforce employed in agriculture sector includes cultivators (self-employed) as well as agricultural labourers (sellers of labour power). In contrast, the share of work force employed in industrial sector has increased from 11.30 percent (1971, 4.42 lakh persons) to 12.28 percent (1991, 7.49 lakh persons). Similarly, the relative weight of tertiary sector has substantially improved from 23.09 percent (1971) to 25.74 (1981) to 29.08 (1991) [Table 3.3].

Table 3.3 : Structure of workforce (main workers) in Punjab

(Percentage)

	1971[1]	1981[1]	1991[1]	2001[2]
1. Cultivators	42.56	35.86	31.44	22.96
2. Agricultural labourers	20.11	22.16	23.82	16.40
3. Livestock, forestry etc.	0.95	1.00	0.81	*
4. Mining and quarrying	0.01	0.02	0.01	*
Primary Sector (1+2+3+4)	**63.63**	**59.04**	**56.08**	*
5. Manufacturing: a) In household industry	3.17	2.58	1.33	3.36
b) Other than household industry	8.13	10.58	10.95	*
6. Construction	1.98	2.04	2.56	*
Secondary Sector (5+6)	**13.28**	**15.20**	**14.84**	*
7. Trade and commerce	8.22	9.47	10.55	* 57.28
8. Transport storage and communications	2.80	3.73	3.83	*
9. Other services	12.07	12.54	14.70	*
Tertiary Sector (7+8+9)	**23.09**	**25.74**	**29.08**	*
Total	**100**	**100**	**100**	**100.00**

Sources: 1.   Census of Punjab, 1971, 1981 and 1991.
2.   Census of India, 2001 (Electronic Data), quoted in *Indian Journal of Labour Economics*, Vol. 45(1), January-March, 2002.

A similar but sharp pattern is displayed when alternative NSSO data source of employment flows is analysed to corroborate the Fisher-Clark-Kuznets hypothesis of positive structural change in the Punjab state. On expected lines, a steady decline is observed in the proportion of workers engaged in the agriculture sector from 66.8 percent (1983) to 56.4 percent (1993-94) to 53.4 percent (1999-2000) [Table 3.4].

On the other hand, the proportion of workforce in non-agricultural sectors has witnessed a steady increase. This seems to be a healthy trend. Two points, however, need to be underlined. **First,** the inter-sectoral shifts in workforce were relatively more pronounced during the 1980s than during the 1990s. For example, for agricultural workers, the decline was fairly steady and high (from 66.8 percent in 1983 to 56.4 percent in 1993-94) during pre-reform period and it declined rather mildly (from 56.4 percent in 1993-94 to 53.4 percent in 1999-2000) during the post-reform period. **Second**, the halting pace of workforce shift to non-agriculture sectors during the post-reform years may be because

of low level of their human capital index, particularly among rural workers. Moreover, low education levels among rural female workers will put them in a more disadvantageous position as they have to compete with their male counterparts in the rural areas and with their more qualified sisters in the urban areas.

Table 3.4: Sectoral distribution of workforce (usual status criteria) in Punjab, 1983 to 1999-2000

(Percentage)

Sector	1983	1993-94	1999-2000
Agriculture	66.8	56.4	53.4
Manufacturing	11.8	12.2	13.5
Non-Agriculture	33.2	43.6	46.6

Source: Culled from the Table 2 and Table 5 of Chadha and Sahu, 2002

3.3 Punjab Economy: Emerging Employment Scenario

The structure of the Punjab economy continues to be agrarian oriented, more so, from employment perspective. For, agriculture sector continues to engage from two-fifths (as per Census 2001 estimates) to about half of the workforce (as per NSSO 1999-2000 estimates). Also, the share of employment offered by manufacturing sector is far less than 20 percent of workforce - a norm to declare any state an industrially advanced state. Such a situation has serious implications for the future employment generation scenario in the state.

For, **Punjab's agrarian sector is facing an unprecedented crisis and has turned away from the path of sustainable growth and employment**. Nearly stagnated agricultural production and crop yields, sharply deteriorated land and water resources, reduced profit margins due to rising cultivation costs and procurement crisis of wheat and paddy have added miseries to the resource-poor cultivators in Punjab. As a consequence, the capacity of Punjab agriculture sector to absorb additional labour appears to have declined sharply overtime (Bhalla, 1993; and Sidhu, 2002). Probably, there already prevails a very high level of underemployment among the persons engaged in agriculture (Gill, 2002).

The tertiary sector in Punjab has already overgrown and cannot be expected as the major absorbent of rising labour force. In fact, most government bodies have already planned to 'down-size' or 'right-size' the volume of their employees, more so, in the post-reform phase (Table 3.5). The total employment in public sector in the state increased marginally from 590,675 persons in 1992 to 599,088 persons in 1999. Organised private industry is no longer creating very many jobs. Between 1992 and 1999, organised private industry has created additional employment for 19,538 persons only, which is 2791 persons per year (Statistical Abstract of Punjab, 2000). Even in the organised manufacturing sector, employment growth has decelerated in Punjab from 7.21 percent (1973-79) to 5.58 percent (1980-90) to 3.06 percent (1991-97) [Singh and Anita Gill, 2003].

Table 3.5 : Employment in organised sector in Punjab (in numbers)

	1992	1993	1994	1995	1996	1997	1998	1999
1. Public sector								
a) Central Government	79904 (9.75)	81394 (9.75)	82787 (9.96)	83693 (9.95)	83662 (9.82)	80823 (9.55)	80483 (9.42)	70880 (9.43)
b) State Government	301770 (36.84)	302945 (36.65)	299930 (35.23)	296476 (35.23)	298202 (34.93)	298597 (35.29)	310654 (36.39)	307146 (36.26)
c) Quasi Government	175447 (21.42)	175040 (21.18)	177842 (21.34)	182526 (21.69)	188203 (22.04)	180329 (21.32)	177175 (20.75)	180329 (21.29)
d) Local Government	33554 (4.10)	34232 (4.15)	33605 (4.03)	32764 (3.90)	32942 (3.86)	32834 (3.88)	34241 (4.01)	33602 (3.97)
Total (1)	5900675 (72.11)	593611 (71.83)	594364 (71.31)	595459 (70.77)	603209 (70.65)	592583 (70.04)	602553 (70.57	599088 (70.72
2. Private sector	228485 (27.89)	232813 (28.17)	239158 (28.69)	246000 (29.23)	250551 (29.35)	253424 (29.96)	251223 (29.43)	248023 (29.28
Grand total (1+2)	819160 (100.00)	826424 (100.00)	833522 (100.00)	841459 (100.00)	853760 (100.00)	846007 (100.00)	853776 (100.00)	8471111 (100.00)
Increase of grand total over the previous year	27871	7264	7098	7937	12301	-7753	7769	-6665

Source: Economic Advisor, *Statistical Abstract of Punjab 1995 and 1999*, Government of Punjab, Chandigarh.
Growth of employment between 1990 and 1999 = 7.72 percent and Per Year = 0.86 percent

The small scale industry, which employs about 80 percent of industrial labour force, has, however, attracted additional workforce to its fold from 711,417 persons in 1991-92 to 864,592 persons in 1998-99; an increase of 21.53 percent over a period of seven years, i.e. an addition at the rate of 3.08 percent per annum (Statistical Abstract of Punjab, 2000). However, employment in this unorganised sector is the least preferred job area for educated unemployed persons in Punjab (Krishan, 1986) because this segment is notorious for non-observance of statutory labour standards like minimum wages, working hours, retirement benefits, etc. In fact, employees are ill-paid and, consequently, it attracts only migrant labourers from the poor states like Bihar and U.P. and not the educated unemployed of the state. Over and above this fact is the hostile business environment that emanates from post-reform liberalised and globalised scenario which will not allow it to absorb additional labour force. **A not so good an omen for the educated unemployed workforce of the state**!

3.4 Punjab Economy: Unemployment Trends

Let us examine as to how far alternative data sources of employment situation of the state corroborate the above inferences. The Punjab Planning Board[*] (1978) estimated that educated manpower having matriculation or higher qualifications would expand from 15.66 lakh in 1978 to 21.94 lakh in 1983. And of the educated (consisting of graduates, post-graduates and diploma-holders) manpower of 3.45 lakh (1978), 11.8 percent were unemployed. The observed high rate of unemployment is despite the fact that those that were, and are more, prone to unemployment were ignored, namely non-technical educated manpower consisting of matriculates having below graduation level of education. On its recommendation, the data on unemployed persons (Job-seekers) in the live registers of Employment Exchanges began to be categorised between the educated (i.e. matriculation and above) and uneducated persons (below matriculation).

The facts lend support to our hypothesis regarding burgeoning increase in educated unemployed numbers as well as their share. To illustrate, the proportion of educated unemployed persons in the state in terms of Employment Exchange data has increased from 50.52 percent (214,738 persons in 1980) to 62.07 percent (409,211 persons in 1990) to 73.32 percent (399,618 persons in 1999) [Table 3.6]. It is noteworthy the number of unemployed registered applicants with Employment Exchanges has been rising in spite of the fact that the **placement of the unemployed persons per year have been progressively falling** from 27,751 persons (1975) to 17998 persons (1980) to 3978 persons (1996) to 4308 persons (1997) to 2627 persons (1999) [Statistical Abstract of Punjab 2000, p. 456]. **In 1998**, **one among 280 educated unemployed persons was the fortunate one to get placement through employment exchanges** – indeed, a very low probability of getting a job. Despite this biting reality, educated youth of Punjab goes on getting registered with the employment exchanges. – a pointer towards the forecasted gloomy state of affairs of Punjab economy.

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[*] The Punjab Planning Board study on *Employment and Manpower* was a precursor to the formulation of state's Sixth Five Year Plan (1980-85).

Table 3.6: Registered unemployed persons in Punjab by education

Year	Educated	Uneducated	Total
1980	214,738 (50.52)	210,308 (49.48)	425,046 (100.00)
1985	273,642 (50.93)	263,688 (49.07)	537,330 (100.00)
1990	409,211 (62.07)	250,039 (37.93)	659,250 (100.00)
1995	348,259 (68.79)	157,977 (31.21)	506,236 (100.00)
1996	387,192 (71.35)	155,503 (28.65)	542,695 (100.00)
1997	405,426 (69.78)	175,592 (30.22)	581,018 (100.00)
1998	410,161 (72.18)	158.051 (27.82)	568,212 (100.00)
1999	399,618 (73.32)	145,399 (26.68)	545,017 (100.00

Note: Educated means all applicants who are matriculation and above level of qualifications. Uneducated means all applicants who are under matric and illiterate applicants.
Source: Government of Punjab, *Statistical Abstract of Punjab*, various issues.

Who are these unemployed persons? Data on the composition of the educated unemployed persons by level of education, given vide Table 3.7, reveal that the largest portion of them are having general education qualifications but no work experience or skill. Fresh matriculates represent the single largest category. Their relative weight increased from 33.63 percent (1980) to 39.10 percent (1990) to 45.81 percent (1999). When undergraduate freshers are added to this category, its relative weight shows an increase from 46.51 percent (1980) to 60.54 percent (1999). Graduate and postgraduate freshers constituted another 16.15 percent of educated unemployed in 1980. Their share, however, declined to 8.89 percent in 1999. All of them generally seek white-collar jobs.

The trained workforce available for employment accounts for only 30.57 percent of the educated employment seekers population (1999). These are divided into four broad categories, viz. (a) technical trained persons holding (i) engineering degrees & diplomas and (ii) certificates & work experienced (low level); (b) trained teachers; (c) trained doctors, agriculture experts & (d) others (including paramedical persons, etc.). Among them, trained teachers (9.17 percent) and certificate & work experience holders (8.90 percent) are two large categories of unemployed educated persons (Table 3.7). Unemployment among trained doctors, engineers and agricultural specialists is the least. **Educated unemployed persons are dominantly those persons who have grounding in general education**.

Table 3.7 : Number of educated unemployed by level of educational qualifications in Punjab

Qualifications	1980	1985	1990	1995	1996	1997	1998	1999
Matriculate freshers	72,215 (33.63)	113,066 (41.32)	159,989 (39.10)	175,821 (50.49)	165,091 (42.64)	180,419 (44.50)	185,055 (45.12)	183,082 (45.81)
Undergraduate freshers	27,660 (12.88)	33,895 (12.39)	42,893 (10.48)	36,373 (10.44)	36,089 (9.32)	46,100 (11.37)	52,251 (12.74)	58,867 (14.73)
Graduate freshers	28,221 (13.14)	30,452 (11.13)	35,934 (8.78)	32,529 (9.34)	29,984 (7.44)	31,285 (7.72)	30,239 (7.37)	28,600 (7.16)
Postgraduate freshers	6454 (3.01)	6651 (2.43)	10581 (2.59)	9008 (2.59)	8305 (2.15)	7682 (1.89)	7832 (1.91)	6910 (1.73
Graduate engineers	246 (0.11)	254 (0.09)	437 (0.11)	1056 (0.30)	1052 (0.27)	1000 (0.25)	931 (0.22)	966 (0.24)
Diploma engineers	2430 (1.13)	3907 (1.43)	5189 (1.27)	7933 (2.28)	7213 (1.86)	7124 (1.76)	7205 (1.76)	6623 (1.66)
Craftsman trained ITI & work experienced	25849 (12.04)	34327 (12.55)	34104 (8.34)	35591 (10.22)	33516 (8.66)	35006 (8.63)	38997 (9.51)	35575 (8.90)
Doctors : a) Allopathic	44 (0.02)	33 (0.01)	27 (0.01)	66 (0.02)	60 (0.02)	75 (0.02)	106 (0.02)	134 (0.03)
b) Others	262 (0.12)	264 (0.10)	275 (0.07)	680 (0.19)	481 (0.12)	409 (0.10)	394 (0.10)	380 (0.10)
Agriculture specialist	331 (0.16)	269 (0.10)	643 (0.16)	893 (0.26)	340 (0.09)	604 (0.15)	653 (0.16)	546 (0.14)
Teachers : a) M.Ed. and B.Ed.	18480 (8.61)	19732 (7.21)	23425 (5.72)	30565 (8.78)	28051 (7.25)	37038 (9.14)	35798 (8.73)	34365 (8.60)
b) Language	1488 (0.69)	1047 (0.38)	956 (0.23)	505 (0.15)	481 (0.12)	541 (0.13)	498 (0.12)	352 (0.09)
c) PTI, CPED, DP, BP & MP	9948 (4.63)	6945 (2.54)	4925 (1.20)	3476 (1.00)	2625 (0.68)	3029 (0.75)	2162 (0.53)	1938 (0.48)
Others	21,110 (9.83)	22,800 (8.33)	89,833 (21.95)	13763 (3.95)	73,904 (19.09)	55,114 (13.59)	55,872 (13.62)	41,280 (10.33)
Total	**214,738 (100.00)**	**273,642 (100.00)**	**409,211 (100.00)**	**348,259 (100.00)**	**387,192 (100.00)**	**405,426 (100.00)**	**410,161 (100.00)**	**399,618 (100.00)**

Source: Government of Punjab, *Statistical Abstract of Punjab,* various issues.

These secondary data based inferences are substantiated by the primary data based studies as well. For instance, a well dispersed study spread across 42 villages representing all the districts of the Punjab state through 42 tehsils and conducted during 1979-81 reveals that about two-thirds of the unemployed of the state (62.57 percent) were matriculate unemployed persons (Krishan, 1986). In other words, even in rural Punjab, unemployment of the educated persons especially those who are matriculates or more qualified in general education continue to dominate the unemployment scene of Punjab. Although there are rural-urban differences in the level of qualifications and socio-economic backgrounds of the unemployed, the highest incidence of unemployment is found among the non-technical/general educated persons even in the three border districts of Punjab (Rao and Singh 1989). Even during 2000, the IAMR conducted study of Amritsar district indicates that the weight of educated (general) unemployed persons (15 plus age group) in the pool of unemployed persons is as high as 62.4 percent (IAMR, 2002).

It is this setting that has led to the state of Punjab getting is bracketed with Kerala and Tamil Nadu in the category of increasing unemployment but low growth of labour force. As a consequence, the state is expected to have the lowest employment growth rate among the major Indian states, i.e. 0.73 percent per annum compared to its labour force growth rate of 2.27 percent per annum during the (1997-2002, Table 3.8). The worst expected scenario in terms of employment growth, consequently, places Punjab even below such low performing states as Bihar and U.P. (Planning Commission, 1999).

Table 3.8 : Employment growth rate and growth of labour force among major Indian states, 1997-2002

States	Employment growth rate: 1997-2002	Labour force growth rate	
		1997-2002	2002-2007
All India	2.44	2.51	2.47
Andhra Pradesh	3.11	2.39	2.34
Assam	3.73	2.73	2.79
Bihar	1.29	2.58	2.85
Gujarat	2.53	2.37	2.18
Haryana	3.49	2.99	2.84
Karnataka	2.81	2.47	2.26
Kerala	1.26	2.30	1.90
Madhya Pradesh	2.61	2.39	2.48
Maharashtra	2.54	2.26	2.20
Orissa	2.35	2.10	2.13
Punjab	0.73	2.27	2.08
Rajasthan	2.71	2.84	2.91
Tamil Nadu	2.00	1.98	1.70
Uttar Pradesh	2.07	2.57	2.68
West Bengal	2.75	2.52	2.45

Employment and labour force estimates are on usual status basis
Source: Planning Commission, *Ninth Five Year Plan*, Vol. I., Government of India, New Delhi, 1999, p. 20.

Even the Planning Commission's estimate of unemployed persons (10.65 lakh in 2002) turned out to be an underestimate when those seeking self-employment were considered as unemployed. As per a comprehensive and exhaustive survey carried out as a part of the Fourth Economic Census (during April-June 1998) by the Economic and Statistical Organisation of Punjab (with the help of school teachers and staff of other departments under the supervision of Tehsildars, BDPOs and EOs of the Municipalities), there were 14.72 lakh unemployed persons (18-35 years age-group) in the state in 1998 (much before 2002 as predicted by Planning Commission). Of the 14.72 lakh unemployed persons, seven-tenths lived in rural areas (70.69 percent, 10.41 lakh persons) and the residual in urban areas (Table 3.9). Even among them, above three-fifths (61.02 percent, 8.98 lakh persons) were educated unemployed (matriculation and above). And, in the rural areas, educated unemployed dominated (56.13 percent) but were far less in weight compared to their counterparts in urban areas (72.81 percent.).

Table 3.9 : Unemployed persons desirous of seeking self-employment in Punjab, 1998

Area	Educated	Uneducated	Total
Rural	583,851	456,418	1040,269
	(56.13)	(43.87)	(100.00)
Urban	314,009	117,249	431,258
	(72.81)	(27.19)	(100.00)
Total	897,860	573,667	1471,527
	(61.02)	(38.98)	(100.00)

Figures in brackets are percentage

Source: Economic Advisor, *Report on Unemployment Persons (Age-group 18-35 years) Desirous of Seeking Self-Employment in Punjab*, Government of Punjab, Chandigarh, 1998.

Altogether low estimates of unemployment rate emerge from the NSSO data based studies in **rural Punjab** probably owing to the differences in the methodology and conceptualisations in-built in these estimates. For example, during 1999-2000, in terms of **usual principal status**, the unemployment rate was estimated at 2.6 percent: 2.3 percent for males, 6.2 percent for females (Table 3.10). For **current weekly status** and **current daily status**, unemployment rates are as follows: males (3.1 and 4.2 percent), females (1.0 and 1.7 percent) and persons (2.4 and 3.7 percent) respectively. On the expected lines, however, unemployment rate among educated (age 15 years and above) is relatively pronounced. It is, in the case of **usual principal status** 6.0 percent in general; males (4.8 percent) and females (21.5 percent). A similar upward behaviour is depicted in terms of **current weekly status** as well (Table 3.10).

The unemployment rate, on predicted lines, is sensitive to age-profile of those who seek work. For instance, it is substantially higher in the age-group (15-29 years) where those who seek and need work yearn the most to productively engage themselves (Table 3.11). Let us take the **usual principal status** case in the context of this age-group. The unemployment rate zooms up from the average of 2.6 percent to 6.1 percent; for males from 2.3 percent to 5.6 percent and for females from 6.2 percent to 13.3 percent. A similar pattern is discernible even when

Table 3.10 : Unemployment rates in rural Punjab during 1999-2000

(Percentages)

	Males	**Females**	**Persons**
I. Overall			
a) Usual status	2.3	6.2	2.6
b) Current weekly status	3.1	1.0	2.4
c) Current daily status	4.2	1.7	3.7
2. Educated Persons (15 years age and above)			
a) Usual principal status	4.8	21.5	6.0
b) Current weekly status	5.3	5.5	5.3

Note: Educated persons means secondary and above qualification.

Source: *Employment and Unemployment Situation in India*, NSSO, 55th Round, Report No. 458, Part I, May 2001.

Table 3.11 : Unemployment rates among youth (15-29 years) in rural Punjab during 1999-2000

(Percentage)

Activity status	15-19 Years	20-24 Years	25-29 Years	15-29 Years
Usual Principal Status				
Males	10.3	6.1	1.7	5.6
Females	5.6	33.3	4.5	13.3
Persons	9.9	7.6	1.8	6.1
Current Weekly Status				
Males	11.0	6.8	3.2	6.7
Females	1.2	3.6	0.7	2.0
Persons	8.1	5.9	2.5	5.3
Current Daily Status				
Males	12.0	7.9	5.0	8.0
Females	2.7	6.4	1.3	3.6
Persons	9.9	7.6	4.3	7.0

Source: *Employment and Unemployment Situation in India*, NSSO, 55th Round, Report No. 458, Part I, May 2001.

alternative measurement concepts are deployed (Table 3.12). In fact, the unemployment rate is the maximum among the females in the age-group of 20-24 years probably because of counter social pressures associated with their initial marital phase.

The above NSSO related reported findings unwittingly assume homogenous attitude towards to work of all the persons. It is rarely so. Indeed, there is marked degree of under-employment displayed by the data. As many as, 8.8 percent of the such persons (11.7 percent females and 8.6 percent males) were not working regularly throughout the year in the case of usual principal status (Table 3.12). Moreover, 4.4 percent persons sought or were available for alternative work. Further, 5.3 percent of such persons in the age-group of 15 years and above sought or were available for additional work.

Table 3.12 : The salient features of workforce in rural Punjab during 1999-2000, usual principal status

(Percentage)

Salient Features	Males	Females	Persons
1. Non-regular working throughout the year	8.6	11.7	8.8
2. Those sought or were available for additional work (15 years age and above)	5.4	3.4	5.3
3. Those sought or were available for alternative work.	4.6	1.1	4.4

Source: *Employment and Unemployment Situation in India*, NSSO, 55th Round, Report No. 458, Part I, May 2001.

3.5 Concluding Observations

The proceeding discussion on the Punjab economy indicates as to why and how certain fundamental factors are aggravating the unemployment situation. The existence of substantially higher proportion of income in the non-agricultural sector and the higher proportion of population in the agricultural sector is the most pronounced manifestation of the mismatch between the sectoral composition of output and employment that has cropped up during the process of structural transformation of Punjab economy. The deceleration of overall growth rates of state income and that of per capita income (measured in real terms) is an outcome of the impending consequences of the disturbed equilibrium of economic activities that prevails in the state.

The declining employment elasticity of output is another such manifestation that has, and continues to, adversely affect the employment generation capacity of the economy. Even the quality of employment appears to be deteriorating as is reflected in the increasing degree of casualisation. The new economic policy programmes and increasing budgetary deficits of the state have, at least in the first round, added fuel to the already bad employment scenario by freezing the employment growth in public sector. For, even the organised private industry has added few additional employment openings during the post-reform era. No wonder, the share of manufacturing sector's employment in the overall workforce has remained low. Even the leading employment generating agricultural sector has yielded to the pressures of fast mechanisation of agricultural operations associated with mono-cropping patterns and has consequently, reduced its labour absorption capacity.

The gap between the employment growth and labour force growth in the state has, accordingly, widened during the Ninth Five Year Plan. Not surprisingly, even the Planning Commission's estimate of unemployed persons (10.65 lakh in 2002) turned out to be an underestimate when those seeking self-employment were considered as unemployed (14.72 lakh in 1998). In terms of skill differentials, educated persons dominate the pool of unemployed persons. Such a bleak employment scenario, obviously, warrants an urgent attention, more so, for rural Punjab.

CHAPTER 4

Impact of Border Risk on Income, Infrastructure and Employment

The probabilistic treatment of uncertainty is known as risk. The market risk magnifies in a border state that boasts of an active international border. Punjab State has a long stretch of active international border. The entrepreneurs, particularly farmers, faced two war (1965 and 1971) in the border belt and, consequently, live under constant threat of aggression. Unlike porous border with Nepal, a barbed wire fence that seals the Punjab side of Indian international border with Pakistan **blocks the flow of merchandise across international border**. Such a situation is least conducive for making investments by private entrepreneurs in particular, and state as an entrepreneur, in general. If so, does the fear psyche of investors uniformly influence the investment in all set of activities in the border region? Does the state shy away even from investments aimed at building socio-economic infrastructure base of the border region? What are the implications of border risk for employment opportunities in the border region? Answers to these and related questions are attempted, first, at the theoretical level and, later, at the empirical level by comparing the set of border districts with the set of non-border districts of Punjab economy.

The Chapter is organized in four sections. Section I is devoted at deciphering the theoretical underpinnings associated with border risk and developing verifiable hypothesis. Section II describes the database and methodology used for analyzing the data. Interpretation of facts aimed at verifying the validity of the hypotheses is detailed in the context of socio-economic infrastructure and economic activities in Section III and with reference to unemployment dimension in Section IV. Section V attempts the policy implications of the study.

4.1.1 Theoretical Underpinnings

A risk situation depicts a subset of uncertainty situations where formulation of probabilistic expectations is considered to be conceivable and measurable. The probabilities of future events are, however, *subjectively* determined. These are influenced by (i) the investors' risk attitude, (ii) the assessment of rate of change of the business environment and (iii) the time-horizon. The decision-maker assigns subjective probabilities to the possible effects of each strategy to estimate its mathematical expectations. Having done such computations for all alternative actions, the entrepreneur chooses the action with the highest expected value in each period. The set of net expected profit values of each period is discounted with a *subjective discount rate*, and their present value is estimated. The decision-maker chooses the strategy that maximises the present value of future stream of net profits over its specific time-horizon. (Koutsoyiannis, 1985: 261).

The **decision-making by an individual investor as well as by a group of investors is governed by prevailing business environment** which is, in turn, conditioned by the existing (a) technology paradigm, (b) general price level, (c) interest rate, (d) political leadership, (e) market structure and (f) market psychology. The perception of investors regarding profitable investment opportunities is, therefore, sensitive to a change in one or more of these business environment conditioning variables. A positive assessment of the

perceived change in any of these variables may translate in an act of additional capacity-creation (or capital formation) and, in turn, accelerate the growth of the economy. A pessimistic assessment may, in contrast, discourage, in the initial round, investment and cause, when it persists over a long duration, capital flight - even through acts of disinvestment. As a consequence, growth rate in the area will, initially, slow down and may become negative at a later date.

The **reach of** these **business environment-sensitizing variables** is, in general, all-pervasive across regional boundaries within a nation. Since an investor-group perceives investment opportunities differently in different regions, the degree of sensitivity to the changes in these variables may vary across regional territories. For instance, an **industrially backward region** is perceived by the investor-group as having a low investment potential. This perception continues until the change in political leadership decides to give (i) region-specific subsidies on capital investments and/or (ii) grant tax holidays on the produce flowing from the investments made in the industrially backward region.

There is, however, a caveat. An *industrially backward region* becomes an **active-border region** when it gets exposed to, off and on, real war action that causes massive destruction of life and property, particularly the fixed assets (i.e. production capacity), of the region on the one hand, and loss of market credibility of the region, on the other. Such a scenario creates a *fear-ridden* **group-psyche** among the investor-groups *that encourages them to indulge in capital flight from the active border region*. To make any discernible dent on the *fear-engrossed* **group-psyche** of the investor-groups, it requires the demonstration of strong will power on the part of (new) political leadership. It may require the display of the state muscle-power by taking punitive action against the hostile neighbour (a typical strategy of Israel against it neighbours) and simultaneously committing and initiating work on state sponsored investment projects in the region on a large scale. Such state initiatives, when accompanied by other privileges doled out to industrially backward regions, may succeed in instilling investors' confidence in the future of the economy of an active border region.

Does the *fear-engrossed* **group-psyche** behaviour of the investors' uniformly influence the investment in all set of activities in the border region? No, not necessarily. The regional activities may be grouped into three broad sets, namely the set of activities representing primary sector, secondary sector and tertiary sector. While the production of primary and secondary sector deals with creation of goods, those of tertiary sector deals with creation of services. While the dominant form of production in the primary sector involves multiplication of goods using the same, marginally improved, or genetically engineered bio-technology, in the secondary and tertiary sectors it involves multiplication of goods/services with the help of continuously updated, or altogether new, man-made technologies. The production process related technological developments, thus, play a crucial role in the multiplication of goods and services.

While marketing of supplies produced by the primary sector encounters market conditions that resemble perfect competition, the supplies originating from secondary and tertiary sectors encounter imperfect competition and, at times, oligopolistic market conditions - where market leadership and market share is the prime consideration for survival. In such an environment, the up-to-date technology base is an asset. So is the necessity to harness the advantage of economies of scale. Accordingly, the production

bases of units falling in secondary and tertiary sectors require, substantially and continuously, higher doses of investment compared to their primary sector counterparts. Consequently, the *fear-engrossed* **group-psyche** behaviour of the investors is likely to hit the units belonging to secondary sector maximum, followed by, those belonging to tertiary sector and, the least, the units of the primary sector. Accordingly, **the productive capabilities of an active-border region are likely to be of a lower order than that of its non-border counterpart region, primarily owing to the relative neglect of activities of secondary sector.** Besides, it would imply a low employment base. Alternatively viewed, **the border region will experience a higher rate of unemployment compared to its counterpart, the non-border region**.

How far would the State like to invest in such an active-border area? It depends on the strategic importance of the region to the Nation and the State. The state of Punjab has a strategic location. The strategic road and rail links to the state of Jammu and Kashmir pass through the state. The common border of the state of Jammu and Kashmir with Pakistan is known as the *line of control*, but not an *international border* as is the case with the Punjab state. The *line of control* in the Chhamb-Jorian sector, the *chicken neck*, of Jammu and Kashmir provides comparative advantage to Pakistan and when ever (during 1965 and 1971) it has come under attack. This pressure of Pakistan is countered by sensitizing the *international border* adjoining the states of Punjab and Rajasthan.

Consequently, it is imperative for the Nation to declare the major state roads linking the rest of the country with the border as defense roads. Besides, to ensure the quick mobility of the troops in the border belt, the local link roads must be kept functional in all weather conditions. **The development of road network in border areas is, thus, a response to strategic defense interests of the Nation**. In the non-border areas, it is a response, however, to market linkage pressures that demand good transport facilities to move the supplies (produce) from surplus producing regions to the deficit producing regions (in response to their demand). The **border districts are likely to have, thus, as good network of roads as the non-border districts**. Accordingly, **the strategic defense interests of the Nation are likely to ensure as good a socio-economic infrastructure in the set of border districts as is dictated in response to market forces in the set of non-border districts**.

4.1.2 Hypotheses Formation

1. *The productive capabilities of an active-border region are likely to be of a lower order than that of its non-border counterpart region, primarily owing to a relative neglect of activities of the secondary sector. This implies that a border region provides a poor environment to attract medium and large-scale industrial units to its fold. Even those units that were there at the time of partition are likely to be shifted to other areas or will continue to operate without substantial enhancement of their production base.*
2. *The set of border districts are likely to enjoy as good an infrastructure base in response to national strategic defense interests as is enjoyed by its counterparts in the set of non-border districts in response to market pressures.*
3. *The border region will experience a higher rate of unemployment compared to its counterpart non-border region.*

4.2.1 Data Base and Methodology

The chapter is based on district-wise secondary data compiled by the office of Economic Advisor to Government of Punjab. It is available in published form either in the Statistical Abstract of Punjab or in the various survey reports. The district-wise data of Punjab state has been recompiled into two sets of districts, a **set of border districts** (called border region) representing the three border districts that share a common international border with Pakistan namely Ferozepur, Amritsar and Gurdaspur. And, a **set of non-border districts** (called **non-border region**) represents the remaining districts of Punjab state. Percent change in the values (ratios) of variables of the set of border districts over the values (ratios) of corresponding variables representing the set of non-border districts has been computed. *Every effort has been made to ensure temporal compatibility of the data by using variables that are relatively immune to administrative changes as well as purchasing power of the currency.*

4.2.2 Punjab Economy: The Setting

The state of Punjab is generally endowed with a plain fertile land-base and a favourable agro-climatic environment. For instance, both the sets of border-belt districts and non-border-belt districts received, on an average (1995-99), equal rainfall (600 mm.). In terms of district income estimates, the State Domestic Product of Punjab has doubled in the post-reform era from Rs. **202.5** lakh (1991-92) to Rs. **405.8** lakh (1996-97) [Table 4.1]. In the mean time, however, per capita income has increased at a bit slower rate from Rs. 9,872 (1991-92) to Rs. 18,007 (1996-97). A part of the income gains have, thus, been consumed by the population growth. Interestingly, the increase in domestic product is not led by the secondary sector (Table 4.2). In fact, the contribution of secondary sector to State Domestic Product has shrunk from 22.4 percent (1990-91) to 21.4 percent (1996-97). This is despite the fact that manufacturing sub-sector's contribution to the secondary sector has increased from 66.0 percent (1990-91) to 70.1 percent (1996-97), although, in the mean time, its registered manufacturing sub-sector's share has decreased from 57.1 percent to 55.8 percent. To sum up, **income gains registered by Punjab economy in the post-reform era are not attributable to** the **secondary sector and positively not to its registered manufacturing sub-set – the expected lead player**. **This** fact **is consistent with the reality that Punjab State is a border state.**

As such, full employment appears to be a distant dream for the workforce of Punjab. The available statistics of unemployed persons, as reported in Chapter 2, (Table 2.3) registered with Employment Exchanges and those depicted by Economic Census present a gloomy picture, indeed. **A comparison of Employment Exchange data**, which relates to that seeking wage employment in the formal/organised sector, **with Economic Census data**, which captures those unemployed who seek self-employment avenues, reveals that the **Employment Exchange data represents a gross underestimate of prevailing unemployment scenario**. In fact, the gap between the two estimates is two-folds to three-folds. For each unemployed person registered with Employment Exchange (1998), those who were unregistered but seeking self-employment avenues as per Economic Census data numbered 2.7 times in Punjab. **Under reporting of unemployment by Employment Exchange data is**, thus, **marked.** In fact, **self-employment seekers** represent **20.6 percent of workforce and 6.4 percent of population of the state**. *A damaging and dangerous scenario for an active-border state of Indian Union, indeed!*

Table 4.1: Net regional domestic product and per capita income in Punjab state across the sets of border districts and the non-border districts from 1970-71 to1996-97

Domestic Product / Per Capita Income (Year-wise)	Punjab (Value units)	Relative share in Punjab of		Percent change in border values are lower (-) or higher (+) than non-border values
		Set of Border Districts	Set of Non-border Districts	
Net Regional Product (Rs. '00' Crore at Current Prices)				
1970-71	14.4	**28.6**	71.4	**-59.9**
1982-83	60.8	**28.8**	71.2	**-59.5**
1990-91	167.4	**27.2**	72.8	**-62.6**
1991-92	**202.5**	**27.2**	72.8	**-62.7**
1992-93	232.8	**26.9**	73.1	**-63.3**
1993-94	275.5	**26.4**	73.6	**-64.1**
1994-95	315.4	**26.5**	73.5	**-64.0**
1995-96	355.0	**26.5**	73.5	**-64.0**
1996-97	405.8	**26.2**	73.8	**-64.5**
Per Capita Income (Rs. at current prices)				
1990-91	8318	**7819**	8522	**-8.2**
1991-92	**9872**	**9288**	10109	**-8.1**
1992-93	11140	**10394**	11442	**-9.2**
1993-94	12934	**11912**	13346	**-10.7**
1994-95	14534	**13460**	14964	**-10.0**
1995-96	16053	**14896**	16514	**-9.8**
1996-97	**18007**	**16617**	18558	**-10.5**

Sources: Economic Advisor to Government of Punjab, *District Income Estimates of Punjab State: 1970-71 to 1982-83 and 1990-91-1996-97.*

4.3 Border versus Non-Border Regions

4.3.1 The Value Creation Activities

Does border region lag behind the non-border region in terms of value creation potential? If so, is it owing to its failure to attract high-end value-creation activities? The value-creation capacity of two regions may be compared in terms of per capita income flows. The **per capita income** *of the set of border districts of Punjab is found to be, as expected, consistently lower by around 10 percent points compared to its counterpart the set of non-border districts of Punjab* (1990-91 to 1996-97, Table 4.1). In fact, it is consistently loosing its relative weight overtime. Note a systematic decline in the relative contribution of the border set to the state domestic product by more than 2 percent points (from 28.6 percent during 1970-71 to 26.2 percent during 1996-97, Table 4.1). In other words, **the relative income flow generation capacity of the border-belt of Punjab is, as expected, not only lower than that of its counterpart the non-border region but also trailing behind.**

As the scenario unfolds, **the high-end value-creation activities of the secondary sector appear to be responsible for this divergence in per capita income performance levels of the border and the non-border belts**. As expected, the percent contribution of the secondary sector to the domestic regional product is markedly lower in the border

region compared to its counterpart, the non-border region (Table 4.2). The comparative behaviour of this ratio in the two regions is equally revealing during different phases of the trade cycle. During the upswing phase (1970-81) of the secondary sector, the ratio of the border region follows the rising-trend observed in the ratio of the non-border region. [Note: the secondary sector's share in domestic product rose from 14.4 percent to 19.0 percent in the border region by less percent points than that in the non-border region (from 15.7 percent to 23.5 percent) during the buoyancy phase (1970-81) of the secondary sector in the State (Table 4.2).] In contrast, during the downswing phase (1981-96) of the secondary sector, it fell at a faster rate in the border region. [Note: the secondary sector's share in domestic product fell slowly (19.7 percent to 17.0 percent) in the initial round (1981-91) and at an accelerated rate (17 percent to 14.3 percent) in the latter phase (1990-96) in the border areas. In contrast, it maintained an upward drive (23.5 percent to 24.4 percent) and later fell marginally (24.4 percent to 24.0 percent) in the non-border areas.] No wonder, the contribution of border area to the value of industrial exports originating from Punjab has been less than 16 percent, though it did improve from 9.7 percent (1970-71) to 15.8 percent (1998-99) [Table 4.3].

Table 4.2: Relative contribution of registered, manufacturing and secondary sectors' product to domestic regional product of the sets of border districts and the non-border districts of Punjab

Variables and their Temporal Reference	Punjab	Set of Border Districts	Set of Non-border Districts	Percent change in border values are lower (-) or higher (+) than non-border values
Percent Contribution of Secondary Sector's Output to Domestic Regional Product				
1970-71	15.3	*14.4*	15.7	**- 8.3**
1980-81*	22.2	*19.0*	23.5	**- 19.1**
1990-91	22.4	*17.0*	24.4	**- 30.3**
1996-97	21.4	*14.3*	24.0	**- 40.4**
Percent Contribution of Manufacturing Sub-Sector's Output to Secondary Sector's Domestic Regional Product				
1970-71	52.2	*51.6*	52.5	**- 1.7**
1980-81*	60.6	*55.4*	62.3	**- 11.1**
1990-91	66.0	*54.1*	69.1	**- 21.7**
1996-97	70.1	*54.3*	73.5	**- 26.1**
Percent Contribution of Registered Sub-Sector's Output to Manufacturing Sector's Output				
1970-71	49.3	*47.3*	50.1	**- 5.6**
1980-81*	48.6	*36.5*	52.0	**- 29.8**
1990-91	57.1	*45.9*	59.4	**- 22.7**
1996-97	55.8	*30.1*	59.8	**- 49.7**

Sources: (1) Economic Advisor to Government of Punjab, *District Income Estimates of Punjab State: 1970-71 to 1982-83 and 1990-91-1996-97.*
(2) Economic Advisor to Government of Punjab, *Statistical Abstract of Punjab, 2000.*

What is the explanation for the poor (and laggard) performance of the secondary sector in the border-belt? The poor performance of the secondary sector of the border areas is attributable to a relatively **low and falling weightage** of the contribution of manufacturing segment and, in turn, of registered manufacturing sub-segment to manufacturing segment vis-à-vis the non-border areas (Table 4.2). The percent contribution of manufacturing sub-sector's output to secondary sector's Domestic Regional Product varies across regions. While it has consistently improved its share from 52.5 percent (1970-71) to 73.5 percent (1996-97) in the non-border areas, it has in the corresponding period marginally improved from 51.6 percent to 54.3 percent in the border areas. In other words, **investors in manufacturing units have consistently preferred the non-border districts of Punjab to the border districts, more so, after Indo-Pakistan war of 1971**.

What is the production base of these manufacturers? Are they registered or non-registered manufacturers? The percent contribution of registered manufacturing sub-sector's output to manufacturing sector's output also varies across regions. While it has consistently improved its share from 50.1 percent (1970-71) to 59.8 percent (1996-97) in the non-border areas, it has in the corresponding period shrunk from 47.3 percent to 30.1 percent in the border areas (Table 4.2). Accordingly, investors in manufacturing units who shied away from the border districts are registered manufacturers rather than non-registered manufacturers. Alternatively viewed, **the border area is and will continue to be, thus, the dominant abode of non-registered micro manufacturing units - the units that are self-financed or family-financed and cater to the local market demand**.

In contrast, the registered manufacturing units are set up to cater, apart from local market demand, the demand originating from other markets as well. Consequently, their production bases range from small-scale units to factory units to large-scale units. Even amongst the registered units, the share of units located in the border areas in the total units of Punjab State reveals that as the production base increases, the share of units located in the border areas declines from 23.0 percent (small-scale units) to 21.1 percent (factory units) to 15.1 percent (large-scale units) [Table 4.3]. Even amongst the large-scale manufacturing units located in the border districts, the majority that has come up in the post 1971 era are state funded units in the public sector or cooperative sector. A majority of large-scale private sector units located in the border districts have their legacy in the historical past, often, tracing back to pre-partition days. Broadly, a similar explanation applies in the case of factory units, though private sector has been relatively more forthcoming in the border districts as well. Among the three border districts, Amritsar district, which enjoyed historical head-on advantage in the manufacturing sector, continues to retain its position. The district alone accounts for about three-fifths of the industrial units and industrial employment of the border areas.

As expected, the product lines in which border area factories are engaged are local demand oriented. These are food and beverage products, wood and wood products, paper and paper products, printing and publishing and repair services. A comparison of relative share of product-line-wise industrial units in total industrial units of the State located in the border and the non-border areas reveals that these shares are invariably lower in the border areas.

Table 4.3: Distribution of industrial activities across the sets of border districts and the non-border districts of Punjab

Industrial Activities	Punjab (Value units)	Relative share in Punjab of		Percent change in border values are lower (-) or higher (+) than non-border values
		Set of Border Districts	Set of Non-border Districts	
Value of Exports of Industrial Goods (Rs. lakh)				
1980-81	**16213**	*9.7*	90.3	**- 89.3**
1990-91	**76920**	*10.5*	89.5	**- 88.3**
1998-99	**362913**	*15.8*	84.2	**- 81.2**
Industrial Units				
Large scale industrial units (1998-99)	**602**	*15.1*	84.9	**- 82.2**
Registered working factory units (1999)	**13382**	*21.1*	78.9	**- 73.3**
Small scale industrial units (1998-99)	**197344**	*23.0*	77.0	**- 70.1**
Product-line-wise breakdown of Factory Units				
Food & beverages products factories	*2134*	*30.5*	*69.5*	**- 56.1**
Wood & wood products factories	*2075*	*27.5*	*72.5*	**- 62.1**
Paper & paper products factories	*185*	*18.9*	*81.1*	**- 76.7**
Printing, publishing & allied factories	*131*	*14.5*	*85.5*	**- 83.0**
Manufacturing of textiles	**1991**	**18.9**	81.1	**- 76.7**
Repair services of motor vehicles & sale	*214*	*38.8*	*61.2*	**- 36.6**
Other factories	*6652*	*12.1*	*87.9*	**- 86.2**
Industrial Employment				
Large scale industrial employment (1998-99)	**227929**	*11.8*	88.2	**- 86.6**
Registered working factory employment (1999)	**446953**	*14.6*	85.4	**- 82.9**
Small scale industrial employment (1998-99)	**864592**	*22.3*	77.7	**- 71.3**
Per Unit Employment of Workers (Numbers)				
Large scale industrial employment (1998-99)	**379**	**296**	393	**-24.6**
Registered working factory employment (1999)	**33**	**23**	36	**-36.0**
Small scale industrial employment (1998-99)	**4**	**4**	4	**-4.1**
Food & beverages products factories	**32**	**24**	36	**-32.5**
Wood & wood products factories	**6**	**5**	6	**-13.1**
Paper & paper products factories	**49**	**20**	55	**-64.7**
Printing, publishing & allied factories	**17**	**12**	18	**-31.3**
Manufacturing of textiles	**49**	**36**	56	**-35.7**
Repair services of motor vehicles & sale	**33**	33	32	**3.2**
Other factories	**38**	**24**	39	**-39.2**

Source: Economic Advisor to Government of Punjab, *Statistical Abstract of Punjab, 2000.*

Are the industrial units located in the border areas comparable in size vis-à-vis their counterpart non-border area units? The answer to this question demands information on output or income or such proxies as employed capital stock and/or employed manpower. It is easier to generate unit-wise status of employed workforce. A glance through the Table 4.3 reveals that the number of persons employed per industrial unit, irrespective of its production-base and product-line, is lower in the set of border districts compared to their counterpart set of non-border districts. Accordingly, **border area units have**, other things remaining the same, **lower production capacity levels than their counterpart non-border area units**.

To sum up, **the set of border districts of Punjab lags behind its non-border counterparts in the secondary activities, more so, in the units engaged in industrial activities at large-scale, factory scale and even small-scale both in proportional weight and relative size. Also that, the units in the border districts is slow to pick-up during the upswing but quick to loose during slow-down period. The industrial units in the border-belt are primarily engaged to cater to the local demand.**

4.3.2 Economic and Social Infrastructure

Is the differential in economic performance of border and non-border districts due to differentials in economic and social infrastructure? The social infrastructure is approximated by educational and health services. The economic infrastructure is approximated by assess to and the availability of electricity.

4.3.2.1 Educational Infrastructure

The educational infrastructure lays down the basic pyramid to inject, through a formal education process, human capital formation in the future of society. It may take the form of open spaces, playgrounds and buildings. The buildings may be (a) equipped with teaching facilities, (b) stacked with library books and journals, etc. (c) furnished with scientific instruments to conduct laboratory experiments, and (d) furnished with computers to help acquire computer literacy and/or computer expertise. To be operational, apart from these fixed investments, the educational infrastructure requires student intake and teachers to teach them. The assessment of educational infrastructure may, accordingly, be carried out in terms of fixed lay out per student or per teacher. In the absence of information on these variables, the number of students per institution, pupil-teacher ratio, etc. may be used as their proxy variables.

The number of students enrolled per educational institution in the state of Punjab increases as one moves up in the educational ladder. The student population per representative institution increases from 145 at Primary School level to 838 at Senior Secondary School level but slides down marginally thereafter to 788 at College level (Table 4.4). A similar pattern is observed in the sets of border districts as well as those of non-border districts. However, the number of students per institution is generally higher in the set of border districts compared to the set of non-border districts except at Primary school level. This implies:

a) the degree of crowding of students at a representative educational institution increases as the institution transcends on the higher steps on the ladder of educational institutions and

b) the crowding across the board is more pronounced in the set of border-districts compared to that of the non-border districts.

Table 4.4: Quality of life index in the sets of border districts and the non- border districts of Punjab, 1999

Quality of Life Capturing Variables and Institutions	Punjab	Set of Border Districts	Set of Non-border Districts	Percent change in border values are lower (-) or higher (+) than non-border values
Students per Institution at the Level of				
College (B.A./B.Sc./B.Com.)	788	**797**	785	**1.5**
Senior secondary school	838	**880**	822	**7.1**
Matriculation school	392	**424**	381	**11.6**
Middle school	109	**121**	104	**16.9**
Primary school	145	**139**	148	**- 6.0**
Students per Teacher or Pupil-Teacher Ratio at Educational Institutions				
Colleges (B.A./B.Sc./B.Com.)	22	**23**	22	**1.9**
Senior secondary school	30	**32**	29	**8.4**
Matriculation school	27	**30**	26	**13.2**
Middle school	18	**20**	17	**17.6**
Primary school	41	**38**	42	**-9.5**
Polytechnic institution	11	**10**	11	**-7.9**
Industrial Art Craft School	11	**11**	11	**-6.1**
Teacher Training College (B.Ed.)	10	**9**	10	**-14.6**
Population Served per Medical Professional				
Doctor	1485	**1441**	1502	**-4.1**
Midwife	1015	**814**	1120	**-27.3**
Nurse	1696	**1299**	1917	**-32.3**
Population Served per Medical Institution				
Institution	10786	**10752**	10799	**-0.4**
Population Served per Government Employee				
1999	64	**61**	66	**-7.4**
1991	60	**61**	59	**2.0**

Source: Economic Advisor to Government of Punjab, *Statistical Abstract of Punjab, 2000.*

The educational institutions are, however, conscious of this crowding and try to overcome its adverse effect by hiring the services of additional teachers. This is amply displayed by pupil-teacher ratio. It is highest at the Primary school level (around 40). Within the school system, the pupil-teacher ratio rises as one move from Middle school level (18) to Senior Secondary school level (30). After that it falls at the college level (22), more so in professional colleges (11). *The pupil-teacher ratio is, however, generally higher across educational institutions located in the set of border districts than those of the non-border districts, except in the case of professional institutions and at Primary school level.* The two implications of these facts are:

1. the whole state suffers from crowding of students at the crucial foundation laying primary education stage – a disgrace for a developed economy; and
2. the border district students are disadvantageously placed as the border districts are not the sought after places by the teachers.

4.3.2.2 Health Services related Infrastructure

A medical institution caters to the health needs of 10,000 plus persons in both the sets of districts, border as well as non-border (Table 4.4). In terms of number of persons serviced by professionals, namely doctors, mid-wives (*Dais*) and nurses, the set of border districts is relatively better endowed, particularly with respect to para-medical staff. For, the medical professionals cater to a substantially lesser number of persons in the set of border districts compared to their counterparts working in the non-border districts (Table 4.4). The border districts set enjoy this advantage owing to the historical edge enjoyed by its two constituent districts, namely Amritsar and Gurdaspur.

4.3.2.3 Power Infrastructure

In terms of **assess to electricity infrastructure,** as approximated by the proportion of households having electricity connection, households of the border districts are relatively less fortunate compared to their non-border counterparts. While 89 percent of the households of non-border districts enjoy electricity connections, only 75 percent of their counterparts in border districts have such assess. In fact, the set representing the border districts houses only 25.4 percent of the consumers of Punjab State, the rest resides in the non-border districts (Table 4.5).

Who are the consumers of electricity? Do these electricity consumers use it to meet household needs (domestic consumers), to satisfy community needs (public lighting) and to create-value additions through commerce activities (commercial consumers), through industrial activities (industrial consumers) and through agricultural activities (agricultural consumers)? Yes, all of these. However, their relative preponderance varies across the sets of border and non-border districts of Punjab (Table 4.5).

In the State as a whole, the electricity consumer structure is led by domestic consumers (70.9 percent) followed, in the declining importance, by agricultural consumers (15.3 percent), commercial consumers (11.6 percent), industrial consumers (2.2 percent) and public lighting (0.02 percent). Broadly, the same pattern of electricity consumers persists across the sets of border and non-border districts. **The two sets assign, however, significantly different weights to domestic consumers and agricultural consumers of electricity**. While the set of border districts assigns about 7 percent point higher weight to agricultural consumers and an equally lower weight to domestic consumers, the reverse pattern is observed in the set of border districts (Table 4.5). Since the agricultural connections are primarily used for energisation of tubewells to supplement canal irrigation supplies, this gives the farmers of the border districts a head on advantage over their non-border counterparts. For, an assured food market and possibilities to exploit it by having an equally assured ground water supply for irrigation by investing in energisation of tube-wells helps to partly counter the adverse border influence on economic activities in the rural areas of border districts. In other words, **a good electricity infrastructure, accompanied by state policies that ensure the local produce an assured market, helps to minimize the adverse effect of border risk on economic activities in rural areas**.

Table 4.5: Distribution of electricity consumers across the sets of border districts and the non-border districts of Punjab during 1999-2000

Consumers of Electricity	Punjab	Set of Border Districts	Set of Non-border Districts	Percent change in border values are lower (-) or higher (+) than non-border values
Use of Electricity Infrastructure				
Percent share of households electrified	85	**75**	89	**-16.0**
Total consumers	5029990	*1280086*	3749904	**-65.9**
	100.0	**25.4**	74.6	**-65.9**
Composition of Electricity Consumers (percent shares)				
Domestic consumers	70.89	*65.97*	72.57	**-9.1**
Agricultural consumers	15.33	*20.69*	13.50	**53.3**
Commercial consumers	11.55	*11.02*	11.73	**-6.1**
Industrial consumers	2.20	*2.29*	2.17	**5.7**
Public lighting	0.02	*0.02*	0.02	**0.0**
Relative (percent) Share in Punjab of Border and Non-Border Districts				
Total consumers	5029990	**25.4**	74.6	**-65.9**
Domestic consumers	3565857	**23.7**	76.3	**-69.0**
Agricultural consumers	771133	**34.3**	65.7	**-47.7**
Commercial consumers	580784	**24.3**	75.7	**-67.9**
Industrial consumers	110492	**26.5**	73.5	**-63.9**
Public lighting	1724	**25.6**	74.4	**-65.5**

Source: Economic Advisor to Government of Punjab, *Statistical Abstract of Punjab, 2000.*

4.3.2.4 Rural Infrastructure

Does the agricultural electrification advantage available to the set of border districts get an equal complementary support from other rural infrastructure services as presumed in the preceding proposition? *Yes*, it does. For instance, in terms of **link road infrastructure** (as approximated by road linked villages), the border-belt villages with their relative share in Punjab at 30.8 percent are as well or better endowed compared to their non-border counterparts (Table 4.6). The same holds for **rural market infrastructure** as approximated by **focal points** that focus at developing market driven growth centres. The border-belt accounts for 31.0 percent of the focal points of the State. Even in terms of **administrative support for rural development** as approximated by **community development blocks,** border-belt is positively disposed as it houses 29.2 percent of the blocks of the State. In this context it is important to note that **net sown area** of the border-belt accounts for 28.4 percent of the net sown area of the State. To sum up, **rural border areas are relatively better endowed with state supported infrastructure** than **their non-border counterparts**.

Table 4.6: Rural infrastructure in the sets of border districts and the non-border districts of Punjab during 1999-2000

Description of Variables	Punjab	Set of Border Districts	Set of Non-border Districts	Percent change in border values are lower (-) or higher (+) than non-border values
Rural Community Infrastructure				
Road linked villages	12334	3795	8539	-55.6
	100.0	**30.8**	69.2	**-55.6**
Community Development Blocks	137	40	97	-58.8
	100.0	**29.2**	70.8	**-58.8**
Focal Points	597	185	412	-55.1
	100.0	**31.0**	69.0	**-55.1**
Average rainfall (mm., 1995-99)	607	600	608	-1.3
Land ('000 Hectares) and Land-use Pattern (percent)				
Net sown area	4237	1202	3035	-60.4
Gross cropped area	7847	2214	5633	**-60.7**
Irrigation intensity of net sown area (percent)	94	89	95	-6.3
Irrigation intensity of gross crop area (percent)	96	95	97	**-1.8**
Cropping intensity (percent)	**185.2**	**184.2**	**185.6**	**-0.8**
Percent Share of Gross-cropped Area Cropped under				
Food crops	83.4	84.1	83.1	**1.2**
Non-food crops	16.6	15.9	16.9	**-5.9**
Percent Share of Non-food Crops Area Cropped under				
Cotton	36.6	34.5	37.3	**-7.7**
Sugarcane	8.3	9.2	7.9	**16.2**
Horticulture	2.3	3.6	1.8	**94.6**

Source: Economic Advisor to Government of Punjab, *Statistical Abstract of Punjab, 2000.*

The *response of the farmers to a positively disposed State policy environment* aimed at mitigating the problems of farmers of the border-belt *is equally encouraging*. This is displayed by (a) the use-intensity of resources (land, cropping intensity; and water, irrigation intensity) and (b) cropping pattern. For instance, the observed cropping intensity (184.2) and irrigation intensity (95) of the set of border districts is in the vicinities of the attainments of their non-border counterparts (185.6 and 97 respectively). Similarly, the relative allocation of area to food crops (namely wheat and paddy) is comparable in the sets of border and non-border districts (84.1 percent and 83.1 percent respectively). Bowing under the influence of different agro-climatic conditions their allocation of land under non-food crops varies, however. Farmers of border-belt lay more emphasis on fruit plantations (9.2 percent against 7.9 percent), particularly Kinnow and Malta, and Sugarcane plantation (3.6 percent against 1.8 percent), but less emphasis on Cotton (34.5 percent against 37.3 percent) compared to their non-border counterparts. The stress on annual (sugarcane and fruit trees) plantations rather than on seasonal (Rabi & Kharif) crops explains the marginally lower land use intensity parameters of border regions. To sum up, **the state support for rural development in the border districts has helped farmers to considerably marginalise the adverse effect of border risk on rural economic activities.**

4.4 Unemployment Scene

What has been the influence of border risk on employment scene? Has it encouraged unemployment? Yes, it has. For, border region offers relatively poor employment openings. This is brought to fore by employment exchange statistics as well as economic census statistics (Table 4.7). For instance, **unemployment rate**, represented by the proportion of self-employment seekers in the workforce, **in the set of border districts** (24.9 percent) **is 6 percent point higher than in the set of non-border districts** (18.9 percent). This difference is less marked when wage employment is the focus. For, the proportion of wage employment seekers, represented by Employment Exchange registered personnel, in the workforce in the set of border districts (7.9 percent) is only marginally higher than in the set of non-border districts (7.5 percent).

The relatively disadvantageous position of wage employment seekers in the set of border districts worsens when better-endowed educated and/or skilled unemployed persons are considered. This is displayed by higher share of educated (29.2 percent) and skilled (30.3 percent) unemployed persons of the border set in the unemployed pool of the state than that in the population (28.3 percent in 1991, Table 4.7). The relatively weak share of the set of border districts belonging to unskilled unemployed category (23.8 percent) and uneducated (below matric) category (27.8 percent) probably suggests that these categories shies away from registering with Employment Exchanges owing to unfulfilled expectations of their better skill endowed counterparts of the region. To sum up, **there is relatively poor availability of employment openings in the border region compared to the non-border region, more so, to better educated and skill endowed categories of unemployed persons**.

As per **Economic Census of 1998**, the **border region** alone reported 4.93 Lakh unemployed youth, a number in the vicinity of unemployed persons (5.45 Lac) that is registered with the Employment Exchanges in the state. The contribution of the **border region to the state's unemployed pool is** 33.52 percent, a share **higher by 5 percent points than its population share** of 28.3 percent (Table 4.7). There exists, thus, a substantially large number of unemployed youth in Punjab, particularly in the border belt.

For each unemployed person registered with Employment Exchange, during 1998, those who were unregistered but seeking self-employment avenues as per Economic Census data numbered 3.14 in the border region against 2.52 in the non-border region of Punjab. **Under reporting of unemployment by Employment Exchange data is**, thus, **marked in border region, more so, in Ferozepur district** (3.73), **particularly in the case of uneducated youth** or those that did not complete their matriculation level of education (7.81).

Table 4.7: Unemployment scene in the sets of border districts and the non-border districts in Punjab, 1998

Variable Details	Punjab	Set of Border Districts	Set of Non-border Districts	Percent change in border values are lower (-) or higher (+) than non-border values
Population (lakh, 1998)	231.51	65.50	166.01	-60.5
	100.0	**28.3**	**71.7**	-60.5
Workers (lakh, 1998)	71.48	19.84	51.65	-61.6
Workers share in population (percent)	30.9	30.3	31.1	
Unemployed: Self-employment seekers (lakh, 1998)	14.72	4.93	9.78	-49.6
Unemployed: Employment Exchange registered (lakh, 1999)	5.45	1.57	3.88	-59.4
Percent of Workforce which is Unemployed and Seeking Employment as				
Self-employed (SE)	20.6	**24.9**	**18.9**	31.2
Wage workers	7.6	**7.9**	**7.5**	5.6
Percent of Population which is Unemployed and Seeking Employment as				
Self-employed	*6.4*	**7.5**	**5.9**	27.8
Wage workers	*2.4*	**2.4**	**2.3**	2.8
Number of Unemployed Self-employment Seekers per Person Registered with Employment Exchanges				
Overall	*2.70*	**3.14**	**2.52**	24.3
Educated - Matric & above	*2.25*	**2.56**	**2.12**	21.0
Uneducated - Below matric & illiterate	*3.95*	**4.79**	**3.62**	32.5
Employment Exchange Registered Unemployed Persons (Lakh, 1999)				
Total persons	*5.45*	1.57	3.88	-59.4
	100.0	**28.9**	**71.1**	-59.4
Educated - Matric and above	*4.00*	1.17	2.83	-58.7
	100.0	**29.2**	**70.8**	-58.7
Uneducated - Below matric & illiterate	1.45	**0.40**	**1.05**	-61.4
	100.0	**27.8**	**72.2**	-61.4
Skilled persons	*4.22*	1.28	2.94	-56.5
	100.0	**30.3**	**69.7**	-56.5
Unskilled persons	1.23	0.29	0.94	-68.7
	100.0	**23.8**	**76.2**	-68.7
Unemployed Self-employment Seekers (Lakh, 1998)				
Total	*14.72*	4.93	9.78	-49.6
	100.0	**33.5**	**66.5**	-49.6
Educated - Matric & above	*8.98*	2.99	5.99	-50.0
	100.0	**33.3**	**66.7**	-50.0

Source: Derived from tables contained in: (1) Economic Advisor to Government of Punjab, *Statistical Abstract of Punjab, 2000.* (2) *Report on Unemployed Persons (Age Group 18-35 Years) Desirous of Seeking Self-Employment in Punjab State* prepared, from Fourth Economic Census conducted during April-June, 1998, by **Economic Census Section, Economic and Statistical Organisation, Punjab.**

4.5 Policy Import

In conformity with our hypothesis, the analysis reveals that the economy of the border-subset of Punjab, a border state of Indian Union, *suffers from a high rate of unemployment*. This is owing to the shying away of investors from the region, particularly from the high-end value creating secondary sector activities. Consequently, the economy of the region is caught at low level of economic activity equilibrium. Recall that per capita income of the set of border districts is lower *by 10 percent points than the set of non-border districts* and that the contribution of registered component of manufacturing sector is markedly weak in the border region. This is despite the fact that the state-supported socio-economic infrastructure is well dispersed in both the sets of districts.

The border state of Punjab with **every fifth person** (as per official statistics) **as unemployed** and willing to engage even in self-employment (the second-best employment option, Singh, 1996) depicts a dangerous signal to the economy of the state in particular and that of the nation in general. It is a manifestation of low-level of economic activity equilibrium in which the economy of the set of border districts has been caught in particular and that of the state in general.

For this sorry state of health of the economy of Punjab, the foreign policy of the nation in particular and popular politic-oriented weak-nee jerk policies of the state in general is responsible.

Is there a way out of this mess? *Yes, there always exists a scope to start afresh provided there is a will power and the economic interest of the region, those of the state and the nation are allowed to over-ride the individual, group and political narrow partisan interests*. Even after five decades of independence existence of the Indian State, *is it a tall order to expect this from the elite of the nation?* If the answer is no, the future of the economy of the set of border districts, the border state and that of the national state is bleak. If the answer is yes, than a number of initiatives by the State are called for.

1. The first and foremost amongst the *initiatives is the **governance***. The state must ensure that employees are, at least, physically present at the places of their postings for the specified hours of the day. The custom *of sub-letting of* the permanent positions, particularly in rural and backward areas, must be dealt with an iron hand (The Tribune, 2002). The message to the masses must go that before the law all are equal. Those who fail to be transparent must get exemplary punishment in the shortest time. Towards this end, there is an urgent need to build a *transparent computerized data base*, initially, by putting available historical facts from the record files lying in the government offices and, later, by updating and strengthening these.

2. There is a need to have a fresh look at our State policies. This is a pre-requisite to survive in a globalised market driven world order of which Indian economy is a part. It demands the creation of level playing field by organizing the numerous domestic producers, say as *producer cooperatives*, with state acting as facilitator and not, as in the past, controller. This will enable them to bargain with the big international players and venture for a respectable share/niche in the world market. But the success of such a cooperative venture will depend, as the past experience of successful producer cooperative ventures demonstrate, on its transparent working in the eyes of

its producer members/shareholders who are likely to be scattered across spatial units. Besides, such ventures must be *run on strictly professional lines to ensure product* quality under a brand name to compete with competitors – a hallmark of marketing of branded goods of multinationals. By minimizing market risk of producers, such an initiative is expected to sensitize producers to concentrate on enlarging the production base and improve the product quality and, in turn, help break the web of low economic activity equilibrium in which the economy is currently caught.

3. A market driven economy assumes sufficient availability of the services of a solid base of socio-economic infrastructure but at a price, howsoever, low it may be. The responsibility of maintenance, *updating and strengthening of exiting social and economic infrastructure* remains with the State. *The price of these services must cover their maintenance cost*.

Measurement and Extent of Unemployment among
Rural Sampled Households

The task of creating sufficient new jobs to overcome unemployment, underemployment and problems of low pay ranks is the primary challenge for economic and social policy in countries at all levels of development across the globe. For, employment problems are not predetermined outcomes of the working of uncontrollable forces such as globalization, intensified competition, and technical change. Rather, they are the results of social choice: commissions or omissions in economic and social policies and shortcomings in institutional arrangements. Policies and institutional arrangements at both the national and inter-national levels can and should be improved to reverse the drift towards a global employment crisis. This calls for a universal commitment to the goal of full employment and measures to promote a more equitable sharing of the costs and benefits of globalization among and within countries and institutional reforms to bring about a better coordination of economic and social policies. (ILO, 1995: v-vi).

The Chapter is divided into three sections. Section I points out the conceptual and measurement problems regarding unemployment in India. Section II deals with demographic and socio-economic features of rural sample household. And, the extent of unemployment among rural households is measured in Section III.

5.1.1 Unemployment: Conceptual Problems

Unemployment refers to a situation in which all workers who are medically fit and physically capable of working and willing to work at market wage rate do not get employment. From the macro-perspective, **unemployment** captures the difference between the total labour force available and seeking work and the demand for labour during the reference period. From the micro-perspective, **unemployment** is a situation in which one has to be involuntarily without gainful work (i.e., productive and income yielding) during a specified period despite one's efforts to seek work at market wage rate. The work is sought, under the prevailing remuneration and work conditions, through such available intermediary channels as employment exchanges, placement agencies, friends/relatives, and/or direct interaction between prospective employees and employers.

There are several sources of unemployment in a dynamic economy and, accordingly, different forms of unemployment. The turnover of the labour force, due to the presence of search costs associated with life-cycle employment changes, generates **frictional** (or turnover) **unemployment**. In other words, the **frictional unemployment** occurs in the normal process of job search for better vocational and/or location opportunities by individuals on quitting their jobs until the period they get alternate jobs. It represents the *normal* unemployment due to people switching/changing jobs. It is a temporary phenomenon that usually lasts only for a few weeks. 2 to 4 percent of labour force usually remained frictionally unemployed in developed countries (Ott, et al. 1975: 24). It is often ignored while estimating full employment equilibrium.

The changing output-mix of the economy requiring reallocation of labour force across sectors in the presence of search and mobility costs generates **structural** (or mismatch) **unemployment**. In other words, the **structural unemployment** occurs when there is a mismatch between the skill or location requirements of job vacancies and the present skills and location of unemployed individuals. It lasts over long periods and usually lead to family breakdown, mental illness, loss of health insurance, and erosion of job skills. This phenomenon is usually associated with less developed economies.

To ward off the adverse influence of temporary slumps on profitable incentive based long-term labour force attachments, **contractual unemployment** in the form of temporary layoffs of attached labour force follows. **Cyclical unemployment** is caused by lack of effective demand for goods and services during recession or depression. It is amenable to appropriate monetary and fiscal policies. These two phenomena are usually associated with economies of developed countries. *Frictional, structural and contractual unemployment* can all be associated with the dynamic equilibrium in the working of labour market. The **natural rate of unemployment** is the rate towards which the dynamic system is converging for a given underlying general equilibrium stochastic structure. It takes into account the actual structural characteristics of the labour and commodity markets, including market imperfections, search and mobility costs (Haltiwanger, : 610). The **cyclical unemployment** is the difference between the actual and natural rates of unemployment (Gordon, 1993: 316).

Job search theory treats unemployment as a socially valuable, productive activity. Unemployed individuals invest in job search. The cost of their investment is the cost of the search itself plus the loss of wages that could be earned by accepting a job immediately. The payoff to their investment is the prospective earning of a higher wage for many months or years into the future.

5.1.2 Unemployment: Measurement Problems

In the western developed economies, unemployment is primarily a market-oriented concept (Brahmananda, 1983, p. 33). The state, in these economies, ensures the right to employment to their citizens. The involuntarily unemployed persons, therefore, are promptly reported and recorded to the appropriate state authorities so that they can seek compensation in the form of dole/unemployment allowance. The extent of unemployed persons in these economies is measured from the data recorded systematically by the employment exchanges and special labour market surveys. This is a result of the greater extent of urbanisation, the high educational levels and the more efficient system of data collection, transmission and communication in these economies. Even their agriculture, which provides employment only to a small proportion of the workforce, do not suffer from acute seasonal unemployment and disguised unemployment and available jobs are not predominantly part-time in nature. The labour market within each of these countries is characterised by the relatively high mobility of labour between regions and jobs, and the overhead costs of getting employment (in forms of getting information, transport, settlement, adjustment expenses, etc.) are very low compared to the income earned. *One can, therefore, justify a market-based and market-biased analysis of employment/unemployment in these countries.*

Apart from market perspective, **unemployed persons** are specified by *social-cum-political institutions* as those that do not fulfill the work norms in terms of work hours (8-12) per day and days per week (5-7) – the time criterion – or in terms of minimum specified income per hour/ per week/ per month – the income criterion. A partially employed person may be perceived as **underemployed** or **disguisedly unemployed** depending upon the perceiver's perspective.

In India, by adopting the western notions of employment and unemployment, there are many serious difficulties in defining and measuring the extent of unemployment because of different conditions such as prevalence of less mobility of labour, underdeveloped wage system, low education levels, unpaid family labour, etc.. Hence, the distinction between various aspects of employment and unemployment has to be made in the context of a developing country like India (Chand, 1993, p. 84). In the Indian economy, free labour mobility between regions and occupations has been and, continues to be, restricted by the differences in living conditions, language, geography, socio-cultural acceptability and transfer of ownership rights, particularly land rights (Brahmananda, 1983, p. 34). The earning levels among workers are low as well as uncertain. They tend to earn from several sources of livelihood. As regards the wage-earners, there are often no contract jobs. The employment among them is characterised by frequent shifts from (i) out of the labour force to the labour force; (ii) self employment to wage/salary employment to casual employment; (iii) fractional work on daily basis to fractional work on a weekly or longer term basis; and (iv) work in rural areas to urban areas during lean seasons and vice-versa during busy seasons. Self-employed enterprises and persons form a high proportion of all enterprises and of the total workforce, particularly in agriculture. Such available employment does not yield adequate earnings and is insufficient in duration, more so, in agriculture where seasonal unemployment and disguised unemployment are more pronounced. Often, the self-employment merely conceals unemployment.

In view of above mentioned complexities, a school of economists led by C. D. Long (1942, p.1) believes that **it is impossible to define unemployment as a single magnitude - an absolute quantity of unused labour time. In fact, they argue that a multiple approach to measure unemployment in a developing country is an utmost necessity.** Towards this end, a number of criteria has been put forward to measure unemployment and underemployment in India.

Operationally, **unemployment** should be measured in developing countries like India by using alternative criteria, namely, time criterion, productivity criterion, income criterion, and willingness criterion (Raj Krishna, 1973). In all these criteria, a comparison is made with a pre-fixed normative standard. For instance, according to time criterion, an **unemployed person** is gainfully employed for less number of hours or days than the hours or days institutionally specified for a fully employed person. As per productivity criterion, a person is *disguisedly unemployed* if his/her marginal productivity in the production system is zero. As per income criterion, a person is unemployed if he/she earns below some institutionally specified (say under minimum wage act) minimum income level. In terms of willingness criterion, a person is *underemployed* if he/she is willing to do extra work than is presently available. Naturally, **these different concepts and criteria of identifying the unemployed, if applicable or applied, will certainly give different estimates of unemployment of an economy.** These criteria, though useful in

understanding unemployment and underemployment, have been questioned on various grounds of applicability in Indian conditions, particularly the last three criteria.

In India, **National Sample Survey Organisation (NSSO)** employs <u>time criterion</u> to measure the extent of employment and unemployment. To get a relatively comprehensive perception of unemployment extent, it employs three alternative standards, namely,

A person is unemployed in terms of **usual principal status** (a measure of chronic unemployment) if he/she gets work for less than half the number of days of the reference year. This criterion does not throw any light on the earnings and underemployment of persons.

A person is unemployed in terms of **current weekly status** (a measure of under-employment) if he/she gets work for less than one hour on any one day of the reference week.

A person is unemployed in terms of **current daily status** (or labour time disposition in the 27th round) if he/she gets work (gainful activity) for less than one hour during each day of the reference week.

Current daily status is a comprehensive measure of unemployment - it includes chronic unemployment as measured by usual principal status as well as under-employment as measured by current weekly status. The measures of current daily status as well as current weekly status are, however, sensitive to the specific time of survey in the year. This is particularly true in the case of rural areas where the nature of agricultural activities is season-specific. It is for this reason that all the three alternative measures of unemployment are used by the mainstream economists for analysing the unemployment situation in India.

Unemployment rate by itself is not a measure of the social distress caused by the loss of a job. For, each person who lacks a job and is looking for one is generally counted as "1.0 unemployed people", whether the person is the head of a household responsible for feeding numerous dependents or a sixteen year-old looking for a ten-hour-per-week part-time job to provide pocket money (Gordon, 1993: 320). Anyone who has done any work at all for pay during the past week, whether part-time (even one hour per week), or full-time, or temporary work, is counted as employed (Gordon, 1993: 319).

A worker is a person who perceives himself as a contributor to the process of value creation on full or part-time basis - a perception also corroborated by others - with or without receiving formal reward/payment for the services rendered. Workers put together represent workforce. A part of the workforce that is actively seeking wage/self-employment work is called unemployed workforce. The proportion of such defined unemployed workers in the workforce is henceforth called **unemployment rate**.

The **two major sources of workforce/labour force statistics** in India are the decennial Census of Population and the quinquennial surveys of the NSSO. The term "work" has been defined as "*any productive work for which remuneration is paid and is market-oriented*" in the Census of Population and as "*economically meaningful activity*" (that may not necessarily be market-oriented) in the NSSO. Obviously, the later concept

includes general activities of women done within the sphere of household activities, such as, looking after livestock, fodder collection, foodgrain processing, etc. A "worker" is a person engaged in "work". The workforce participation rates under the NSSO will, obviously, be higher than that under the Census of Population. A worker who works for a major part of the reference year is known as "main worker" and if he works for less than half a year he/she is known as "marginal worker" as per Census data. And, non-workers are divided into eight activity status categories. Two of these (a) " a person who has not been employed before but is seeking employment for the first time" and (b) " a person employed before but out of employment and seeking employment", together formed the unemployed. However the Census had adopted a very wide reference period (say one year) alongwith a rather lenient criterion of the quantum of work. Moreover, the term "seeking work" was not properly defined and the enumeration work is done essentially by honorary part-time workers. **The Census data on unemployment, thus, appears to reflect only the chronically unemployed persons. Moreover, its lowest micro unit is the district. It is available by sex, broad age-groups rural-urban residence and educational attainment at the district level but not at block or village level. The data have obviously limited use for the study in hand**. On the other hand, **the NSSO' survey data, though exhaustive and scientific, do not percolate to the district level – the reliability of these estimates is, at most, at the State level**.

Another important data source of unemployment may be the employment exchange data. These are, however, located in urban centres only. Obviously, these estimates ignore rural unemployment and are, therefore, an understatement of reality. Other major drawbacks of this data are that (a) not all the unemployed may be registered with the employment exchanges because the registration is voluntary and (b) not all registered persons in employment exchanges at any time are unemployed because their employment status is never verified. Many of them tend to be (i) employed persons that seek better or more stable jobs, (ii) those that register at more than one employment exchange, and (iii) students. Thus, **two cross-currents are simultaneously in operation, while one tends to jack up the estimates, the other depresses it**. However, the 'live register' registrations, even if they do not measure chronic unemployment, suggest the demand for income and/or better jobs offered by established employers. In other words, it helps to bring about an expeditious matching between the job requirements of the registrants and the labour requirements of the established employers i.e. to minimize the extent of frictional unemployment. It is, however, useful as a measure of broad trends in the job market (Visaria, 1971, p. 213), especially among educated employed (Dholakia, 1977, p. 28). In view of the above noted **strengths and weaknesses of the available secondary data sources, the present study decided to measure the extent of unemployment through the primary survey**.

5.2 Rural Sampled Households' Characteristics

This section displays the demographic and socio-economic characteristics of sampled 434 households located in 30 villages of Ferozepur district of Punjab State. It is assumed that such a display will help to better comprehend the measure of extent of unemployment and suggest specific policy guidelines to remedy the situation. The village-cum-household distribution (Table 5.1) as per the distance of the village from the **international border** is as follows: **zero-border villages** up to 2 kilometers from the border (represented by 8 villages and 105 households); **near-border villages** from 2 to 6 kilometers from the

border (represented by 7 villages and 91 households); **border-vicinity villages** up to 6 kilometers from the border (represented by 15 villages and 196 households); **other-border villages** from 6 to 16 kilometers from the border (represented by 10 villages and 150 households); **non-border villages** from beyond 16 kilometers from the border but within the Ferozepur district (represented by 5 villages and 88 households); and **overall** (30 villages and 434 households).

5.2.1 Demographic Characteristics

A population of 2,938 persons resided in 434 sampled households. Of them, 1,593 persons (54.2 percent) were males and the rest 1,345 (45.8 percent) females. The overall sex ratio (females per 1,000 males) worked out to be 844. It was the lowest (821) in **other-border** villages and the highest (900) in **near-border** villages. This implies that border nearness either encourages gender equality or encourages migration of male members to non-border regions.

Similarly, the overall sex ratio was 860 for the adults (18-60 years of age), 905 for elders (60 years and above), and 909 for children (below 18 years of age). This suggests that female gender is favoured at and around birth and death. However, in the category of elders, the sex ratio was as high as 1,227 in the **near-border** villages and very low (500) in **zero-border** villages. This suggests that either elder male members in the zero-border villages run away from their households or they have very low longevity vis-à-vis their female counterparts. The age distribution of population points out that the adult members constituted the majority (51.3 percent), followed by the children (38.5 percent) and the elders (10.2 percent). This suggests that border has no adverse influence on the age structure of families residing in the border district. **(Unless otherwise specified, family and household terms are used inter-changeably).** The share of students in children population was between 60.6 percent and 70.1 percent across different types of villages. The average size of household was 6.8 persons; it was slightly higher in **zero-border** villages (7.1 persons) and lower (6.1 persons) in **near-border** villages (Table 5.1).

5.2. 2 Socio-Economic Attributes

For all villages, the share of **yellow card holding households** was 33.9 percent, with the maximum proportion (44.8 percent) in **zero-border** villages and minimum (23.9 percent) in **non-border** villages (Table 5.2). This suggests that poverty index is inversely related with the distance of the village location from the international border. Further, 23 households (5.3 percent) reported the emigration by some family members, with the lowest proportion (3.8 percent) in **zero-border** villages and the highest proportion (9.1 percent) in **non-border** villages. This indicates that emigration is positively related with the distance of the village location from the international border. Overall, about 2 percent of the population (57 persons) out-migrated. About half of the affected households (12 out of 23 households) reported the receipt of remittances. These households received Rs. 5,24,400 as remittances.

Table 5.1: Distribution of rural sampled households from Ferozepur district by age, sex and border distance criteria

Family Traits	Zero-border Villages	Near-border Villages	Border-vicinity Villages	Other-border Villages	Non-border Villages	All Villages
Villages	**8**	**7**	**15**	**10**	**5**	**30**
Households	**105**	**91**	**196**	**150**	**88**	**434**
Sex ratio	842	900	867	821	837	844
Adults	874	838	858	892	816	860
Elders	500	1227	722	1059	1057	905
Children	909	922	914	680	803	808
Persons per household	**7.1**	**6.1**	**6.6**	**6.9**	**6.9**	**6.8**
Persons: total	748	553	1301	1029	608	2938
Male members	406	291	697	565	331	1593
Males share in household (percent)	**54.3**	**52.6**	**53.6**	**54.9**	**54.4**	**54.2**
Female members	342	262	604	464	277	1345
Females share in household (percent)	*45.7*	*47.4*	*46.4*	*45.1*	*45.6*	*45.8*
Adult members (18 to 60 years)	358	283	641	541	325	1507
Adults share in household (percent)	**47.9**	**51.2**	**49.3**	**52.6**	**53.5**	**51.3**
Male adults	191	154	345	286	179	810
Male adults share among households males (percent)	*53.4*	*54.4*	*53.8*	*52.9*	*55.1*	*53.7*
Elder members (60 years & above)	75	49	124	105	72	301
Elders share in family (percent)	**10.0**	**8.9**	**9.5**	**10.2**	**11.8**	**10.2**
Male elders	50	22	72	51	35	158
Male elders share among households males (percent)	*66.7*	*44.9*	*58.1*	*48.6*	*48.6*	*52.5*
Children (below 18 years)	315	221	536	383	211	1130
Children share in family (percent)	**42.1**	**40.0**	**41.2**	**37.2**	**34.7**	**38.5**
Male children	165	115	280	228	117	625
Male children share among households males (percent)	*52.4*	*52.0*	*52.2*	*59.5*	*55.5*	*55.3*
Students	196	136	332	232	148	712
Student share among households children (percent)	*62.2*	*61.5*	*61.9*	*60.6*	*70.1*	*63.0*

Note: Depending on the distance from the international border, border villages have been classified into **zero-border villages** (up to 2 Km.), **near-border villages** (2-6 Km**.),** **border-vicinity villages** (up to 6 Km.), **other-border villages** (6-16 Km.) and **non-border villages** (beyond 16 Km. but within the district).

The number of land-owning households was 276 (63.6 percent, Table 5.2). The weight of land-owning households was the highest (77.1 percent) in **zero-border** villages and the lowest (54.0 percent) in **other-border** villages suggesting that non-land related activities are inversely related with the location of the village from the international border. The average availability of land per land-owning households was 10.1 acres. It was the lowest in **border-vicinity** villages (8.6 acres) and the highest (12.3 acres) in **other-border** villages. The land per sampled household varies between 5.4 acres to 6.8 acres. Land-man

ratio was 0.94 in overall sample. However, it was very low in **zero-border** and **near-border** villages and rises as the distance of the village location from the international border increases. This suggests that *nearness to border adversely influences not only the location disadvantage to these families but poor land resource base as well.*

Table 5.2: Salient features of rural sampled households from Ferozepur district by border distance criteria

Salient Features	Zero-border Villages	Near-border Villages	Border-vicinity Villages	Other-border Villages	Non-border Villages	All Villages
Villages	8	7	15	10	5	30
Households : total	105	91	196	150	88	434
Yellow card hold households	47	32	79	47	21	147
Share of yellow card holder households (percent)	**44.8**	**35.2**	40.3	**31.3**	**23.9**	**33.9**
Family Member Emigration						
Effected households (number)	4	4	8	7	8	23
Share of emigrant households (percent)	**3.8**	**4.4**	4.1	**4.7**	**9.1**	**5.3**
Persons: total	12	5	17	13	27	57
Remittance receiving households	2	2	4	5	3	12
Remittances: total (Rs.)	80000	80000	160000	284400	80000	524400
Debited Households	48	40	88	54	29	171
percent share in total households	45.7	44.0	44.9	36.0	33.0	39.4
Debt: total (Rs.)	5882000	3956000	9838000	3441700	2293000	15572700
Debt per debited household (Rs.)	122542	98900	111795	63735	79069	91068
Debt per household (Rs.)	56019	43473	50194	22945	26057	35882
Income per household (Rs.)	107208	97901	102657	147525	131153	122446
Debt as percent of household income	52.3	44.4	48.9	15.7	19.9	29.3
Per capita income = per household income/average household size (Rs.)	15100	16049	15554	21380	19008	18007
Land-owning households	81	57	138	81	57	276
percent share in total household	77	62.6	70.4	54.0	64.8	63.6
Land: total (acres)	687	494	1181	993	602	2777
Land per land-owning household (acres)	8.5	8.7	8.6	12.3	10.6	10.1
Land per household (acres)	6.5	4.7	6.0	7.3	6.8	6.4
Land man ratio (acres)	0.11	0.10	0.11	0.97	0.99	0.94

In the overall sample, 171 households (39.4 percent) reported the prevalence of debt. The proportion of debited households was the highest (45.7 percent) in **zero-border** villages and the lowest (33.0 percent) in **non-border** villages. The total debt reported was Rs.155.73 lakh against the 171 indebted households, i.e. Rs.91,068 per indebted household. It was, as expected, the highest (Rs.1,22,542) in **zero-border** villages and the lowest (Rs.63,735) in **other-border** villages. The debt per sampled household was Rs.35,882. The overall income per household was estimated to be Rs.1,22,446. It was the highest (Rs. 1,47,525), as expected, in **other-border** villages. The per capita income

stood at Rs.18,007. It was the highest on expected lines in **other-border** villages (i.e. Rs. 21,380) and the lowest in **zero-border** villages (Rs.15,100). Per household debt-income ratio was 29.3 for all village households - the highest level (52.3) being in **zero-border** village households and the lowest level (15.7 percent) being in **other-border** village households (Table 5.2).

The social, political and religion-wise distribution of sampled households alongwith household type and living conditions have been depicted in Table 5.3. As expected in a Sikh dominated State, an overwhelming proportion of households belonged to the Sikh religion (78.6 percent), followed by the Hindus (16.4 percent) and the Christians (3.9 percent) in the case of all villages. So far as the social participation was concerned, 383 households (88.2 percent) have reported active participation in social and religious functions. Only 5 households (1.2 percent) reported participation in community life by heading the social, religious, sports and cultural organisations. And, as many as, 45 households (10.4 percent) reportedly participation in community development programmes. They were involved in such community related activities as the collection of donations for school buildings, religious places, common land leveling activities, etc.

Households' political participation measured by different yardsticks indicates that as many as 369 households (85.0 percent) were found to be politically inactive. Another 41 households (9.4 percent) either hold or held a political office, 4 households (0.9 percent) organised the visits of political leaders in their villages, 5 households (1.2 percent) claimed to be active workers of political parties, and 11 households (2.5 percent) were found to be holding political ambitions. **The indifference of nine out of every ten households towards political activity going around them is a serious matter to ponder by those who advocate democracy to be the best bet for social development**.

The types of dwelling units were as follow: *pucca* houses, 229 households (52.8 percent), *semi-pucca* houses, 94 households (21.7 percent) and *katcha* houses, 111 households (25.6 percent)[Table 5.3]. The proportion of *katcha* houses decreases progressively as one moves from **zero-border** villages (41.9 percent) to **non-border** villages (4.5 percent). Further, 299 households (68.9 percent) availed of bathroom facilities, 196 households (45.2 percent) were having kitchen, and 93 households (21.4 percent) were having living and drawing-rooms facilities. Further, **as one move from border-vicinity villages to non-border villages, these facilities that reflect of higher standard of living, have also tended to move up considerably**.

The family settlement patterns indicate that about half the households (49.5 percent) enjoyed joint family structures and the other half (50.5 percent) has nuclear family structures (Table 5.4). On the basis of occupation, the share of various households was as follows: agriculture households (53.9 percent), wage-worker households (38.9 percent), artisan households (0.7 percent), dairy households (0.5 percent), shop households (3.5 percent), service households (2.3 percent), and priest households (0.7 percent). The proportion of agriculture households was the highest in **zero-border** villages (61.9 percent) and the lowest in **near-border** villages (40.7 percent, Table 5.4).

Table 5.3: Distribution of rural sampled households according to religion, poverty, social & political participation, house type and living facilities.

	Salient features	Zero-border Villages	Near-border Villages	Border-vicinity Villages	Other-border Villages	Non-border Villages	All Villages
	Number of households	105	91	196	150	88	434
	a) Religion Distribution						
I	Sikh households	86	81	167	93	81	341
		81.9	89.0	85.2	62.0	92.0	78.6
II	Hindu households	16	4	20	45	6	71
		15.2	4.4	10.2	30.0	6.8	16.4
III	Christian households	3	5	8	8	1	17
		2.9	5.5	4.1	5.3	1.1	3.9
	b) Social Participation						
I	Head of social, religious, sports, and/or cultural organisations	4	0	4	0	1	5
		3.8	0.0	2.0	0.0	1.1	1.2
II	Collection of donations for school buildings, Gurdwara, roads, common land leveling (Toaba filling), etc and their management	11	7	18	17	10	45
		10.5	**7.7**	**9.2**	**11.3**	**11.4**	**10.4**
III	Active participation in social (death, marriage, etc.) & religious functions	90	84	174	132	77	383
		85.7	**92.3**	**88.8**	**88.0**	**87.5**	**88.2**
	c) Political Participation						
I	**Hold/held a political Office**	8	8	16	17	8	41
		7.6	**8.8**	**8.2**	**11.3**	**9.1**	**9.4**
II	Organises visits of Political leaders	1	1	2	1	1	4
		1.0	1.1	1.0	0.7	1.1	0.9
III	**Active worker (registered member) of a political group**	0	1	1	1	3	5
		0.0	**1.1**	**0.5**	**0.7**	**3.4**	**1.2**
IV	Hold political ambitions	4	2	6	5	0	11
		3.8	2.2	3.1	3.3	0.0	2.5
V	**Politically inactive households**	91	77	168	125	76	369
		86.7	**84.6**	**85.7**	**83.3**	**86.4**	**85.0**
VI	Others	1	2	3	0	0	3
		1.0	2.2	1.5	0.0	0.0	0.7
	d) Type of House						
I	**Katcha house households**	44	31	75	32	4	111
		41.9	**34.1**	**38.3**	**21.3**	**4.5**	**25.6**
II	Semi-pucca house households	27	15	42	38	14	94
		25.7	16.5	21.4	25.3	15.9	21.7
III	**Pucca house households**	34	45	79	80	70	229
		32.4	**49.5**	**40.3**	**53.3**	**79.5**	**52.8**
	e) Living Facilities						
I	**Living/drawing facility households**	15	16	31	39	23	93
		14.3	**17.6**	**15.8**	**26.0**	**26.1**	**21.4**
II	**Kitchen facility households**	39	33	72	68	56	196
		37.1	**36.3**	**36.7**	**45.3**	**63.6**	**45.2**
III	**Bath room facility households**	67	55	122	103	74	299
		63.8	**60.4**	**62.2**	**68.7**	**84.1**	**68.9**

Table 5.4: Social and primary occupational classification of sampled households by border distance criteria

Social/Primary Occupation Traits	Zero-border Villages	Near-border Villages	Border-vicinity Villages	Other-border Villages	Non-border Villages	All Villages
a) Number of households	105	91	196	150	88	434
1. Joint households	45	36	81	85	49	215
Joint family households' share (percent)	42.9	39.6	41.3	56.7	55.7	49.5
2. Nuclear family households	60	55	115	65	39	219
Nuclear households' share (percent)	57.1	60.4	58.7	43.3	44.3	50.5
b) Primary Occupational Classification of Households						
(i) Agriculture households	65	37	102	83	49	234
Agriculture households' share (percent)	61.9	40.7	52.0	55.3	55.7	53.9
(ii) Wage worker households	34	47	81	59	27	167
Wage worker households' share (percent)	32.4	51.6	41.3	39.3	30.7	38.5
(iii) Artisan (wage worker) households	1	1	2	1	0	3
Artisan households' share (percent)	1.0	1.1	1.0	0.7	0.0	0.7
(iv) Dairy households	0	1	1	0	1	2
Dairy households' share (percent)	0.0	1.1	0.5	0.0	1.1	0.5
(v) Shop households*	4	3	7	2	6	15
Shop households' share (percent)	3.8	3.3	3.6	1.3	6.8	3.5
(vi) Service households	1	0	1	4	5	10
Service households' share (percent)	1.0	0.0	0.5	2.7	5.7	2.3
(vii) Faqir/Priest households	0	2	2	1	0	3
Faqir/Priest households' share (percent)	0.0	2.2	1.0	0.7	0.0	0.7

Households' possession of consumer durables is given in Table 5.5. The preponderance of households owing the variety of consumer durables display the following pattern: jeep/car (7.1 percent), scooter/motor cycle (27.6 percent), bicycle (83.2 percent), fans (90.8 percent), desert cooler (17.5 percent), television black & white (44.2 percent), television coloured (14.3 percent), fridge (29.3 percent), generator set (7.4 percent) and telephone (16.1 percent). *This suggests that market forces have succeeded in invading even remote rural border villages.*

Table 5.5: Sampled households and availability of consumer durables by border distance criteria

Salient Features		Zero-border Villages	Near-border Villages	Border-vicinity Villages	Other-border Villages	Non-border Villages	All Villages
Households: total		105	91	196	150	88	434
i)	Jeep/car (Nos.)	4	6	10	15	6	31
	Percentage of households	3.8	6.6	5.1	10.0	6.8	7.1
ii)	Scooter/motor cycle (Nos)	25	28	53	40	27	120
	Percentage of households	23.8	30.8	27.0	26.7	30.7	27.6
iii)	Bicycle (Nos.)	83	89	172	117	72	361
	Percentage of households	79.0	97.8	87.8	78.0	81.8	83.2
iv)	Fans(Nos.)	95	95	190	124	80	394
	Percentage of households	90.5	104.4	96.9	82.7	90.9	90.8
v)	Desert cooler (Nos)	11	18	29	29	18	76
	Percentage of households	10.5	19.8	14.8	19.3	20.5	17.5
vi)	T.V. (b/w) (Nos.)	39	45	84	63	45	192
	Percentage of households	37.1	49.5	42.9	42.0	51.1	44.2
vii)	T.V. (c) (Nos.)	14	11	25	22	15	62
	Percentage of households	13.3	12.1	12.8	14.7	17.0	14.3
viii)	Fridge (Nos.)	22	26	48	44	35	127
	Percentage of households	21.0	28.6	24.5	29.3	39.8	29.3
ix)	Generator (Nos.)	8	9	17	12	3	32
	Percentage of households	7.6	9.9	8.7	8.0	3.4	7.4
x)	Telephone (Nos.)	15	16	31	24	15	70
	Percentage of households	14.3	17.6	15.8	16.0	17.0	16.1

Note : (Nos.) mean number of households having these consumer durables.

5.2.3 Demographic and Socio-Economic Features of Workers

The age-cum-education distribution of workers of sampled households is given vide Table 5.6. Out of 1,749 workforce population, about half (906, 51.8 percent) were illiterate, about one-third were literate but had education below matric (528, 30.2 percent), about one-sixth had education matric and above (305, 17.4 percent), and a negligible number had professional qualifications (8, 0.5 percent). The age profile of workers shows that 60.1 percent of the total workers were between age-group of 23-58 years. **Amazingly, even among the younger age-group (up to 18 years) 34.1 percent of workers were illiterate, i.e. they did not join any school.** The proportion of illiterates first declines and then rises with the increase of age-group, e.g. 34.1 percent of up to 18 years, 28.7 percent of 18-22 years, 52.5 percent of 23-58 years and 84.3 percent of 59-70 years, and 85.7 percent of 71 years and above. Even among the literate, in younger age-group (up to 18 years) as many as 47.6 percent of the workforce was below matric, 17.1 percent of matric and above education level and 1.2 percent possessed professional qualifications. This is *a poor reflection*, to say the least, *on the social sector dimension of affairs in the development strategy of the lead State of the country*.

Table 5.6: Distribution of workers of rural sampled households by age-cum-educational status

Education Level		up to 18 Years	18-22 Years	23-58 Years	59-70 Years	71 Years & above	Total
		1	**2**	**3**	**4**	**5**	**6**
All workers		**82**	**348**	**1052**	**204**	**63**	**1749**
		4.7	**19.9**	**60.1**	**11.7**	**3.6**	**100.0**
		100.0	100.0	100.0	100.0	100.0	100.0
	Illiterate	28	100	552	172	54	906
		34.1	**28.7**	**52.5**	**84.3**	**85.7**	**51.8**
	Below matric	39	127	325	28	9	528
		47.6	**36.5**	**30.9**	**13.7**	**14.3**	**30.2**
	Matric & above	14	117	170	4	0	305
		17.1	**33.6**	**16.2**	**2.0**	**0.0**	**17.4**
	Professional	1	3	4	0	0	8
		1.2	**0.9**	**0.4**	**0.0**	**0.0**	**0.5**
Male workers		**52**	**195**	**563**	**109**	**38**	**957**
		5.4	20.4	58.8	11.4	4.0	100.0
		100.0	100.0	100.0	100.0	100.0	100.0
	Illiterate	19	48	238	83	30	418
		36.5	**24.6**	**42.3**	**76.1**	**78.9**	**43.7**
	Below matric	24	66	196	23	8	317
		46.2	**33.8**	**34.8**	**21.1**	**21.1**	**33.1**
	Matric & above	8	78	126	3	0	215
		15.4	**40.0**	**22.4**	**2.8**	**0.0**	**22.5**
	Professional	1	3	3	0	0	7
		1.9	**1.5**	**0.5**	**0.0**	**0.0**	**0.7**
Female workers		**30**	**152**	**488**	**95**	**25**	**790**
		3.8	**19.2**	**61.8**	**12.0**	**3.2**	**100.0**
		100.0	100.0	100.0	100.0	100.0	100.0
	Illiterate	9	52	314	89	24	488
		30.0	**34.2**	**64.3**	**93.7**	**96.0**	**61.8**
	Below matric	15	61	129	5	1	211
		50.0	**40.1**	**26.4**	**5.3**	**4.0**	**26.7**
	Matric & above	6	39	44	1	0	90
		20.0	**25.7**	**9.0**	**1.1**	**0.0**	**11.4**
	Professional	0	0	1	0	0	1
		0.0	**0.0**	**0.2**	**0.0**	**0.0**	**0.1**

The literacy levels of workers are sensitive to gender. Illiteracy level was higher, as expected, among female workers (61.8 percent) compared to male workers (43.7 percent). The share of matric and above level of education was 33.1 percent in the case of males and only 11.4 percent in the case of females. In younger age-group, in the case of females, none was having professional education. **On the whole, Table 5.6 depicts a very deplorable state of human capital formation among the workers in rural Ferozepur district.**

Table 5.7 demonstrates the age-wise *marital status* situation of the workforce. Among the workforce, 73.8 percent were married, 4.3 percent either widowed or divorced/separated and 21.8 percent unmarried. The marital status is also gender sensitive. While amongst the males (68.9 percent) were married, this proportion was higher in the case of females (79.6 percent). This was due to preponderance of marriage at an early stage in the case of females than in the case of males. This is revealed by the weight of unmarried males in the workforce was much higher (26.8 percent) compared to that of females (15.8 percent). *Despite the law prohibiting marriage below 18 years of age for girls and 21 years for boys, 3.8 percent of males and 3.3 percent of females were married in the age-group of up to 18 years.* Notwithstanding this aberration, 88.5 percent of males and 95.7 percent of females amongst the workers were married and belonged to the age-group of 23-58 years.

Table 5.7 : Distribution of workers of rural sampled households by age- and sex-wise marital status relationship

Education Level	up to 18 Years	18-22 Years	23-58 Years	59-70 Years	71 Years & above	Total
	1	2	3	4	5	6
a) All workers	**82**	**348**	**1052**	**204**	**63**	**1749**
	4.7	**19.9**	**60.1**	**11.7**	**3.6**	**100.0**
	100.0	100.0	100.0	100.0	100.0	100.0
Married	3	104	966	175	42	1290
	3.7	**29.9**	**91.8**	**85.8**	**66.7**	**73.8**
Unmarried	79	243	58	2	0	382
	96.3	**69.8**	**5.5**	**1.0**	**0.0**	**21.8**
Widowed	0	1	24	27	21	73
	0.0	**0.3**	**2.3**	**13.2**	**33.3**	**4.2**
Divorced/separated	0	0	2	0	0	2
	0.0	**0.0**	**0.2**	**0.0**	**0.0**	**0.1**
b) Male workers	**52**	**196**	**564**	**109**	**38**	**959**
	5.4	20.4	58.8	11.4	4.0	100.0
	100.0	100.0	100.0	100.0	100.0	100.0
Married	2	40	499	95	25	661
	3.8	**20.4**	**88.5**	**87.2**	**65.8**	**68.9**
Unmarried	50	156	50	1	0	257
	96.2	**79.6**	**8.9**	**0.9**	**0.0**	**26.8**
Widowed	0	0	13	13	13	39
	0.0	**0.0**	**2.3**	**11.9**	**34.2**	**4.1**
c) Female workers	**30**	**152**	**488**	**95**	**25**	**790**
	3.8	**19.2**	**61.8**	**12.0**	**3.2**	**100.0**
	100.0	100.0	100.0	100.0	100.0	100.0
Married	1	64	467	80	17	629
	3.3	**42.1**	**95.7**	**84.2**	**68.0**	**79.6**
Unmarried	29	87	89	1	0	125
	96.7	**57.2**	**1.6**	**1.1**	**0.0**	**15.8**
Widowed	0	1	11	14	8	34
	0.0	**0.7**	**2.3**	**14.7**	**8**	**34**
Divorced/separated	0	0	0	0	0	0
	0.0	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**

5.2.4 Employment/Unemployment Status of Workers

Table 5.8 shows the age-specific employment status of sampled households according to three different levels of employment durations, i.e. **on seven days work basis, on thirty days work basis and on ninety days work basis**. Under each work basis, time disposition pattern has also been examined. In terms of seven work days criteria, 182 persons (10.4 percent) did not work even for single day of the reference week; 67 persons (3.8 percent) worked for up to 3 days, and 1,500 persons (85.8 percent) worked for 4 days and above. In terms of this criterion, about two-thirds of the workforce (1,126 persons, 64.4 percent) was fully employed on each of the seven week days. This proportion is gender sensitive. While 77.3 percent of females worked during whole of the week compared to 53.7 percent of the males. In contrast, 7.7 percent of females and 12.6 percent of males did not work even for a single day during the reference week. Put together, thus, while one-tenth of the workforce (10.4 percent) remained fully unemployed during the week, whereas two-thirds were fully employed (64.4 percent) during the week.

The degree of full employment is, however, sensitive to the age profile of the workforce. While the maximum proportion (54.0 percent) of the segment representing the highest age ladder (71 years and above) was fully unemployed, the reverse was true (3.3 percent) in the work profile age-group of 23-58 years. The vice-versa happens when full-employment aspect is taken note of. In other words, there exists an inverse relation between the age of the worker and the availability of work (refer row iv, Table 5.8).

Between the zero work days and all seven work days scenario, there exist two other categories that represent a situation of partial/under-employment. While those who work **'up to three days during the week'** can be termed as semi-employed, those who work for **'4 days and above'** represent a situation towards full-employment. The same type of categorisation can be extended to that of thirty days work criterion and ninety day work criterion.

The perusal of Table 5.8 further shows that as the criterion is changed from thirty day duration basis to ninety days duration basis, those who fail to get work even for one day their proportion increases from 12.3 percent (216 persons) to 13.4 percent (234 persons). In contrast, those who got the work for all the days, their number fell from 306 persons (17.5 percent) to 94 persons (5.4 percent). Similarly, those who got work for more than half the duration of the criterion their proportion fell from 82.6 percent (1444 persons) to 79.2 percent (1385 persons). But those who got work for less than half the duration of the criterion, their proportion rose from 5.1 percent (89 persons) to 7.4 percent (130 persons). In other words, **as we move from shorter duration to longer duration criterion, the proportion of those who were unemployed or partially employed increases. And those who were fully employed or tended to move towards full employment decreases**.

The sensitivity pattern observed in the case of first criterion in respect of age profile behaviour as well as gender behaviour gets replicated in the case of other two criteria of employment measurement. For instance, upper age-group encountered maximum unemployment scenario while the workers belonging to younger age-group enjoyed near full employment scenario.

Table 5.8: Age and sex specific employment status of workers of rural sampled households

Employment Status	up to 18 Years	18-22 Years	23-58 Years	59-70 Years	71 Years & above	Total
a) All workers	**82**	**348**	**1052**	**204**	**63**	**1749**
	4.7	**19.9**	**60.1**	**11.7**	**3.6**	**100.0**
	100.0	100.0	100.0	100.0	100.0	100.0
Employment Status: Seven Days Basis						
i) Zero work days	10	48	35	55	34	182
	12.2	**13.8**	**3.3**	**27.0**	**54.0**	**10.4**
ii) Up to 3 days	3	13	44	6	1	67
	3.7	**3.7**	**4.2**	**2.9**	**1.6**	**3.8**
iii) 4 days & above*	69	287	973	143	28	1500
	84.1	**82.5**	**92.5**	**70.1**	**44.4**	**85.8**
iv) All Seven Days	63	237	725	83	18	1126
	76.8	**68.1**	**68.9**	**40.7**	**28.6**	**64.4**
Employment Status: Thirty Days Basis						
i) Zero work days	11	59	56	56	34	216
	13.4	**17.0**	**5.3**	**27.5**	**54.0**	**12.3**
ii) Up to 14 days	5	18	51	11	4	89
	6.1	**5.2**	**4.8**	**5.4**	**6.3**	**5.1**
iii) 15 days & above**	66	271	945	137	25	1444
	80.5	**77.9**	**89.8**	**67.2**	**39.7**	**82.6**
iv) All Thirty Days	27	61	203	15	0	306
	32.9	**17.5**	**19.3**	**7.4**	**0.0**	**17.5**
Employment Status: Ninety Days Basis						
i) Zero work days	14	62	68	56	34	234
	17.1	**17.8**	**6.5**	**27.5**	**54.0**	**13.4**
ii) Up to 44 days	11	22	73	20	4	130
	13.4	**6.3**	**6.9**	**9.8**	**6.3**	**7.4**
iii) 45 days & above***	57	264	911	128	25	1385
	69.5	**75.9**	**86.6**	**62.7**	**39.7**	**79.2**
iv) All Ninety Days	8	24	56	6	0	94
	9.8	**6.9**	**5.3**	**2.9**	**0.0**	**5.4**
b) Male workers	**52**	**196**	**564**	**109**	**38**	**959**
	5.4	20.4	58.8	11.4	4.0	100.0
	100.0	100.0	100.0	100.0	100.0	100.0
Employment Status: Seven Days Basis						
i) Zero work days	9	34	22	34	22	121
	17.3	**17.3**	**3.9**	**31.2**	**57.9**	**12.6**
ii) Up to 3 days	3	13	40	4	1	61
	5.8	**6.6**	**7.1**	**3.7**	**2.6**	**6.4**
iii) 4 days & above*	40	149	502	71	15	777
	76.9	**76.0**	**89.0**	**65.1**	**39.5**	**81.0**
iv) All Seven Days	36	111	320	38	10	515
	69.2	**56.6**	**56.7**	**34.9**	**26.3**	**53.7**

Table 5.8 continue...

Table 5.8 continue...

Employment Status	up to 18 Years	18-22 Years	23-58 Years	59-70 Years	71 Years & above	Total
Employment Status: Thirty Days Basis						
i) Zero work days	10	37	27	32	22	128
	19.2	**18.9**	**4.8**	**29.4**	**57.9**	**13.3**
ii) Up to 14 days	5	15	49	10	2	81
	9.6	**7.7**	**8.7**	**9.2**	**5.3**	**8.4**
iii) 15 days & above**	37	144	488	67	14	750
	71.2	**73.5**	**86.5**	**61.5**	**36.8**	**78.2**
iv) All Thirty Days	12	24	50	6	0	92
	23.1	**12.2**	**8.9**	**5.5**	**0.0**	**9.6**
Employment Status: Ninety Days Basis						
i) Zero work days	12	39	31	32	22	136
	23.1	**19.9**	**5.5**	**29.4**	**57.9**	**14.2**
ii) Up to 44 days	8	17	62	16	2	105
	15.4	**8.7**	**11.0**	**14.7**	**5.3**	**10.9**
iii) 45 days & above***	32	140	471	61	14	718
	61.5	**71.4**	**83.5**	**56.0**	**36.8**	**74.9**
iv) All Ninety Days	6	16	14	3	0	39
	11.5	**8.2**	**2.5**	**2.8**	**0.0**	**4.1**
Female workers	**30**	**152**	**488**	**95**	**25**	**790**
	3.8	**19.2**	**61.8**	**12.0**	**3.2**	**100.0**
	100.0	100.0	100.0	100.0	100.0	100.0
Employment Status: Seven Days Basis						
i) Zero work days	1	14	13	21	12	61
	3.3	**9.2**	**2.7**	**22.1**	**48.0**	**7.7**
ii)Up to 3 days	0	0	4	2	0	6
	0.0	**0.0**	**0.8**	**2.1**	**0.0**	**0.8**
iii) 4 days & above*	29	138	471	72	13	723
	96.7	**90.8**	**96.5**	**75.8**	**52.0**	**91.5**
iv) All Seven Days	27	126	405	45	8	611
	90.0	**82.9**	**83.0**	**47.4**	**32.0**	**77.3**
Employment Status: Thirty Days Basis						
i) Zero work days	1	22	29	24	12	88
	3.3	**14.5**	**5.9**	**25.3**	**48.0**	**11.1**
ii) Up to 14 days	0	3	2	1	2	8
	0.0	**2.0**	**0.4**	**1.1**	**8.0**	**1.0**
iii) 15 days & above**	29	127	457	70	11	694
	96.7	**83.6**	**93.6**	**73.7**	**44.0**	**87.8**
iv) All Thirty Days	15	37	153	9	0	214
	50.0	**24.3**	**31.4**	**9.5**	**0.0**	**27.1**
Employment Status: Ninety Days Basis						
i) Zero work days	2	23	37	24	12	98
	6.7	**15.1**	**7.6**	**25.3**	**48.0**	**12.4**
ii) Up to 44 days	3	5	11	4	2	25
	10.0	**3.3**	**2.3**	**4.2**	**8.0**	**3.2**
iii) 45 days & above***	25	124	440	67	11	667
	83.3	**81.6**	**90.2**	**70.5**	**44.0**	**84.4**
iv) All Ninety Days	2	8	42	3	0	55
	6.7	**5.3**	**8.6**	**3.2**	**0.0**	**7.0**

Note: * This includes the persons who worked all the seven days.
        ** This includes the persons who worked all the thirty days.
      *** This includes the persons who worked all the ninety days.

5.2.5 **Employment Seeking Behaviour**

Even in a situation where community support usually allows persons to enjoy life without work, when a person is compelled to seek work it is an index of extreme situation where even community feels your existence without work is non-acceptable. In other words, **employment seeking is the most-pronounced manifestation of ones' non-affordability of a situation of unemployment.** Of the total workforce (1749 workers), 85.4 percent (1494 persons) were fully accepted by the community and did not made any apparent effort to seek work (Table 5.9). However, about one-seventh (14.6 percent, 255 persons) were compelled by their circumstances and made active efforts of varying degree to seek and secure gainful work. While three-fourth of them (73.3 percent, 187 persons) reported daily in the informal labour market/Chowk, others (26.7 percent, 68 persons) tried a number of alternative measures to seek employment.

Table 5.9: Age-cum-employment seeking behaviour of workers among rural sampled households

Working Seeking Preference		up to 18 Years	18-22 Years	23-58 Years	59-70 Years	71 Years & above	Total
a) All workers		82	348	1052	204	63	1749
		4.7	**19.9**	**60.2**	**11.7**	**3.6**	**100.0**
i) Not seeking work (1)*		71	274	898	190	61	1494
		86.6	**78.7**	**85.4**	**93.1**	**96.8**	**85.4**
ii) Actively seeking work (2)		11	74	154	14	2	255
		13.4	**21.3**	**14.6**	**6.9**	**3.2**	**14.6**
	2	0	0	4	0	0	4
	3	0	1	3	0	0	4
	4	0	7	15	0	1	23
	5	0	4	1	0	0	5
	6	0	0	0	0	0	0
	7	0	0	0	0	0	0
	8	2	16	8	0	0	26
	9	0	1	0	0	0	1
Labour market: daily attendance (10)		9	43	120	14	1	187
	11	0	2	3	0	0	5
b) Male workers		**52**	**196**	**564**	**109**	**38**	**959**
		5.4	**20.5**	**58.9**	**11.4**	**4.0**	**100.0**
i) Not seeking work (1) *		43	134	432	95	36	740
		82.7	**68.4**	**76.6**	**87.2**	**94.7**	**77.2**
ii) Actively seeking work (2)		9	62	132	14	2	219
		17.3	**31.6**	**23.4**	**12.8**	**5.3**	**22.8**
2		0	0	2	0	0	2
3		0	1	2	0	0	3
4		0	3	12	0	1	16
5		0	4	1	0	0	5
6		0	0	0	0	0	0
7		0	0	0	0	0	0
8		1	13	6	0	0	20
9		0	1	0	0	0	1
10		8	38	109	14	1	170
11		0	2	0	0	0	2

Table 5.9 continue...

Table 5.9 continue...

Working Seeking Preference	up to 18 Years	18-22 Years	23-58 Years	59-70 Years	71 Years & above	Total
c) Female workers	30	152	488	95	25	790
	3.8	19.2	61.8	12.0	3.2	100.0
i) Not seeking work (1) *	28	140	466	95	25	754
	93.3	92.1	95.5	100.0	100.0	95.4
ii) Actively seeking work (2)	2	12	22	0	0	36
	6.7	7.9	4.5	0.0	0.0	4.6
2	0	0	2	0	0	2
3	0	0	1	0	0	1
4	0	4	3	0	0	7
5	0	0	0	0	0	0
6	0	0	0	0	0	0
7	0	0	0	0	0	0
8	1	3	2	0	0	6
9	0	0	0	0	0	0
10	1	5	11	0	0	17
11	0	0	3	0	0	3

Note: *It includes those unemployed persons who were not actively seeking employment during the reference period.

Note: Not seeking work (Code 1), Seeking Work (Code 2-10), Seeking Work in the Organised sector (Codes 2 to 9), and *Seeking work in non-organised* sector (Code 10). Those seeking work in the non-organised sector mark their attendance, on daily basis, in the informal labour market/Chowk. Those that *seek job in the organised sector either* are registered with employment exchanges/placement agencies, appearing/appeared in tests/interviews or are waiting for a period extending up to three or more months.

The employment seeking behaviour is sensitive to gender as well as age-profile of the unemployed person. For instance, while 85.9 percent of the unemployed male workforce (219) actively sought work, only 14.1 percent unemployed females (36) actively sought work. Similarly, the maximum numbers who marked their attendance daily in labour market belonged to the age-group of 23-58 years (120 out of 181). The same holds true both for male employment seekers and female employment seekers. The age-group profile proportion of persons seeking work displays no clear cut pattern. It shows an upward swing up to the age of 22 and a systematic fall thereafter. For instance, it rises from 13.4 percent for the age-group up to 18 years to 21.3 percent for the age-group of 18-22 years, and thereafter registers declining trend from 14.6 percent (for the age-group 23-58 years) to 6.9 percent (for the age-group 59-70 years), and 3.2 percent (for the age-group 71 years and above).

The employment seeking options are further diagnosed in terms of organised and non-organised sectors (Table 5.10). Out of 255 persons, almost three-fourths (73.3 percent, 187 persons) opted for employment in the non-organised sector, probably because openings in the organised sector were available only to the few qualified chosen (26.7 percent, 68 persons). While the dominant proportion (77.6 percent) of males opted for employment in the non-organised sector, those of the females who sought outside employment were keen only for the organised sector employment (52.8 percent). The preference for non-organised sector by a majority is, obviously, a reflective index of limited options available to the majority of work seekers in the organised sector.

Table 5.10: Age-cum-employment seeking preference of workers among rural sampled households by organised/unorganised sector

Working Seeking Preference	up to 18 Years	18-22 Years	23-58 Years	59-70 Years	71 Years & above	Total
a) All workers	82	348	1052	204	63	1749
	4.7	**19.9**	**60.2**	**11.7**	**3.6**	**100.0**
Not seeking work (1)*	71	274	898	190	61	1494
	86.6	**78.7**	**85.4**	**93.1**	**96.8**	**85.4**
Actively seeking work (2)	11	74	154	14	2	255
	13.4	**21.3**	**14.6**	**6.9**	**3.2**	**14.6**
i) Organised sector	2	31	34	0	1	68
	18.2	**41.9**	**22.1**	**0.0**	**50.0**	**26.7**
ii) Non-organised sector	9	43	120	14	1	187
	81.8	**58.1**	**77.9**	**100.0**	**50.0**	**73.3**
b) Male workers	52	196	564	109	38	959
	5.4	**20.4**	**58.8**	**11.4**	**4.0**	**100.0**
Not seeking work (1)*	43	134	432	95	36	740
	82.7	**68.4**	**76.6**	**87.2**	**94.7**	**77.2**
Actively seeking work (2)	9	62	132	14	2	219
	17.3	**31.6**	**23.4**	**12.8**	**5.3**	**22.8**
i) Organised sector	1	24	23	0	1	49
	11.1	**38.7**	**17.4**	**0.0**	**50.0**	**22.4**
ii) Non-organised sector	8	38	109	14	1	170
	88.9	**61.3**	**82.6**	**100.0**	**50.0**	**77.6**
c) Female workers	30	152	488	95	25	790
	3.8	**19.2**	**61.8**	**12.0**	**3.2**	**100.0**
Not seeking work (1)	28	140	466	95	25	754
	93.3	**92.1**	**95.5**	**100.0**	**100.0**	**95.4**
Actively seeking work (2)	2	12	22	0	0	36
	6.7	**7.9**	**4.5**	**0.0**	**0.0**	**4.6**
i) Organised sector	1	7	11	0	0	19
	50.0	**58.3**	**50.0**	**0.0**	**0.0**	**52.8**
ii) Non-organised sector	1	5	11	0	0	17
	50.0	**41.7**	**50.0**	**0.0**	**0.0**	**47.2**

* It includes those unemployed persons who were not actively seeking employment during the reference period.

Note: Not seeking work (Code 1), Seeking Work (Code 2-10), Seeking Work in the Organised sector (Codes 2 to 9), and *Seeking work in non-organised* sector (Code 10). Those seeking work in the non-organised sector mark their attendance, on daily basis, in the informal labour market/Chowk. Those that *seek job in the organised sector either* are registered with employment exchanges/placement agencies, appearing/appeared in tests/interviews or are waiting for a period extending up to three or more months.

Were all the persons available for work in the market place? "No". Two-fifths of the person were not available for work on full time basis partly because of studies (60 persons), training (30 persons), disability (120 persons), and domestic work (493 persons, Table 5.11). Another one-tenth of the workforce (12.0 percent, 210 persons) was engaged in only as part-time workers in the market place. Of the 210 part-time workers, self-earning was the dominant mode (128 persons) of employment and casual work earnings (82 persons), the residual choice. Even self-employed worker are not a homogenous group. Of the 407 self-employed workers who accounted for around one-fourth of the workforce (23.3 percent), 342 were own-account workers, 38 were unpaid family workers and 27 acted as supervisors. Among the wage-employed 303 workers (17.3 percent), 169 worked as casual workers and 134 as regular worker.

Table 5.11: Age-cum-work status relationship among workers of rural samples households

Work Status	up to 18 Years	18-22 Years	23-58 Years	59-70 Years	71 Years & above	Total
All workers (i to vii)	82	348	1052	204	63	1749
i) Non-available for work on full time basis due to						
Studies (13)	14	46	0	0	0	60
Trainee (24)	13	15	1	0	1	30
Disability (17)	3	9	25	52	31	120
Domestic work (14)	14	104	305	59	11	493
Sub-total	44	174	331	111	43	703
	53.7	**50.0**	**31.5**	**54.4**	**68.3**	**40.2**
ii) Part-time worker as						
Casual worker (10)	5	10	60	5	2	82
Self earner (15)	0	10	108	10	0	128
Sub-total	5	20	168	15	2	210
	6.1	**5.7**	**16.0**	**7.4**	**3.2**	**12.0**
iii) Self-employed						
Own account worker (1)	6	39	261	29	7	342
Unpaid worker (5)	4	24	10	0	0	38
Supervisor (22)	0	0	7	18	2	27
Sub-total	10	63	278	47	9	407
	12.2	**18.1**	**26.4**	**23.0**	**14.3**	**23.3**
iv) Wage employed						
Casual worker (21)	8	37	109	14	1	169
Regular worker (6)	11	33	84	4	2	134
Sub-total	19	70	193	18	3	303
	23.2	**20.1**	**18.3**	**8.8**	**4.8**	**17.3**
v) Self-employed-cum-wage worker (4,7,23)	0	6	52	6	2	66
	0.0	**1.7**	**4.9**	**2.9**	**3.2**	**3.8**
vi) Available for work but did not seek work (12)	1	7	19	5	1	33
	1.2	**2.0**	**1.8**	**2.5**	**1.6**	**1.9**
vii) Others	3	8	11	2	3	27
	3.7	**2.3**	**1.0**	**1.0**	**4.8**	**1.5**

Table 5.12: Age-cum-work status relationship among workers of rural sampled households (males)

Work Status	up to 18 Years	18-22 Years	23-58 Years	59-70 Years	71 Years & above	Total
Male (i to vii)	**52**	**196**	**564**	**109**	**38**	**959**
i) Non-available for work on full time basis due to						
Studies (13)	**11**	**33**	**0**	**0**	**0**	**44**
Trainee (24)	**9**	**13**	**1**	**0**	**1**	**24**
Disability (17)	**3**	**7**	**16**	**31**	**19**	**76**
Domestic work (14)	0	0	4	0	0	4
Sub-total	**23**	**53**	**21**	**31**	**20**	**148**
	44.2	**27.0**	**3.7**	**28.4**	**52.6**	**15.4**
ii) Part-time worker as						
Casual worker (10)	0	0	3	1	0	4
Self earner (15)	0	0	4	0	0	4
Sub-total	**0**	**0**	**7**	**1**	**0**	**8**
	0.0	**0.0**	**1.2**	**0.9**	**0.0**	**0.8**
iii) Self-employed						
Own account worker (1)	6	37	257	28	7	335
Unpaid worker (5)	3	22	9	0	0	34
Supervisor (22)	0	0	6	18	2	26
Sub-total	9	59	272	46	9	395
	17.3	**30.1**	**48.2**	**42.2**	**23.7**	**41.2**
iv) Wage employed						
Casual worker (21)	6	34	109	14	1	164
Regular worker (6)	10	30	79	4	2	125
Sub-total	16	64	188	18	3	289
	30.8	**32.7**	**33.3**	**16.5**	**7.9**	**30.1**
v) Self-employed-cum-wage worker (4,7,23)	0	6	51	6	2	65
	0.0	**3.1**	**9.0**	**5.5**	**5.3**	**6.8**
vi) Available for work but did not seek work (12)	1	7	18	5	1	32
	1.9	**3.6**	**3.2**	**4.6**	**2.6**	**3.3**
vii) Others	3	7	7	2	3	22
	5.8	**3.6**	**1.2**	**1.8**	**7.9**	**2.3**

Table 5.13: Age-cum-work status relationship among workers of rural sampled households (females)

Work Status	up to 18 Years	18-22 Years	23-58 Years	59-70 Years	71 Years & above	Total
Female (iv-vii)	**30**	**152**	**488**	**95**	**25**	**790**
i) Non-available for work on full time basis due to						
Studies (13)	3	13	0	0	0	16
Trainee (24)	4	2	0	0	0	6
Disability (17)	0	2	9	21	12	44
Domestic work (14)	14	104	301	59	11	489
Sub-total	**21**	**121**	**310**	**80**	**23**	**555**
	70.0	**79.6**	**63.5**	**84.2**	**92.0**	**70.3**
ii) Part-time worker as						
Casual worker (10)	5	10	57	4	2	78
Self earner (15)	0	10	104	10	0	124
Sub-total	**5**	**20**	**161**	**14**	**2**	**202**
	16.7	**13.2**	**33.0**	**14.7**	**8.0**	**25.6**
iii) Self-employed						
Own account worker (1)	0	2	4	1	0	7
Unpaid worker (5)	1	2	1	0	0	4
Supervisor (22)	0	0	1	0	0	1
Sub-total	**1**	**4**	**6**	**1**	**0**	**12**
	3.3	**2.6**	**1.2**	**1.1**	**0.0**	**1.5**
iv) Wage employed						
Casual worker (21)	2	3	0	0	0	5
Regular worker (6)	1	3	5	0	0	9
Sub-total	**3**	**6**	**5**	**0**	**0**	**14**
	10.0	**3.9**	**1.0**	**0.0**	**0.0**	**1.8**
v) Self-employed-cum-wage worker (4,7,23)	0	0	1	0	0	1
	0.0	**0.0**	**0.2**	**0.0**	**0.0**	**0.1**
vi) Available for work but did not seek work (12)	0	0	1	0	0	1
	0.0	**0.0**	**0.2**	**0.0**	**0.0**	**0.1**
vii) Others	0	1	4	0	0	5
	0.0	**0.7**	**0.8**	**0.0**	**0.0**	**0.6**

Apart from these exclusive categories of wage and self-employed workers, there were porous categories where a worker was simultaneously engaged in more than one categories of work. For example, 66 workers (3.8 percent) represented a combined self-employment-cum-wage-employed set. Interestingly, 33 persons (1.9 percent) were available for work but did not seek work actively – **they appeared to be waiting for the right opportunity when they hope to actively seek work.** In all, 27 persons (1.5 percent) formed 'others' as another category of workers.

Amongst the 959 male workers, 15.4 percent (148) were not available for work on full-time basis. The share of those who worked as part-time workers was 0.8 percent, as self-

employed workers 41.2 percent, as wage-employed workers 30.1 percent and as self-employed-cum-wage-workers 6.8 percent (Table 5.12). Even among them, a small fraction though available for work did not actively seeks work (32 male workers). As expected, majority (70.3 percent) of the female workers were not available for work on full-time basis. This was partly owing to their being engaged in domestic work (555) and physical disability (44) and partly because some of them were engaged in studies (16) or working as trainees (6).

Comparative analyses indicate that dominant proportion of females could not participate as full-time work because of domestic work. The proportion of females in self-employment was very small, as against the males who sought self-employment as the main avenue of employment (Table 5.13). The maximum number of women workers worked as part-time workers as against a small proportion of male workers who offered as part-time workers. Thus, **the supply of the males and females in the labour market as workers depends upon different socio-economic under-currents and dynamics.**

5.3 Extent of Unemployment and Border Nearness

Of 434 sampled rural households, 209 households (48.2 percent) reported one or more unemployed person/s that was seeking employment (Table 5.14). Across the border distance criteria, the proportion of such employment seeking households was higher among the border-vicinity villages (55.1 percent) compared with other-border villages (41.3 percent) and non-border villages (44.3 percent). On the whole, there were 316 unemployed persons seeking employment amongst 209 households. There were, thus, 1.51 unemployed persons per household. Per household unemployed persons number was the highest (1.74 persons) among the **other-border** villages and the lowest (1.29 persons) among the **near-border** villages.

However, in terms of workforce, **the unemployment rate was 18.1 percent and, in terms of population, it was 10.8 percent**. Such a relatively high unemployment rate is attributable primarily to border-vicinity villages. In fact, unemployment rate looses by about 5 percentage points as we move from border-vicinity villages to other-border villages to non-border villages from 20.4 percent to 16.9 percent to 15.4 percent respectively. Thus, **unemployment rate appears to be inversely related with the distance of the village from the border**. Such a tendency is further corroborated by the existence of *negative sign of the correlation coefficient* (-0.0704) found between the *distance from the border of the village of a family* and *its unemployment rate* as observed from each of the 434 families.

Work participation rate, ratio of workers in population, is 59.5 percent suggesting that, on an average, three out of five members of the family contribute to production process. This ratio is marginally higher in the case of males (60.2 percent) than that of females (58.7 percent). In other words, **there is no gender bias and both sexes equally participate in production activities**. *Work participation rate is, however, 4 percentage points lower in border-vicinity village households (56.9 percent) compared to other-border village families (62.0 percent) and non-border village families (61.0 percent).* Broadly, a similar pattern persists across the two genders.

Table 5.14: Composition of workers of rural sampled households of Ferozepur border district as per villages arranged by distance from border

Workers Attributes	Zero-border Villages	Near-border Villages	Border-vicinity Villages	Other-border Villages	Non-Border Villages	All Villages
Household : total	**105**	**91**	**196**	**150**	**88**	**434**
Employment seeking households	49	59	108	62	39	209
Share of employment seeking households (percent)	**46.7**	**64.9**	**55.1**	**41.3**	**44.3**	**48.2**
Population : total	748	553	1301	1029	608	2938
Workers: total	410	330	740	638	371	1749
Workers' share among members (percent)	**54.8**	**59.6**	**56.9**	**62.0**	**61.0**	**59.5**
Male Workers	221	190	411	340	208	959
Male workers' share among male members (percent)	**54.4**	**65.3**	**58.9**	**60.1**	**62.8**	**60.2**
Female Workers	189	139	328	298	164	790
Female workers' share among female family members (percent)	**55.3**	**53.1**	**54.3**	**64.2**	**59.2**	**58.7**
Usual status workers	247	197	444	351	198	993
Usual status workers' share in family workforce (percent)	**60.2**	**59.7**	**60.0**	**55.0**	**53.4**	**56.8**
Unemployment persons seeking work	75	76	151	108	57	316
Proportion in workforce (percent)	**18.3**	**23.0**	**20.4**	**16.9**	**15.4**	**18.1**
Proportion in population (percent)	**10.0**	**13.8**	**11.6**	**10.5**	**10.8**	**10.8**
Unemployed person/s per household	**1.53**	**1.29**	**1.40**	**1.74**	**1.46**	**1.51**

Note: Depending on the distance from the international border, border villages have been classified into **zero-border villages** (up to 2 Km.), **near-border villages** (2-6 Km**.), border-vicinity villages** (up to 6 Km.), **other-border villages** (6-16 Km.) and **non-border villages** (beyond 16 Km. but within the district).

The **usual principal status**, an index of committed employment's share in workforce reveals that three out of five workers work on full-time basis (56.8 percent). In other words, the remaining *two of the five workers work on part-time basis* suggesting the presence of high level of **underemployment and disguised unemployment**.

Do border nearness inculcate traits that resist change? The usual principal activity status, namely farming, non-farming and subsidiary, is assigned to a rural family member when he/she devotes a dominant part of his time to that activity. Interestingly, only three of the five members of the workforce (56.8 percent) are engaged on full-time basis and reported their usual principal occupation either as farming, non-farming or subsidiary. This number is relatively higher in the border-vicinity villages (60.0 percent) than in the other-border villages (55.0 percent) and non-border villages (53.4 percent). Alternatively viewed, the tendency to be tied to an occupation weakens as one moves away from border villages to non-border villages. The **border nearness, thus, builds inertia to change**.

There appears to exist an inverse relation between the distance from the border and the *usual principal status workers* share in family workforce. The share decreases as we move from border-vicinity village families (60.0 percent) to other-border village families (55.0 percent) to non-border village families (53.4 percent). The existence of *negative sign of the correlation coefficient* (-0.14972) between the *distance from the border of the village of a family* and the *usual status workers share in family workforce* as observed from each of the 434 families lends further support to the above evidence. Alternatively viewed, **disguised unemployment rate** is positively related with distance from the border. In other words, the rate of **open unemployment** is likely to be higher in the border-vicinity villages than in other/non-border villages, a fact well recorded earlier.

Employment extent may be measured on weekly basis, monthly basis, quarterly basis and annual/ usual principal status basis. For computing the capacity use rate, a concept often used in industry, Sundays, which are universally accepted as holidays, are excluded. Consequently, workdays at the command of a rural worker during a week are at most six, during a month at most twenty-six, and during a quarter at most seventy-seven. During the year these are assumed to be three hundred days on the premise of 52 Sundays and 13 holidays. A workday consists of 8 hours. The **capacity use rate of a worker** is computed by dividing the actual workdays by the maximum workdays available and multiplying by 100. For instance, **weekly capacity use rate of a worker** is computed by dividing the actual workdays during a week by the maximum six workdays and multiplying by 100. The value of denominator in the **monthly capacity use rate of a worker** is twenty-six, in the **quarterly capacity use rate of a worker** is seventy-seven and in the **annual capacity use rate of a worker** is three hundreds. Similarly**, daily capacity use rate of a worker** is computed by dividing the actual hours worked during a day by 8 and multiplying by 100.

On an average, **a rural worker works for 90 percent of the workdays whether measured in terms of monthly criteria or quarterly criteria**. However**, during peak workdays**, as the survey weeks happen to be, **they work on full-time basis** as is revealed by weekly capacity use rate of 98 percent (Table 5.15). However, their average workday comprises of 7 hours and not 8 hours, i.e., their **daily capacity use rate is 87 percent**.

Of the 1749 sampled household workers, 55 percent (959) are male workers and remaining (45 percent) (790) are female workers. Irrespective of the employment criteria used, capacity use rate of male workers is lower than that of their female counterparts. Even during the peak work period, while the female workers work at full capacity or above, male counterparts attain maximum of 90 percent capacity use rate on weekly basis, and around 82 percent on monthly and quarterly basis (Table 5.15). Both of them, however, work for a period of around 7 hours in a day.

Are the number of hours worked per day and number of days worked during a defined period affected by border nearness? A priori, one would expect the answer to be positive in both the cases on the premise that army maneuvers may restrict the working hours as well working days in the vicinity of active international border. Since the preceding year was a normal year on the border, the study shows that there exists the expected tendency but it is not significantly marked. For instance, the average number of hours worked per day per worker improves marginally, as we move from border-vicinity

villages to non-border villages, from 7.0 to 7.1 hours in the case weekly and monthly

Table 5.15: Working days, hours per day worked and capacity-use rate by sex as per weekly, monthly and quarterly norms of rural households of Ferozepur border district as per villages arranged by distance from border

Norm Specifications	Zero-border Villages	Near-border Villages	Border-vicinity Villages	Other-border Villages	Non-border Villages	All Villages
Male workers : total	**221**	**190**	**411**	**340**	**208**	**959**
Days and hours worked per day by a male worker during a week, month and three months						
Out of 7 Days	5.4	5.2	5.3	5.4	5.6	5.4
Weekly capacity use rate (percent)	**90**	**87**	**89**	**90**	**93**	**90**
Hours per day	7.0	7.0	7.0	6.9	6.4	7.0
Daily capacity use rate (percent)	87	87	87	86	80	88
0ut of 30 days	22.3	19.7	21.1	21.2	22.1	21.3
Monthly capacity use rate (percent)	**86**	**76**	**81**	**82**	**85**	**82**
Hours per day	7.2	7.0	7.1	7.0	7.3	7.1
Daily capacity use rate (percent)	90	88	89	88	92	89
Out of 90 days	66.4	57.4	62.2	62.1	65.2	62.8
Quarterly capacity use rate (percent)	**86**	**75**	**81**	**81**	**85**	**82**
Hours per day	7.2	7.1	7.2	6.9	7.2	7.1
Daily capacity use rate (percent)	90	89	90	87	90	89
Female workers : total	**189**	**139**	**328**	**298**	**164**	**790**
Days and hours worked per day by a female worker during a week, month and three months						
Out of 7 Days	6.4	6.6	6.5	6.4	6.3	6.4
Weekly capacity use rate (percent)	**107**	**110**	**109**	**107**	**105**	**107**
Hours per day	7.0	7.2	7.1	7.0	6.9	7.0
Daily capacity use rate (percent)	87	90	88	88	87	88
0ut of 30 days	25.3	25.0	25.2	26.0	25.4	25.5
Monthly capacity use rate (percent)	**97**	**96**	**97**	**100**	**98**	**98**
Hours per day	7.0	6.6	6.8	6.9	6.8	6.9
Daily capacity use rate (percent)	88	83	85	86	85	86
Out of 90 days	75.0	73.9	74.5	75.0	75.6	74.9
Quarterly capacity use rate (percent)	**97**	**96**	**97**	**97**	**98**	**97**
Hours per day	7.0	6.6	6.8	6.7	6.9	6.8
Daily capacity use rate (percent)	88	82	85	84	86	85
Total workers : total	**410**	**330**	**740**	**638**	**371**	**1749**
Days and hours worked per day by a worker during a week, month and three months						
Out of 7 Days	5.9	5.8	5.8	5.9	5.9	5.9
Weekly capacity use rate (percent)	**98**	**97**	**97**	**98**	**99**	**98**
Hours per day	6.9	7.0	7.0	6.9	7.1	7.0
Daily capacity use rate (percent)	86	88	87	87	89	87
0ut of 30 days	23.6	21.6	22.7	23.3	23.6	23.1
Monthly capacity use rate (percent)	**91**	**83**	**87**	**90**	**91**	**89**
Hours per day	7.0	6.8	6.9	6.9	7.1	6.9
Daily capacity use rate (percent)	88	85	86	86	89	87
Out of 90 days	70.1	63.6	67.1	67.6	70.2	67.9
Quarterly capacity use rate (percent)	**91**	**83**	**87**	**88**	**91**	**88**
Hours per day	7.0	6.8	6.9	6.8	7.0	6.9

| Daily capacity use rate (percent) | 88 | 85 | 86 | 85 | 88 | 86 |

criteria and from 6.9 to 7.0 hours in the case of quarterly criteria. The average number of days worked per worker improves marginally, as we move from border-vicinity villages to non-border villages, from 22.7 to 23.6 days in the case of monthly criteria and from 67.1 days to 70.2 days in the case of quarterly criteria. The positive tendency between distance and number of average days worked by a family worker on 90-days criteria show a positive correlation (0.166). Thus, **while number of days worked during 90-days is adversely influenced by the nearness to the border; the hours worked per day are relatively immune to the border distance. Between the male and female workers, the working days of male workers are relatively sensitive to border distance** (Table 5.15).

Table 5.16: Working days and hours per day worked as per usual principal occupation activities of rural households of Ferozepur border district as per villages arranged by distance from border

Usual Principal Occupation Employment Features	Zero-border Villages	Near-border Villages	Border-vicinity Villages	Other-border Villages	Non-border Villages	All Villages
Number of Households	**105**	**91**	**196**	**150**	**88**	**434**
Usual Principal Status Workers (No.)	**247**	**197**	**444**	**351**	**198**	**993**
Share of U.P.S. workers in workforce (percent)	60.2	59.7	60.0	55.0	53.4	56.8
Workers per household	**2.4**	**2.3**	**2.3**	**2.3**	**2.2**	**2.3**
Standard Working Days	**222**	**226**	**224**	**258**	**288**	**248**
Per worker working days in						
Farming Activities	**170**	**189**	**178**	**240**	**287**	**218**
Annual capacity use rate of a rural worker in farm activities (percent)	*57*	*63*	*59*	*80*	*96*	*73*
Hours per day in farm activities	7.4	7.5	7.4	7.2	7.5	7.4
Non-farm activities	**151**	**150**	**150**	**184**	**207**	**173**
Annual capacity use rate of a rural worker in non-farm activities (percent)	*50*	*50*	*50*	*61*	*69*	*58*
Hours per day in non-farm activities	8.6	8.2	8.4	8.6	8.8	8.5
Subsidiary activities	**87**	**123**	**101**	**146**	**124**	**121**
Annual capacity use rate of a rural worker in subsidiary activities (percent)	*29*	*41*	*34*	*49*	*41*	*40*
Hours per day in subsidiary activities	8.3	8.5	8.4	8.1	8.3	8.3
All rural activities	**222**	**226**	**224**	**258**	**288**	**248**
Annual capacity use rate of a worker in all rural activities (percent)	*74*	*75*	*75*	*86*	*96*	*83*
Hours per day by workers in all activities	7.8	8.0	7.9	7.8	8.1	7.9

Note: Annual capacity use rate of a worker is computed by dividing the actual working days in a year in the respective activity group by 300 available days. Subtracting from 365 days 52 Sundays and 13 holidays generally available to a formal sector worker, we derive the **annual capacity of a rural worker of 300 days**.

Are the number of hours worked per day and number of days worked during a specified period affected by border nearness even in the case usual principal workers? On a priori ground, the answer should be yes. For, the possibility of use of land for practice by armed force, even when there is no war, during a year is much higher than during a particular week, month or a quarter of the year. For instance, the average number of standard days worked per worker improves appreciably, as we moves from border-vicinity villages to non-border villages, from 224 days to 288 days in the case of usual principal status working criteria. The annual capacity use rate of usual status rural workers, on an average, is 73 percent in the case of farm activities, 58 percent in the case of non-farm activities and 40 percent for subsidiary activities. Border-vicinity villages compared to other-border villages and non-border villages show much higher, annual capacity use rate in terms of farm, non-farm and subsidiary activities (Table 5.16). Further, the data on income reported by households show that **border-vicinity** village households earns Rs.15554.0 compared to Rs.19008.0 per capita of **non-border** village households (Table 5.2). Thus, **while number of days worked by usual status workers is adversely affected by the nearness to the border, the hours worked per day are relatively immune to the border distance. Between the farm activities and non-farm activities, working days of a farm worker are relatively more sensitive to the border distance** (Table 5.16).

Border Risk and Rural Resource Endowment Behaviour

The **border risk** is a manifestation of **political risk.** It is associated with an adventuresome act on the part of ruling elite of the hostile international neighbour. Its economic and social ramifications are often spread across the national boundaries, particularly in the border region/state. By injecting a pessimistic futuristic outlook, an active/sensitive international border encourages capital flight from the border region. What are its implications for the resource endowment behaviour of the agents/residents of the rural border region? Is their resource endowment behaviour sensitive to the distance from the international border? Do families living in border areas differ from those living in non-border areas? Answers to these and related issues are examined in this chapter on the basis of data collected, during September-November 2001, from 434 sampled households spread across 30 villages of Ferozepur district sampled by a two-stage random stratified sampling design.

The Chapter is organised into four Sections. Section I helps to develop the relevant hypothesis. Section II helps in identifying the relevant variables for validation of hypothesis. The corroborating evidence is analysed in Section III. The concluding observations follow in Section IV.

6.1 Hypothesis Formulation

The phenomenon of **risk** plays a pervasive role in economic life. A situation is said to involve **risk** if the randomness facing an agent can be expressed in terms of specific numerical probabilities. These probabilities may either be objectively specified, as with lottery tickets, or else reflect in individual's own subjective beliefs. A situation where the agent cannot (or does not) assign actual probabilities to alternative possible occurrences is said to involve **uncertainty**.

Between rural and urban situations in Punjab, *market risk* is experienced relatively intensely in urban situations. For, market forces act as the prime drivers to the economic activities in urban situations, whereas in rural situations these are partly driven by market forces, often local market forces, and partly by self-consumption needs. The availability of an assured market for rural produce, however, promotes specialization of rural activities. The adoption of paddy-wheat rotation in all parts of rural Punjab owes itself to the assured remunerative price and market created by the State for the produce of these food crops. It did help the nation to convert itself from a food-deficit State to a food-surplus State. In other words, specialised rural, particularly agricultural, activities that are market driven is sensitive to market risk.

The border risk is a situation that arises for an agent where the agent is able to assign varying probabilities to harvesting the gains from economic activities depending upon the changes in border environment. For instance, the probability of harvesting the crop is very low when mines are laid in the cropped land - a scenario that prevails whenever the two hostile nations are caught in a situation of maximum alertness. Or cropped land is flooded with water to check the advance of enemy in the event of actual conflict. In the eventuality of occupation, even though temporary, physical fixed assets (the agents'

historical wealth) face high probability of extinction side by side with the loss of standing crops (the agents' source of current income flows).

Even in the normal peace time situation, the probability of success in crop cultivation may be low if part of the agents' land lies near or inside the border fence where movement is allowed only for limited hours during the day time. Or, when restrictions imposed on cultivation of tall plantations - which have the potential risk to act as a hideout for enemy - constrain agents profit maximization possibilities. Under the circumstances, the agents' location from the border will have a bearing on agents' perception of border risk. Obviously, those that are located on the border or in its vicinity will perceive a higher degree of border risk compared to those that are located far away from the border. If so, it should get reflected in their wealth creation behaviour or resource endowment behaviour. For, investment in general, particularly investment in fixed assets, is sensitive to risk.

Assuming border risk is inversely related with the distance of the agent from the border, it is hypothesized that **border risk will adversely influence investment magnitude and resource endowment levels of agents the nearer the border they reside and, in turn, perpetuate debt and poverty.** This would imply that those families that are living at the border and near the border, henceforth called living-in the border-vicinity, are relatively less resource endowed compared to families living away from the border.

6.2 Base for Validation of Hypothesis: Identification of Variables

The empirical validation of the hypothesis requires variables that directly or indirectly capture investment magnitudes and resource endowment levels of the agents. In the context of rural families, there are two comprehensive, but indirect, measures, namely (a) *agents official recognition as poor* and (b) *agents admission of indebtedness*, that reasonably capture the consequence of poor endowment level of families. Besides, there are direct measures that are associated with the possession or otherwise of variety of fixed assets and moveable assets. The dominant form of fixed asset that is not tied to the agent's work activity is *residential dwelling*, more so, its material base and the in-built facilities that determine standard of living.

The other assets that determine standard of living are (a) possession of modes of communication, namely telephone connection, car/jeep, scooter/motorcycle and bicycle, (b) ownership of modern source of entertainment, namely Television, and (c) summer coolants and refrigerators, namely fans, desert coolers, and fridge. Similarly, there are assets that enhance work efficiency. In the context of agriculture, these could be assets related with (a) draught power, say Tractor, (b) irrigation, say electrically and/or diesel run tubewells, (c) fodder-cutter, say manually or power operated, and (d) harvesting, say reaper and harvester combine, etc.

Apart from the identification of variables, the verification of hypothesis requires that 434 households coming from 30 villages be specifically arranged so that the residence distance of representative families from the international border gets properly marked. For this purpose, as reported earlier, the villages are arranged and grouped into five categories depending upon their distance from the international border. The five village categories are **zero-border villages** (up to 2 Km.), **near-border villages** (2-6 Km**.),**

border-vicinity villages (up to 6 Km.), **other-border villages** (6-16 Km.) and **non-border villages** (beyond 16 Km. but within the district).

6.3 Empirical Evidence

6.3.1 Families below Poverty Line

Families living below poverty line were and are being identified in Punjab State and are issued yellow cards by the state authorities. The *yellow card* is a passport for getting subsidized supplies of ration and priority sector bank loans. Such families are known as *yellow card holding* households. There have been cases of bogus issue of such cards. Nevertheless, the possession of yellow card by a family can be considered a good proxy of their relative poverty. In turn, the preponderance of yellow card families in an area could be treated as a good proxy of relative poverty of the area.

The data indicate that as we move from **border-vicinity villages** to **other-border villages** to **non-border villages** in the border district of Ferozepur, the preponderance of yellow card holding households among the sample families tends to systematically decrease from 40.3 percent to 31.3 percent to 23.9 percent respectively (Table 6.1). **The hypothesis that border risk dampens economic activity and, in turn, breeds poverty gets, thus, corroborated by the sensitive behaviour of the ratio of families holding** *yellow cards*.

6.3.2 Human Capital Formation

Is human capital formation – a long-term investment in skill acquisition process – also sensitive to border nearness? The enrolment for formal education is a step towards human capital formation. Accordingly, *student population as a proportion of children population* can be considered as a proxy of human capital formation. The student proportion among family children is 8 to 10 percentage points higher in non-border village families (70.1 percent) compared to border village families (62.2 percent, 61.5 percent, 61.9 percent and 60.6 percent respectively in zero, near, vicinity and other-border villages, Table 6.1). The **investment in human capital is, thus, found to be sensitive to border risk**.

6.3.3 Residential Dwellings

The type of material of which the residential premises are made and the facilities these are endowed with provide an indirect proxy to assess the influence of border risk on the relative resource endowment position of families. Depending upon the basic material used for constructing the residential premises, these may be classified as *katcha* (mud) houses, semi-*pucca* (mud-cum-brick) houses and *pucca* (brick) houses. As the income level improves, people tend to move from **cheap** mud houses to semi-brick houses to **costly** brick houses because brick houses possess manifold resistance traits to weather changes compared to semi-brick houses and, more so, mud houses. Apart from the material used in construction, the cost of the residential premises varies depending upon covered roof area which, in turn, depends upon whether or not separate provision is made for bathroom, kitchen and guests.

Table 6.1: Distribution of rural households of Ferozepur border district according to poverty, human capital formation, house & living facilities as per villages arranged by distance from border

Salient Features	Zero-border Villages	Near-border Villages	Border-vicinity Villages	Other-border Villages	Non-border Villages	All Villages
Number of households	105	91	196	150	88	434
Yellow card holding families	47	32	79	47	21	147
	44.8	**35.2**	**40.3**	**31.3**	**23.9**	**33.9**
Children population (Below 18 years,)	315	221	536	383	211	1130
Student population	196	136	332	232	148	712
Students as percent children	**62.2**	**61.5**	**61.9**	**60.6**	**70.1**	**63.0**
Material Base of Residential Houses						
Katcha house families	44	31	75	32	4	111
	41.9	**34.1**	**38.3**	**21.3**	**4.5**	**25.6**
Semi-pucca house families	27	15	42	38	14	94
	25.7	16.5	21.4	25.3	15.9	21.7
Pucca house families	34	45	79	80	70	229
	32.4	**49.5**	**40.3**	**53.3**	**79.5**	**52.8**
Facilities in Residential Houses						
Living/drawing facility families	15	16	31	39	23	93
	14.3	**17.6**	**15.8**	**26.0**	**26.1**	**21.4**
Kitchen facility families	39	33	72	68	56	196
	37.1	**36.3**	**36.7**	**45.3**	**63.6**	**45.2**
Bath room facility families	67	55	122	103	74	299
	63.8	**60.4**	**62.2**	**68.7**	**84.1**	**68.9**

-- Figures below the dotted lines are respective cell percentages from respective group households.

Note: Depending on the distance from the international border, border villages have been classified into **zero-border villages** (up to 2 Km.), **near-border villages** (2-6 Km**.), border-vicinity villages** (up to 6 Km.), **other-border villages** (6-16 Km.) and **non-border villages** (beyond 16 Km. but within the district).

Is the material base used in building residential premises sensitive to border nearness? Yes. Out of the five rural families that have brick houses as their residential premises, the number is only two from the set of families that reside in the border-vicinity villages (40.3 percent) against four from the set of families that reside in the non-border villages (79.5 percent, Table 6.1). In fact, the proportion of families living-in *pucca* houses increases from 40.3 percent to 53.3 percent to 79.5 percent as we move from the set of families that represent border-vicinity villages to the set of families that represent other-border villages and non-border villages respectively. Obviously, the pattern reverses in the case of *katcha* houses used as residential premises (38.3 percent to 21.3 percent to 4.5 percent respectively). Thus, the **material use choice in construction of residential premises by families is substantially influenced by their nearness to international border**.

Is the set of residential facilities enjoyed by families sensitive to border nearness? Yes. While every rural family in the border district of Ferozepur has a roof on its head, two out of three families (68.9 percent, 299) have a bath room facility, every second family (45.2 percent, 196) has a bath room facility and every fifth family (21.4 percent, 93) has a living room facility (Table 6.1). Though across family sets of border and non-border villages similar pattern persists, the relative weights change on expected lines. The relative weight of families having separate kitchen facility increases, for instance, from 36.7 percent to 45.3 percent to 63.6 percent as we move from the set of families residing in border-vicinity villages to that of other-border villages to that of non-border villages. The corresponding numbers in the case of bathroom facility are 62.2 percent, 68.7 percent and 84.1 percent respectively. And, in the case of living-room facility the corresponding numbers are 15.8 percent, 26.0 percent and 26.1 percent respectively. Thus, **the degrees of facilities enjoyed at the residential premises by a rural family are sensitive to its location from the border**. Alternatively viewed, **investment made by rural families in their residential premises is found to be sensitive to distance from border location**.

6.3.4 Debt

When income flows fall short of expenditure flows, a family may resort to debt to finance the shortfall. In the rural areas of the border district of Ferozepur, debt is not resorted to by majority of the families. In fact, two out of the five families resort to debt to finance the expenditure (39.4 percent, 171 households, Table 6.2). Even those that have reportedly resorted to it, the level of debt of a majority of families are less than their current income flows (64.3 percent, 110 households). One-third of the debited families have borrowed amounts that exceed their current income flows (35.7 percent, 61 households). Out of five families, while two families have borrowed it to finance consumption expenditure, three have borrowed it to finance production expenditure. A few families borrowed money to finance production related expenditure as well as consumption related expenditure.

Is debt base of rural families sensitive to border risk? Yes, the falling proportion of indebted families amply brings this out. For instance, the proportion falls systematically from 44.9 percent in the border-vicinity villages to 36.0 percent (in the other-border villages) to 33.0 percent in the non-border villages of Ferozepur district (Table 6.2). There is, however, difference in the proportion of debited families depending upon the magnitude of the debt and the purpose for which it is resorted.

As one moves away from the border, for instance, the expected fall in the proportion of indebted families is not clearly discernible when debt finances productive investment or it can be repaid from current income flows. In contrast, **the proportion of debited families falls on expected lines by above 7 percent points when only those that have either borrowed for consumption purposes or have debt level above current income level are considered**. For instance, the proportion of those that finance consumption expenditure through debt falls from 20.4 percent to 8.7 percent and rises to 12.5 percent as we move from border-vicinity villages to other-border villages to non-border villages (Table 6.2). The corresponding proportions of those that have debt level above current income level are 18.9 percent. 10.7 percent and 9.1 percent respectively. To sum up, the data relating to the proportion of debited families further corroborates our hypothesis.

Table 6.2: Number of indebted rural households of Ferozepur border district surveyed as per villages arranged by distance from border

Households	Zero-border Villages	Near-border Villages	Border-vicinity Villages	Other-border Villages	Non-border Villages	All Villages
Total	105	91	196	150	88	434
Non-indebted	57	51	108	96	59	263
	54.3	**56.0**	**55.1**	**64.0**	**67.0**	**60.6**
Indebted	48	40	88	54	29	171
	45.7	**44.0**	**44.9**	**36.0**	**33.0**	**39.4**
Debt level more than current income	25	12	37	16	8	61
	23.8	**13.2**	**18.9**	**10.7**	**9.1**	**14.1**
Debt level less than current income	23	28	51	38	21	110
	21.9	**30.8**	**26.0**	**25.3**	**23.9**	**25.3**
Purpose of Loan						
Production	26	22	48	41	18	107
	24.8	**24.2**	**24.5**	**27.3**	**20.5**	**24.7**
Consumption	22	18	40	13	11	64
	21.0	**19.8**	**20.4**	**8.7**	**12.5**	**14.7**
Value unit of Income and Debt Variables: Rupees						
Income per household (Rs.)	**107208**	**97901**	**102657**	**147525**	**131153**	**122446**
Debt per debited household (Rs.)	**122542**	**98900**	**111795**	**63735**	**79069**	**91068**
Debt per household (Rs.)	**56019**	**43473**	**50194**	**22945**	**26057**	**35882**

--   Figures below the dotted lines are respective cell percentages from respective group households.

Note: Depending on the distance from the international border, border villages have been classified into **zero-border villages** (up to 2 Km.), **near-border villages** (2-6 Km**.), border-vicinity villages** (up to 6 Km.), **other-border villages** (6-16 Km.) and **non-border villages** (beyond 16 Km. but within the district).

6.3.5 Communication Modes

In the technology driven world, command over communication mediums is considered to be the key to success. The fastest and cheapest mode of connectivity to the world is through Internet, followed by, telephone and cellophane. While cellophane provides roaming connectivity, telephone and Internet provides fixed location connectivity to the rest of the world. The next costlier way of connectivity is by physical mobility. The mobility by road becomes readily accessible once one acquires a command over the services of a four wheeler vehicle, say a car/jeep, and/ or a two-wheeler motorized vehicle, say a motorcycle/scooter, or a two-wheeler non-powered vehicle, say a bicycle. The mobility by air becomes accessible once one owns an aircraft and aerodrome – a rare occurrence in rural India.

In the rural sample setting of Ferozepur district none reported computer ownership or aircraft, thus, ruling out the world connectivity through the latest and fastest modes of communication technology. Every sixth family (16.1 percent, Table 6.3) enjoys the telephone connectivity. Every fourteenth family owns the services of car/jeep (7.1 percent). Every fourth family owns a powered two-wheeler (27.6 percent). Four out of five families own a bicycle (83.2 percent). In other words, *the most economical mode of private transport continues to be bicycle, followed by costlier modes of transport, scooter/motorcycle and car/jeep.*

Is the ownership of communication modes by rural families sensitive to border risk? In the context of investment in communication assets, the border risk injects positive as well as negative signals to the agent. The survival instinct to face the eventuality of border risk demands quick connectivity to the rest of the world and, hence, investment in personal transport assets, particularly the powered ones, would become a priority item. In contrast, the pessimistic future outlook, as usual, discourages investment. Under the circumstances, the answer would depend upon the relative development level of the region. For, the agents' perception about the expenditure on personal transport items goes under change from luxury to comfort to necessity as the stage of development of the economy advances.

It is because of this setting that a discernible difference is observed on expected lines between the behaviour of families residing in the border-vicinity villages and those that live in other-border villages but not on expected lines between other-border villages and non-border villages. In fact, the proportion of families owning these assets is invariably less in the non-border villages than in the other-border villages except in the case of ownership of powered two-wheelers transport vehicles (Table 6.3).   Note from Table 6.2 that Rs. 1.47 lakh per household income is the highest in the set of other-border villages. Alternatively viewed, **the negative influence of border risk on powered personal transport vehicles is most dominant in the border-vicinity villages where per household income levels are relatively low than that in the better income enjoying counterparts living in other-border villages**.

Table 6.3: Number of durable asset owning rural households of Ferozepur border district surveyed as per villages arranged by distance from border

Durable Equipment owning Households	Zero-border Villages	Near-border Villages	Border-vicinity Villages	Other-border Villages	Non-border Villages	All Villages
Households	105	91	196	150	88	434
Communication Mediums						
Telephone	15	16	31	24	15	70
	14.3	**17.6**	**15.8**	**16.0**	**17.0**	**16.1**
Jeep/car	4	6	10	15	6	31
	3.8	**6.6**	**5.1**	**10.0**	**6.8**	**7.1**
Scooter/motor-cycle	25	28	53	40	27	120
	23.8	**30.8**	**27.0**	**26.7**	**30.7**	**27.6**
Bicycle	83	89	172	117	72	361
	79.0	**97.8**	**87.8**	**78.0**	**81.8**	**83.2**
Summer Coolants & Refrigerators						
Fans	95	91	186	128	81	395
	90.5	**100.0**	**94.9**	**85.3**	**92.0**	**91.0**
Desert cooler	11	18	29	29	18	76
	10.5	**19.8**	**14.8**	**19.3**	**20.5**	**17.5**
Fridge	22	26	48	44	35	127
	21.0	**28.6**	**24.5**	**29.3**	**39.8**	**29.3**
Entertainment Durable: Television						
Black and white	39	45	84	63	45	192
	37.1	**49.5**	**42.8**	**42.0**	**51.1**	**44.2**
Coloured	14	11	25	22	15	62
	13.3	**12.1**	**12.8**	**14.7**	**17.0**	**14.3**
Total	53	56	109	85	60	254
	50.5	**61.5**	**55.6**	**56.7**	**68.2**	**58.5**

--   Figures below the dotted lines are respective cell percentages from respective group households.

Note: Depending on the distance from the international border, border villages have been classified into **zero-border villages** (up to 2 Km.), **near-border villages** (2-6 Km**.), border-vicinity villages** (up to 6 Km.), **other-border villages** (6-16 Km.) and **non-border villages** (beyond 16 Km. but within the district).

6.3.6 Entertainment Products

The products of entertainment industry have undergone revolutionary transformation from an audio transmitter of signals to image-cum-audio transmitter of signals. In this revolution, it has been helped by satellite infrastructure laid down by the States of the developed World. The entertainment products, apart from providing entertainment, act as a disseminator of information, desirable or otherwise. As a cheap source of entertainment, the television, the lead player among the entertainment industry's products, is chosen to study the susceptibility of the products of entertainment industry to border risk. Every third out of five (58.5 percent) sampled rural families owns a television set either coloured or black and white.

Is the ownership of television sets by rural families sensitive to border risk? Yes. While every second family (55.6 percent) owns a television set in the border-vicinity villages, three out of five families owns it in the other-border villages (56.7 percent) and two out of three in the non-border villages (68.2 percent, Table 6.3). A similar pattern is observed when the owned television delivers the images in black and white form or in their original colour form. Thus, **the ownership of television sets by rural families is sensitive to border risk.**

6.3.7 Weather Normalizing Products

Punjab state enjoys extreme weather conditions; a long spell of summer (Mid March – September) when temperatures rise up to 44 degree centigrade and a short-spell of cold winter (December- February) when temperature falls to single digit range. As a consequence, efforts are made by families to minimize the adverse effect of the heat on human body and on eatable products, uncooked or cooked. With the general prosperity and electrification of rural villages, to fight the summer heat such electricity-operated products are acquired as fans, desert coolers and fridge. To fight summer heat, out of 10 families, nine families own a fan (91.0 percent) and two families a desert cooler (17.5 percent) and three families a fridge (29.3 percent).

Is the ownership of weather resistant products by rural families sensitive to border risk? The answer is a mixed one. In the case of *fan*, which act as a necessity, the answer is no. In contrast, in the case of desert cooler and fridge, the two products that add to the comfort of the family, the answer is yes (Table 6.3). For example, in border-vicinity villages, 14.8 percent rural households compared to 20.5 percent in non-border villages have enjoyed the facility of desert cooler and 24.5 percent of households in border-vicinity villages compared to 39.8 percent in non-border villages have the facility of fridge.

6.3.8 Farming related Assets

Agriculture (53.9 percent) and wage work (38.6 percent), as reported in Chapter 5, are the two activities in which nine out of ten rural households are primarily engaged. The other activities taken up by rural households are salaried service, merchant/ artisan shops, religious preaching, etc. Agriculture as the secondary activity is also taken up by some of the non-agriculture households. Accordingly, the focus on farm related assets.

Since agricultural activities are the lifeline of rural economy, the assets needed to keep these activities in operational form become a necessity. If so, the proportion of households owning these assets would not necessarily be sensitive to border risk. These may, however, be sensitive to agro-climatic conditions. For instance, investment in tubewells and diesel pumps required for pumping the sub-soil water for irrigation depends upon whether or not underground water is sweet or brackish rather than on the distance of the village from the border. Similarly, the machinery needed for post-harvest technology, say harvester combine and reapers, need not necessarily be acquired rather their services can be hired when required. It equally applies to draught power equipment, the tractor. **It is worth noting that the tractor** – a draught power equipment - **also acts as a personal family vehicle for social mobility**. In these farm assets, accordingly, no systematic pattern in the ratio of families owning these farm assets is discernible across

Table 6.4: Number of agricultural assets owning rural households of Ferozepur border district surveyed as per villages arranged by distance from border

Agricultural Assets owning Agricultural Households	Zero-border Villages	Near-border Villages	Border-vicinity Villages	Other-border Villages	Non-border Villages	All Villages
Households (number)	105	91	196	150	88	434
Agricultural households	**65**	**37**	**102**	**83**	**49**	**234**
	61.9	40.7	52.0	55.3	55.7	53.9
Draught power equipment: tractor	30	21	51	41	24	116
	46.2	**56.8**	**50.0**	**49.4**	**49.0**	**41.6**
Harvesting Equipment						
Harvester combine	1	3	4	3	3	10
	1.5	**8.1**	**3.9**	**3.6**	**6.1**	**4.3**
Reaper	8	7	15	9	4	28
	12.3	**18.9**	**14.7**	**10.8**	**8.2**	**12.0**
Irrigation Equipment						
Tube-well	60	37	97	78	40	215
	92.3	**100.0**	**95.1**	**94.0**	**81.6**	**91.9**
Diesel pump	53	36	89	64	20	173
	81.5	**97.3**	**87.3**	**77.1**	**40.8**	**73.9**
Fodder Cutter						
Manually operated*	36	32	68	48	19	135
	55.4	**86.5**	**66.7**	**57.8**	**38.8**	**57.7**
Power operated	12	14	26	36	28	90
	18.5	**37.8**	**25.5**	**43.4**	**57.1**	**38.5**

-- Figures below the dotted lines are respective cell percentages from respective agricultural households except in the case of agricultural households where percentages are from the total households of the respective group.

* Apart from agricultural households, these include those that have agriculture as a subsidiary activity.

Note: Depending on the distance from the international border, border villages have been classified into **zero-border villages** (up to 2 Km.), **near-border villages** (2-6 Km**.), border-vicinity villages** (up to 6 Km.), **other-border villages** (6-16 Km.) and **non-border villages** (beyond 16 Km. but within the district).

villages arranged according to distance from the border (Table 6.4). However, there is one exception, the fodder cutter (*Toka*). While its manually operated version shows inverse relation of the proportion of families owning it with the distance of the village from the border, its power-operated version shows positive relation. **Where there exists a choice, thus, even investment in agricultural assets show sensitivity to border risk**.

6.4 Concluding Observations

The analysis reveals that whenever alternative choices exist, even rural activity related assets are sensitive to border risk. This applies equally to general assets owned by rural households which range from residential buildings, services embedded in these buildings, entertainment related assets (Television) and human capital formation. The two measures of poverty, the proportion of yellow card holding families and the proportion of families under debt, further, establish that border nearness injects and promotes poverty. To sum up, **the resource endowment behaviour of rural households corroborate our hypothesis that border risk injects a pessimistic outlook even among the rural entrepreneurs and dampens their enterprising spirit. As a consequence, poverty and debt perpetuate**.

The proceeding analysis also suggests that those that live in the vicinity of the international border, i.e. within six kilometers, suffer the gravest influence of border risk. These households and their residents deserve special state support to mitigate their sufferings. Unfortunately, the revenue authorities lacked a distance-wise list of villages from the international border at the time of survey. There is a need to have dossiers on all the residents of these villages so that they are able to get requisite state support. This support is a must as their economy is caught, and will remain caught, at low level of economic activity equilibrium.

CHAPTER 7

Border Risk and Rural Employment Search Behaviour

Employment helps in the value-added process (income) by deploying the services of labour to harness the value-creation capabilities of natural resources and man-made resources. A part of the value thus created is paid back to labour as a reward for the services rendered. Obviously, it involves two players. Those that deploy the services of labour to create value – the demanders of labour services – and those that provide the labour services for a reward – the suppliers of labour services. Do the suppliers and demanders of labour services interact directly or through intermediaries? In which situation, the interaction is dominantly direct? Do border risk influence employment search behaviour?

The Chapter is organised into four sections. Section I analyses the theoretical foundations of labour market behaviour. Hypotheses are developed in Section II. The empirical results are analysed to assess the validity of the hypotheses in Section III. The policy recommendations are laid down in the last section, Section IV.

7.1 Theoretical Foundations of Labour Market Behaviour

The act of employment may involve **direct interaction** *between* the *suppliers* of labour services *and the buyers* of labour services. The **direct interaction** may or may not involve a specialised screening device. Generally, a screening device is not required for casual employment though it is required for regular employment. For instance, no screening device is generally used for *casual employment* when non-skilled or semi-skilled workers are hired on daily-contract basis. In contrast, when employment is sought by skilled persons on regular basis, a time-consuming screening device gets involved; it requires proof of skills possessed (i.e. qualifications) through a formal application. In the event of large numbers seeking the few available jobs, a test and/or an interview may further supplement the screening device. A contract for employment is signed with the successful candidates only after establishing the authenticity of their qualifications from the issuing authorities. Obviously, the process is slow and time-consuming.

Alternatively, an **intermediary agent** or **agency** that acts as a link between the buyers and suppliers of labour services may help in the act of employment search. This they do by providing registration and placement services to the employers (buyers) and employment seekers (suppliers) and, in the process, they act as information banks on labour services. The **intermediary agent** may be a specialised agency in labour market in the private sector (such as Private Placement Agencies) or in the state sector (such as Employment Exchanges in India) or may be a well-connected influential person(s) who wields a lot of political power or have a lot of social capital. Apart from providing registration and placement services, these agencies may specialise in different industries, occupations, training facilities and fellowships. Even in this case, regular contractual jobs often require the time-consuming additional screening through a process of tests and interviews. Apart from the direct cost of submitting an application form, test and interview and fee for registration with employment agencies, there is an opportunity cost involved in waiting for a contractual job to materialise. In other words, there exists a waiting cost, which rises with each time unit increase in the waiting period.

Which of the two modes, direct or indirect, of employment search are likely to dominate the scene of an economy? It will depend upon the nature of labour market. When the labour market operates under perfect market conditions, i.e. there are a large number of buyers and suppliers of labour – a typical scenario that prevails in the plains of rural India; one would expect **direct interaction** mode to be the most prevalent. Alternatively, when labour market operates under imperfect conditions, i.e. there are a few (large) buyers of labour services but a large number of workers are willing to supply these services – a scenario which exists in cities, say in urban areas, one would expect **intermediary agent** mode to be the dominant mode. Between rural and urban areas, one would expect **direct interaction mode to be the dominant mode in rural areas** and **intermediary agent mode to be the dominant mode in urban areas**.

The capacity to bear additional cost of employment search is positively related with resource endowment level of the work-searcher's family. *Border risk is one factor that has adverse influence on family's resource endowment level.* The perceived intensity of border risk is most intense at the zero-border zone and decreases as one moves away from this zone. In fact, the resource endowment level of a rural representative family is inversely related with the distance of their village from the border[1].

The two propositions put together imply that relatively **costly job search by unemployed workers through intermediary agents** (which may also involve applications/tests/interviews) **is expected to be positively related to the distance of the village of their residence from the border**. Alternatively, when job search is relatively less costly as is in the case of **direct interaction**, the **job search by unemployed workers is expected to be inversely related to the distance of the village of their residence from the border**.

The act of work search may bring to the forefront specific traits (internal as well as external) of the unemployed individuals seeking wage work that render them unfit for certain sought-after jobs. While most of these traits are amenable to improvement, a few are not. Those traits that present no or limited scope for improvement are associated with the physical appearance, strength and vitality of the body. For instance, recruitment in defense services requires an individual to display a minimum level of height and an all-round physical fitness and mental alertness. Those who have a height below the minimum prescribed norm or have partial disability are, obviously, declared unfit for such jobs. Assuming the distribution of population in terms of such traits as height, ability etc. follows normal distribution, the weight of those that lie on the fringe of the normal curve, owing to below normal height or owing to disability of one or other form, is bound to be nominal. Assuming the population of unemployed workers is a replica of the population they represent, **the weight of those that present traits that have no or limited scope for improvement in the unemployed population should be nominal**.

Similarly, job specifications in the formal and informal sectors prescribe a minimum level of education, and/or on the job training, and/or work experience, and/or a financial or an individual's reliability guarantee from the employment seeker. Often, the vacant openings in these jobs are available at the lowest hierarchy of the job ladder i.e. they carry nominal wages. A lack of any of these traits makes the individual feel that he/she is unfit for these low paid, but sought after, jobs. Since these traits can be acquired to a large extent, these are within the full or partial control of the individuals. **Those who**

posses the traits that can be acquired should, in the normal circumstances, account for a substantial share in the unemployed population.

There is a caveat in the above rationale. It assumes the existence of sufficient work opportunities for the unemployed workers, i.e. the mismatch between the demand and supply of labour services is only temporary. There may be other possibilities. The structural parameters of the economy may create a situation where sufficient jobs fail to get created; a typical scenario is expected to be represented by a land-locked border belt where possibilities of direct international trade are politically unacceptable. For, apart from the inherent additional transport cost, a disadvantage suffered by such a border belt is owing to its location in a corner of the Nation, the regional production and its market suffers from *perceived uncertainty associated with the militarily active border*. Such an economic and political setting generates a *low activity level equilibrium* where a considerable degree of underemployment and even open unemployment should be in-built. In other words, it is hypothesized that **border belt residents would suffer from open unemployment as well as under-employment scenario in the local market**.

7.2 Hypotheses Formation

The following set of hypotheses, thus, emerges:

1. *Rural labour market is likely to be dominated by the direct interaction mode of employment search.*
2. *The mode of employment search is sensitive to the degree of perceived border risks. The more is the degree of perceived risk the more is the dependence on the direct interaction mode of employment search and vice versa when it is through intermediary agents.*
3. *There prevails low economic activity level equilibrium in the border-belt. It manifests itself in unemployed persons presenting themselves in abundance at the local labour market for causal employment on daily-basis.*
4. *The mismatch between demand for labour services and supply of labour services is likely to be significant in case of acquired individual skills but is not so in the case of non-acquirable traits.*

7.3 Empirical Evidence

7.3.1 The Data Setting

The study has considered a household member as unemployed, if and only if, he/she has reported without any gainful work and is seeking employment in the labour market during the reference period (September-November, 2001). Accordingly, the households having at least one such unemployed person is said to be employment seeking households. 209 households out of 434 households (48.2 percent) have, accordingly, reported one or more members as unemployed who sought work. The total number of unemployed persons that sought work was 316. They constitute 18.1 percent workforce (1749) and 10.7 percent sampled household population (2938). Accordingly, **every second rural household has an unemployed member, and every sixth rural worker and every tenth rural person reported to be unemployed and sought work in the labour market**.

Distribution of such unemployed persons across the border villages by distance criteria is presented in Table 7.1. The perusal of the data reveals that of the total unemployed persons, four-fifths of the persons (80.7 percent; 255) were actively seeking employment and another one-fifth (19.3 percent) were unemployed but did not make much efforts to get employment, mainly due to lethargic attitude, old age, below status work, etc. Thus, **255 unemployed persons has become active work seeking players in the labour market**. Out of them, 18 unemployed workers (7.1 percent) did not respond to our query regarding job-market search behaviour (Table 7.1).

Between the wage and self-employment alternatives, self-employment option is considered by every eighth person (12.9 percent, 33). This implies that wage-employment (7 out of 8) is the most sought after mode of employment search. Of the 213 who opted for wage employment, majority remained silent to the query relating to the nature of work and location preference of work. Those who responded positively (21), *three-fourths prefer manual work* (76.2 percent, 16). Others (5) are willing to do any work. Half of them indicated such location preferences that will enable them to be daily commuters, i.e. local area (38.1 percent) or city precincts (9.1 percent). The remaining half (52.4 percent) is willing to work at any location, i.e. explore new locations.

The minimum per month expected and acceptable wages by a wage-worker is Rs. 2146. The wage expectations show a rising pattern as the base of the wage-worker changes from **border-vicinity** villages (Rs. 1982) to **other-border** villages (Rs. 2102) to **non-border** villages (Rs. 2146). In turn, this provides an indirect evidence of increasing paying capacity, which is associated with higher endowment levels, of residents of villages as their distance from the border increases.

7.3.2 The Employment Search Modes

As expected, the **work search mode through the relatively costly intermediary agents** is of negligible importance in the rural border-belt of Punjab. Only three of the 255 respondents approached them (1.3 percent) for help in getting employment. Private placement agents are conspicuously absent from the labour market scene (Table 7.1). Only one person (0.4 percent) is banking on the employment exchange service. The influential persons, an alternative intermediary mode, are resorted to by the remaining two persons (0.8 percent) to seek help in the job search. **The unemployed rural workers of Ferozepur border district have, thus, either no awareness or faith in the service-providing role of the intermediary agents**. This, in turn, hints towards the relative backwardness of rural labour market in the border district of Ferozepur.

The relatively cheap **direct work search** is almost the solo mode of employment search by unemployed rural border youth (Table 7.1). Of the two direct work search forms, **daily-basis work search** at labour market is the option availed by **two-thirds** of the unemployed workers (65.4 percent; 155 persons). The remaining **one-third, search for a regular job** through a **time-consuming screening device** that involves **a formal application, test and/or interview** and, often, authentication of qualifications from the issuing authority.

Table 7.1: Market search behaviour of unemployed workers of rural households of Ferozepur border district surveyed arranged as per distance of villages from international border.

Market Search Variables	Zero-border Villages	Near-border Villages	Border-vicinity Villages	Other-border Villages	Non-border Villages	All Villages
Employment seeking households	**49**	**59**	**108**	**62**	**39**	**209**
Percentage share out of total households	**46.7**	**64.8**	**55.1**	**41.3**	**44.3**	**48.2**
Unemployed persons seeking employment	**75**	**76**	**151**	**108**	**57**	**316**
Percentage share out of total population	**10.0**	**13.7**	**11.6**	**10.5**	**9.4**	**10.7**
Passively seeking employment	**12**	**9**	**21**	**33**	**7**	**61**
	16.0	**11.8**	**13.9**	**30.6**	**12.3**	**19.3**
Actively seeking employment	**63**	**67**	**130**	**75**	**50**	**255**
	84.0	**88.2**	**86.1**	**69.4**	**87.7**	**80.7**
Efforts made to seek work						
Total respondents	**63**	**67**	**130**	**75**	**50**	**255**
No-response respondents	6	5	11	5	2	18
	9.5	**7.5**	**8.5**	**6.7**	**4.0**	**7.1**
Direct work search						
Attendance at labour market, say labour Chowk	44	44	88	45	22	155
	77.2	**71.0**	**73.9**	**64.3**	**45.8**	**65.4**
Applied, appeared in test, or interview	9	15	24	16	22	62
	15.8	**24.2**	**20.2**	**22.9**	**45.8**	**26.2**
Total direct work search respondents	53	59	112	61	44	217
	93.0	**95.2**	**94.1**	**87.1**	**91.7**	**91.6**
Work search through intermediary agents						
Registered with employment exchange	0	0	0	1	0	1
	0.0	**0.0**	**0.0**	**1.4**	**0.0**	**0.4**
Registered with private placement agencies	0	0	0	0	0	0
	0.0	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
Requested influential persons	0	0	0	2	0	2
	0.0	**0.0**	**0.0**	**2.9**	**0.0**	**0.8**
Total intermediary agents' through work search respondents	0	0	0	3	0	3
	0.0	**0.0**	**0.0**	**4.3**	**0.0**	**1.3**
Waiting time interval during work search						
From 1 to 3 months	3	0	3	2	3	8
	5.3	**0.0**	**2.5**	**2.9**	**6.3**	**3.4**
From 3 to 6 months	1	2	3	3	0	6
	1.8	**3.2**	**2.5**	**4.3**	**0.0**	**2.5**
Above 2 months at other places	0	1	1	1	1	3
	0.0	**1.6**	**0.8**	**1.4**	**2.1**	**1.3**
Total waiting time interval reporting respondents	4	3	7	6	4	17
	7.0	**4.8**	**5.9**	**8.6**	**8.3**	**7.2**

.........Figures below the dotted lines are respective cell percentages.

Note: Depending on the distance from the international border, border villages have been classified into **zero-border villages** (up to 2 Km.), **near-border villages** (2-6 Km**.), border-vicinity villages** (up to 6 Km.), **other-border villages** (6-16 Km.) and **non-border villages** (beyond 16 Km. but within the district).

As expected, both the **direct work search forms** are **sensitive to border distance**. The **declining** ratio of unemployed workers who actively seek work on **daily-basis** as we move from border-vicinity villages (73.9 percent) to other-border villages (64.3 percent) to non-border villages (45.8 percent) **corroborates our hypothesis of inverse relation** between the **distance of the village from the border** and **daily-basis work search** mode (Table 7.1). The **increasing** weight of unemployed workers who actively seek **regular work** through applications/ tests/ interviews as we move from border-vicinity villages (20.2 percent) to other-border villages (22.9 percent) to non-border villages (45.8 percent) lends **support to our hypothesis of positive relation** between the **distance of the village from the border** and **regular work search.**

7.3.3 The Employment Search Problems

Of 255 unemployed actively work-seeking workers, 240 unemployed workers (94.1 percent) elucidated the problems encountered in their search for work. Of them, 164 (68.3 percent) reported non-availability of work in the local market (Table 7.2). The remaining (76; 31.7 percent) failed to get employment due to individual specific limitations vis-à-vis job requirements. In other words, **while about one-third of the work-seekers are unemployed due to the temporary mismatch between the demand for and supply of labour services, about two-thirds are unemployed due to low activity level equilibrium caused by structural factors emanating from economic and political environment**. These results thus corroborate our hypothesis.

Of 76 active work-seekers who encountered mismatch problem between job requirements and their individual traits**, only 5 (6.6 percent) reported deficiencies in their physical traits that are not amenable to cure** e.g. short height than that specified for the job, partial physical disability, etc. **The remaining 71 (93.4 percent), as expected, reported deficiencies where improvement is permissible**.

Of 71 work-seekers who reported individual deficiencies that can be rectified with additional support and effort, about half (51.3 percent; 39) identified these as lack of influence, about one-fifth (18.4 percent; 14) as lack of information or partial information about vacant positions, about one-tenth (10.5 percent; 8) as lack of experience and about one-twentieth (6.6 percent; 5) as low level of education or lack of financial resources. **None of the actively work-seekers reported that the available work opportunity was not accepted due to its socially unacceptable status** (Table 7.2).

The nature and pattern of problems encountered by work-seekers is broadly similar across rural border belt of Ferozepur district. However, the **border sensitivity of work-seekers is discernible primarily owing to lack of flow of information as one zeros towards the international border** (Table 7.2). Note: the declining share of lack of information reporting work-seekers as one move from border-vicinity villages (33.3 percent) to other-border villages (13.6 percent) to non-border villages (4.2 percent). Consequently, the share of those who reported non-availability of work in the local market among work-seekers increases as one move from non-border villages (51.0 percent) to other-border villages (69 percent) to border-vicinity villages (75 percent).

Table 7.2: Problems encountered to seek work by unemployed workers of rural households of Ferozepur border district as per distance of villages from international border

Problems Encountered to Seek Work	Zero-border Villages	Near-border Villages	Border-vicinity Villages	Other-border Villages	Non-border Villages	All Villages
Problems encountered to seek work						
Total respondents	**63**	**67**	**130**	**75**	**50**	**255**
No-response respondents	7	3	10	4	1	15
	11.1	**4.5**	**7.7**	**5.3**	**2.0**	**5.9**
Positive-response respondents	56	64	120	71	49	240
	88.9	**95.5**	**92.3**	**94.7**	**98.0**	**94.1**
	100.0	100.0	100.0	100.0	100.0	100.0
Specific Individual Job related Traits						
Total cases of individual job related specific traits	**9**	**21**	**30**	**22**	**24**	**76**
	16.1	**32.8**	**25.0**	**31.0**	**49.0**	**31.7**
Cases where improvement in traits is less permissible	1	1	2	2	1	5
	11.1	*4.8*	*6.7*	*9.1*	*4.2*	*6.6*
Improvement Permissible Traits						
Lack of influence	2	12	14	10	15	39
	22.2	*57.1*	*46.7*	*45.5*	*62.5*	*51.3*
Lack of information	3	7	10	3	1	14
	33.3	*33.3*	*33.3*	*13.6*	*4.2*	*18.4*
Lack of experience	1	1	2	3	3	8
	11.1	*4.8*	*6.7*	*13.6*	*12.5*	*10.5*
Low education level	0	0	0	2	3	5
	0.0	*0.0*	*0.0*	*9.1*	*12.5*	*6.6*
Lack of financial resources	2	0	2	2	1	5
	22.2	*0.0*	*6.7*	*9.1*	*4.2*	*6.6*
Work available below socially determined mind-set status	0	0	0	0	0	0
	0.0	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Total improvement permissible traits reporting respondents	8	20	28	20	23	71
	88.9	*95.2*	*93.3*	*90.9*	*95.8*	*93.4*
General Traits						
Non-availability of work in the local market reporting respondents	47	43	90	49	25	164
	83.9	**67.2**	**75.0**	**69.0**	**51.0**	**68.3**

-- Figures below the dotted lines are respective cell percentages.

Note: Depending on the distance from the international border, border villages have been classified into **zero-border villages** (up to 2 Km.), **near-border villages** (2-6 Km**.), border-vicinity villages** (up to 6 Km.), **other-border villages** (6-16 Km.) and **non-border villages** (beyond 16 Km. but within the district).

7.4 Policy Import

The preceding analysis reveals that unemployment rate in the rural border-belt of Indian Punjab is, as expected, quite high. Every tenth rural person or every sixth worker and every second rural household is under the influence of unemployment. Obviously, it adversely influences their levels of resource endowment as well as the standard of living.

The two-digit range unemployment rate is partly attributable to the mismatch formulation but mainly to structural factors that manifest in low activity level equilibrium. The minimisation of the **adverse effects of such a mismatch** between supply and demand for labour services requires **strengthening of** such **social infrastructure** as educational and training institutions in rural areas. Similarly, the minimisation of the **adverse effects of low activity level equilibrium** requires **injection of new activities into the system**. To create substantial value-addition (income) possibilities, the new activity set should be such that involves substantial **value creation possibilities at primary, secondary and tertiary production stages**.

This may take the form of **diversification of rural activity** set. But, it is easier said than achieved. Otherwise, Punjab economy, which has diversification of rural economy on its agenda for over two decades, might have not been where it is now. The success of such an initiative demands a lot of vision, political will power and drive on the part of political leadership, particularly to counter the resistance from the prosperous vested interest groups created by the existing system.

The new initiatives may broadly be conceived in terms of their inter-temporal influence, namely short-term, medium-term and long-term. The **short-term measures must aim at re-establishing the credibility of the system that has got eroded overtime**. The message must go that before the laws, irrespective of the social, economic or political position held by the individual, all are equal. The deviants must get the due punishment in the shortest possible time - the key to success of this drive. (At present, they are often rewarded for their deviant acts.) The developed world enjoys such a system. Why does not Punjab/India move towards this goal which is well enshrined in our Constitution? **The transparent governance is, thus, the pre-requisite towards the attainment of positive vision of society**. This is the only key to improve state finances.

The **medium-term measures** must aim at **strengthening the existing social infrastructure** so as to enhance its reliability (in the first round) and accessibility (in the second round). In the labour market, it will help to minimise the mismatch problem. This will create an environment that will encourage the application of existing knowledge for human betterment. Also, it will help to **break the barriers of low-level activity equilibrium web in which the border economy of Punjab is caught**.

The **long-term measures** must aim at developing the research base through enhancing the research and development (R & D) in the state, which are aimed at conquering the natural barriers and applying the knowledge for the betterment of humanity.

CHAPTER 8

Conclusions and Policy Recommendations

This Chapter summarises the main conclusions and policy recommdations. The work is broadly divisible into three Sections. While Section I presents a macro perspective, Section II has a focused micro perspective. Policy import of the work follows in Section III.

8.1 Macro Perspective

Indian economy is a typical representative of those economies that has publically assigned high priority to employment creation and, towards this end, invested huge funds but has failed to curtail growing unemployment. In fact, the magnitude of unemployed in India has grown at a disquieting pace partly because of the incremental backlog volume of unemployed persons and partly because of changing age-structure of the population and hence composition of manpower in favour of working age-group. The existence of such a large pool of unemployed persons (i) implies a colossal waste of nation's human resources, and (ii) poses a serious problem to the involved individuals to sustain an honourable life. To be specific, the process of mismatch between the labour force growth and employment growth during 1997-2002 has added 53.01 million to the unemployed labour force pool in India. Punjab economy, a border constituent of the Indian economy, has, in the mean time, recorded sharply divergent growth rates of labour force (2.27 percent per annum) and employment growth opportunities (0.73 percent per annum). Consequently, number of unemployed persons in the state was expected to be 10.65 lakh at the end of the Ninth Five Year Plan.

Rural dominated (66 percent, 1.61 crore persons) Punjab economy is, slowly but steadily, moving towards urbanization (Census, 2001). However, when only self-employment seekers are considered as unemployed, the dominance of rural areas becomes still more pronounced. In fact, 70.72 percent of the 14.72 lakh unemployed persons seeking self-employment (in age-group of 18-35 years) came from rural Punjab (Economic Census, 1998).

The move towards urbanisation is probably due to availability of better employment opportunities in urban Punjab. For instance, as per **usual principal status** criterion, the NSSO's 55th Round (1999-2000), the **work participation rate** of 29.2 percent in rural Punjab was substantially lower than that prevailed in urban Punjab (32.5 percent). To this adverse scenario, the relatively paucity of employment openings in rural Punjab was another causal factor. This is amply brought out by the relatively higher unemployment rates (2.6 percent for persons, 2.3 percent for males, and 6.2 percent for females) witnessed by rural Punjab compared to rural India (1.9 percent for persons, 2.1 percent for males, and 1.5 percent for females). In contrast, urban Punjab experienced lower unemployment rates (3.2 percent for persons, 3.1 percent for males, and 3.5 percent for females) than that of urban India (5.2 percent for persons, 4.8 percent for males and 7.1 percent for females).

The unemployment scene of Punjab is dominated by educated unemployed. For instance, 8.98 lakh (61.01 percent) of unemployed persons seeking self-employment were

educated (matric and above qualification). This scenario gets aggravated when employment exchange statistics are considered. As per these statistics, 73.3 percent of the registered unemployed persons (5.45 lakh) were educated in the state in 1999. Further, 4.22 lakh (77.3 percent) fell in the category of skilled unemployed. It is noteworthy that the employment exchange records the persons who opt for wage employment, and that too in organised sector. However, the number of unemployed registered with employment exchanges represents only a fraction (37 percent) of unemployed pool of Punjab youth.

How has the economy of Punjab performed overtime? In the post-green revolution phase, while the real NSDP (during 1966-67 to 1998-99) increased at the rate of 4.98 percent per annum, the real per capita income grew at 2.92 percent per annum. However, the growth rate was not homogenous across the total time span. In fact, the growth rate, whether real value of income as measured in terms of NSDP or per capita, decelerated during the 1990s as compared to the 1980s. It was markedly decelerated in the case of agriculture and livestock sector (from 5.15 percent to 2.16 percent), more so, agriculture proper (from 4.87 percent to 0.37 percent).

Punjab economy experienced imbalance in its structural transformation. While the dominant sectors experienced a relatively slow growth rate in value creation (trade, hotel and restaurants; mining and quarrying; construction; real estate, ownership of dwellings and business services; other services and agriculture proper), those with less weight recorded relatively better growth rate (housing; banking and insurance; electricity, gas and water supply; manufacturing; transport, storage and communication; and livestock). As a consequence, the primary sector's share in output declined from 51.89 percent (1970-71) to 43.16 percent (1997-98); the secondary sector (16.63 percent to 21.11 percent) and tertiary sector (31.48 percent to 35.73 percent) experienced consolidation. The Punjab economy, thus, indicates a shift away from agrarian economy towards an economy that welcomes industrial and territory sector activities.

However, no corresponding shift has occurred in the employment structure. Even the estimates for 1999-2000 reveal that the share in total workforce of those employed in agriculture (53.4 percent), manufacturing (13.5 percent) and non-agriculture (46.6 percent), are significant (NSSO, 2002). This would hint towards discouraging emerging employment generation scenario in the state. While the public sector shows almost stagnation in employment creation as is reflected by marginal increase in employment from 590,675 persons (1992) to 599,058 persons (1999), the situation is slightly better in the organised sector which witnessed an increase from 819,160 persons (1992) to 847,111 persons (1999). During the same period, the state government employees increased marginally from 301,770 to 307,146. Even the organised private industry creates additional employment only for 2791 persons per year. The major employment-creating sector continues to be the low productivity carrying small-scale industry. It employs 80 percent of industrial labour force. Employment grows in this dominantly self-employment generating sector at a relatively high rate of 3.08 percent per annum.

What is the implication of such a development process for the educated, more so, skilled labour force of Punjab? The continued dominance of small-scale industry on the one hand and curtailment of organised sector openings on the other, obviously, hint towards a bleak employment scenario for educated employment seekers. In fact, the state has experienced an increased proportion of educated unemployed among the overall

unemployed persons. Their share has been continuously increasing, say from 50.52 percent (1980) to 62.07 percent (1990) to 73.32 percent (1999) as per employment exchange statistics. Simultaneously, their placement position has deteriorated from 17,998 persons (1980), 3978 persons (1996) to 2627 persons (1999). This deterioration is attributable to the dominance of general education, which is another manifestation that emerges from employment exchange data. For instance, in 1999, among the educated job seekers (399,618), the matriculates and undergraduate freshers constituted 60.54 percent (241,949), Graduate and postgraduate freshers constituted 8.89 percent (35,510). Among the trained job seekers, trained teachers (9.17 percent) and certificate holders and work experienced persons (8.90 percent) represent relatively important categories.

Altogether low estimates of unemployment rate emerge from the NSSO data in rural Punjab, probably owing to the differences in the methodology and conceptualisations in-built in these estimates. NSSO's estimates of 1999-2000 for Punjab show the unemployment rates for various economic activity status categories were as follow: **usual principal status** – 2.6 percent (persons), 2.3 percent (males) and 6.2 percent (females); **current weekly status** - 3.1 percent (males) and 4.2 percent (females); **current daily status** - 2.4 percent (males) and 3.7 percent (females). For educated persons of age-group (15 years and above), by **usual principal status**, the unemployment rates were: 6.0 percent (persons), 4.8 percent (males), and 21.5 percent (females). In **current weekly status**, the unemployment rates were: 5.3 percent (persons), 5.3 percent (males) and 5.5 percent (females).

In the case of rural youth (15-29 years), the unemployment rates were 6.1 percent (persons), 5.6 percent (males) and 13.3 percent (females). Amazingly, for females of age-group (20-24 years), the unemployment rate was 33.3 percent. For **current weekly status**, the unemployment rates were 5.3 percent (persons), 6.7 percent (males) and 2.0 percent (females). For **current daily status**, the unemployment rates were 7.0 percent (persons), 8.0 percent (males) and 3.6 percent (females).

The other noticeable feature of employment in the state is that as many as 8.8 percent persons were not working regularly throughout the year as per **usual principal status**. In age group of 15 years and above, 5.3 percent persons sought or were available for additional work. Moreover, 4.4 percent persons sought or were available for alternative work.

8.1.1 Border versus Non-Border: Macro Perspective

The border state has an active border zone represented by three border districts (Amritsar, Gurdaspur and Ferozepur). An active border region is, obviously, relatively more risk prone to, apart from the usual risk determining parameters, the nearness to the international border. As a consequence, the productive activities of an active border region are observed to be of a lower order than that of its non-border counterpart region in Punjab. For example, the per capita income of border region is found to be consistently lower by 10 percentage points as against the non-border region. Moreover, its relative weight has got consistently eroded over the period (1970-71 to 1996-97). This is due to a shift in the sectoral composition.

The percent contribution of the secondary sector (14.4 percent to 19 percent) to the state domestic product is markedly lower in the border region compared to its counterpart, the

non-border region (15.7 percent to 24.4 percent). During the upswing phase (1970-81) of the secondary sector, the ratio of the border region follows the rising trend as compared to the ratio of non-border region. In contrast, during the downswing phase (1981-96) of secondary sector in the state, the ratio fell at faster rate in the border region compared to the non-border region. No wonder, the border area's contribution to the value of industrial exports originating from Punjab has remained less than 16 percent, though it did improve from 9.7 percent (1970-71) to 15.8 percent (1998-99). The manufacturing sub-sector output's share in the secondary sector's output improved marginally in border region (51.6 percent to 54.3 percent) as against marked improvement witnessed by the non-border region (52.5 percent to 73.5 percent) from 1970-71 to 1996-97. Thus, investors in manufacturing units have consistently preferred the non-border region of Punjab to the border districts, more so, since the Indo-Pak War of 1971.

Further, within manufacturing sector, the contribution of income created by the registered manufacturing in border region has declined (47.3 percent to 30.1 percent), while it has improved consistently in non-border region (50.1 percent to 59.8 percent), during 1970-71 to 1996-97. Thus, the border region is, and will continue to be, the dominant abode of non-registered micro-manufacturing units - the units that are self-or family-financed and operated, and cater to the local demand. Accordingly, border area units have, ceteris paribus, lower production capacity levels than that of their counterpart non-border area units. Even amongst the registered manufacturing, the share of units located in the border areas in the total units of Punjab state reveals that, as the production base increases, the share of units located in the border areas declined from 23.0 percent (small scale units), to 21.1 percent (registered factory units) to 15.1 percent ((large scale units) in category of the overall units in Punjab. Similarly, the number of persons employed per industrial unit is lower in border region as against non-border region, particularly among registered manufacturing units and large scale units

No noticeable differences prevail in the border and non-border regions so far the educational, health, link roads, focal points, cropping intensity, irrigation intensity, etc. are concerned. However, the educational infrastructure, which lays down the basic pyramid to inject (through a formal education process) human capital formation, suggests that the border district students are disadvantageously placed as the border districts are not the most sought after places by the teachers. In terms of access to electricity infrastructure in the border districts, the data show that 75 percent of the households enjoy electricity connections, against 89 percent in the non-border region.

What are the implications of such a risk dominated economic structure for employment generation in the border region? Obviously, such an economic structure will scale-down employment potential. The border districts together accounted for 28.47 percent of the population of the state. However, their share in the unemployed person's pool of the state was 33.52 percent (Economic Census, 1998) and 28.9 percent (Employment Exchange, 1999). Further, the border districts accounted for 29.2 percent of educated unemployed and for 30.3 percent of skilled unemployed.

In terms of incidence of unemployment, **24.9 percent of workforce in border districts was unemployed and seeking self-employment**, while in non-border districts, it was 18.9 percent (Economic Census, 1998). Similarly, **the share of unemployed to total population was 7.5 percent in border districts and 5.9 percent in non-border districts**. Also, the employment exchange data shows the corresponding unemployment

ratios for border and non-border regions as follows: 7.9 percent in border workforce against 7.5 percent in non-border workforce; and 2.4 percent of border population against 2.3 percent of non-border population.

8.2 Micro Perspective

8.2.1 Sampling Basis

To further supplement this secondary data based analysis, there is need to conduct a primary survey based analysis. Of the three districts of Punjab that share common international-border with Pakistan, Ferozepur district has maximum percentage of border blocks (8 out of 9, i.e. 89.9 percent) vis-a-vis other two border districts (Gurdaspur and Amritsar). A border block is one in which at least one village directly shares the international border or all the villages of the block fall within the border-belt. Irrespective of perspective from which the Ferozepur district is viewed, it has the maximum exposure to the international border amongst the three border districts of Punjab. Hence, the scope of the study is restricted to the Ferozepur district and within the district to its rural segment represented by **434 sampled households from 30 sampled villages**.

Two stage stratified random sampling design was used to draw the sample. At the first stage, every **n**[th] border village was drawn from the list of villages from each of the ten Development Blocks[*]* of Ferozepur district that had common international border with Pakistan; the value of **n** varied between 6 to 136 depending upon the number of border villages in the Development Block. Depending upon the distance of the sampled villages from the border, this list was further divided into *zero-border village category* (up to 2 Km.), *near-border village* (2-6 Km.) *and other-border village* (6-16 Km.) *and non-border village categories* (beyond 16 Km. but within the district). To draw the household's sample, every **n**[th] household from the voter list was sampled; the value of n varied between 5 and 21 depending upon the number of voter-households in a village. **The data was collected from the sampled households through personal interviews conducted during a period spread over three months, September-November 2001, by using a specially structured questionnaire.**

8.2.2 Demographic and Socio-Economic Attributes

The sampled households consisted of 2938 persons: 1593 males (54.2 percent) and 1345 females (45.8 percent). The overall sex ratio was 844, with the lowest 821 in other-border villages and the highest (900) in near-border villages. The sex ratio was 860 for adults, 905 for elders and 909 for children. This implies that border nearness either encourages gender equality or encourages migration of male members to non-border regions. Age-distribution shows the proportion of adults (51.3 percent), children (38.5 percent) and elders (10.2 percent). Students constituted 63.00 percent of children population. The average size of household was 6.8 persons. Yellow card holding households was 33.9 percent. 23 Households (5.3 percent) reported the emigration by some of their family members. Overall, 57 persons (1.94 percent) emigrated. Moreover, 12 households (of 23 households who reported emigration) reported having received

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*   Presently, Ferozepur district consists of ten Development Blocks. As per 1991 Census Handbook, it has 9 Development Blocks.

remittances worth Rs.5.24 lakh. 276 households (63.6 percent) owned land and the average land per land-owning household was 10.01 acre. Land-man ratio was 0.94 acre in overall. However, it was very low in zero-border villages and near-border villages and rises as the distance from the border increases.

As many as, 171 households (39.4 percent) reported the prevalence of debt. Proportion of indebted households was the highest (45.7 percent) in zero-border villages and the lowest (33.0 percent) in non-border villages. The total debt was Rs.155.73 lakh against 171 indebted households, i.e. Rs. 91,068 per indebted household, with the highest level (Rs.1,22,542) in zero-border villages and the lowest (Rs.63,735) in other-border villages. The per capita income stood at Rs. 18,007; the lowest in zero-border villages (Rs.15,100) and the highest (Rs. 21,380) in other-border villages. Per-household debt-income ratio was 29.3 percent in the case of all villages' households.

In overall, 88.2 percent households reported active participation in social and religious functions. Just 1.2 percent households reported participation in community life by heading social, religious, sports and cultural organisations. The actual political participation of households was generally very low; 85 percent of households were found to be politically inactive. 52.8 percent of dwelling units were pucca, 21.7 percent semi-pucca and 25.6 percent were katcha. The type of dwelling unit and facilities in them are sensitive to the border distance.

The occupation-wise distribution of households was as follow: agricultural households (53.9 percent), wage workers (38.9 percent), artisan households (0.7 percent), dairy households (0.5 percent), shop households (3.5 percent), service households (2.3 percent) and priest households (0.7 percent). The proportion of agricultural households was the highest in zero-border villages (61.9 percent) and the lowest in near-border villages (40.7 percent).

Among the sampled population, 1749 persons have been identified as workers, comprising 959 males (55 percent) and remaining 790 females (45 percent). Education-cum-age analysis of workforce shows that out of 1749 workers, as many as 906 (51.8 percent) were illiterate, 528 (30.2 percent) below matric, 305 (30.2 percent) matric and above, and 8 (0.5 percent) with professional qualification. In the younger age-group (up to 18 years), 34.1 percent of workers were illiterate. Further, in younger age-group, 47.6 percent was below matric. 43.7 percent of male workers and 61.8 percent of female workers were illiterate. In the case of younger age-group of females, none was having professional education. In the age-group of 23-58 years, 88.5 percent of males and 95.7 percent of females were married.

8.2.3 Employment/Unemployment Status of Workers

Of 434 samples households, 209 households (48.2 percent) reported one or more unemployed person/s seeking employment. On the whole, 316 unemployed persons were found to be seeking employment, i.e., 1.51 unemployed persons per household. They constitute 18.1 percent of workforce and 10.8 percent of sampled population. Such a high unemployment rate is attributable to border-vicinity villages. The unemployment rate loses by 5 percentage points as we moves from border-vicinity villages (20.4), to other-border villages (16.9) to non-border villages (15.4). The work participation rate

(ratio of workers to population) was 59.5 percent, suggesting no marked gender bias as both sexes participated equally in production process.

The **usual principal status** reveals that three out of five workers work on full-time basis (56.8 percent) and remaining two of the five works on part-time basis. It indicates presence of underemployment and disguised unemployment.

The dominant activity status analysis suggests that, 56.8 percent of workforce was engaged on full-time basis and reported their **usual principal occupation** either as farming, non-farming or subsidiary. The tendency to be tied to an occupation weakens as one move away from border villages to non-border villages. The border nearness builds inertia to change. The border distance of villages and the share of **usual principal status** workers in family workforce were found to be inversely related.

The **capacity use rate** method has also been used to measure the extent of unemployment. The capacity use rate has been analysed for four durations: daily, weekly, monthly and quarterly. On an average, a rural worker works for 90 percent of the workdays whether measured in terms of monthly criteria or quarterly criteria. However, during peak workdays, as survey happen to be, they work on full time basis, as is revealed by **weekly capacity use rate** of 98 percent. The **daily capacity use rate** is 87 percent.

The analysis of employment/unemployment status of a worker has been carried out in terms of **three alternative employment periods**, i.e. seven days work basis, thirty days work basis, ninety days work basis. On seven days work basis, 182 persons (10.4 percent) did not work even for a single day of reference week, 67 persons (3.8 percent) worked up to 3 days, and 1500 persons (85.8 percent) worked for 4 days and above. Only 1126 persons (64.4 percent) worked for all of the seven days of the week (fully employed). For males, the proportion of workers who worked for all of the seven days was 53.7 percent compared to 77.3 percent of females. Further, 12.6 percent of males and 7.7 percent of females did not work even for a single day of the reference week – fully unemployed.

The two situations in-between (i.e. zero work days and all of the work days) represent the situation of partial employment and partial- or under-unemployment. For example, on seven days basis, working 'up to three days' during the week is semi-employed/unemployed. Those who worked for '4 days and above' represent a near full employment situation. To sum up, on seven days basis, a fully unemployed segment accounted for 10.4 percent of the workers and 64.4 percent enjoyed full employment. The rest (25.2 percent) hanged in-between. The segment of fully unemployed was the least (3.3 percent) in the work age-profile of 23-58 years and the most (54.0 percent) in the elderly age-group (71 years and above).

On **thirty day basis duration**, the various employment/unemployment situations were observed as: fully unemployed (12.3 percent), fully employed (17.5 percent). The 70.2 percent persons experienced in between the two said situations. As many as 89 persons (5.1 percent) found work up to 14 days, 1444 persons (82.8 percent) worked for 15 days and above. The full unemployment was faced maximum by the upper age-group and that of near full employment was availed of maximum by the younger age-group.

On **ninety day basis duration**, the situation of full unemployment was faced by 13.4 percent, full employment by 5.4 percent of persons. The situation of semi-employment/unemployment and near full employment was faced by 7.4 percent and 79.2 percent of persons. The same proportions stand for males and females in their respective category.

8.2.4 Employment Seeking Behaviour

Employment seeking behaviour is the most pronounced manifestation of one's non-affordability (economic and non-economic) of the situation of unemployment. As many as 255 unemployed persons (14.6 percent) of total workforce made good amount of efforts of varying degree to secure the work. Out of them, 187 (73.3 percent) unemployed active work seekers marked their attendance on daily basis in the informal labour market/Chowk. The other 68 unemployed active work seekers (26.7 percent) used various alternative methods to seek work. The employment seeking behaviour is sensitive to gender as well as age-profile of unemployed workers. For instance, while 85.9 percent of the unemployed male workforce (219 males) actively sought work, only 14.1 percent unemployed female workforce (36 females) actively sought work. Similarly, the maximum number of unemployed workers that marked their attendance daily in the labour market belonged to the age-group of 23-58 years (120 out of 181). The same trend holds true both for male work seekers and females work seekers.

Employment seeking behaviour in terms of organised and non-organised sectors reveals that, out of 255 unemployed persons actively seeking employment, 73.3 percent opted for employment in non-organised sector probably because the openings in the organised sector were available only to the few qualified chosen, and 26.7 percent in organised sector because of having educational qualification. Further, 77.6 percent of males opted for employment in non-organised sector and 52.8 percent of females in the organised sector. The preference for non-organised sector by a majority is, obviously, a reflective index of limited options available to the majority of active work seekers in the organised sector.

The labour force availability depends upon many socio-economic under-currents and dynamics. Of 1749 persons working, 703(40.2 percent) were not available for work on full time basis partly due to studies (60 persons), training (30 persons), disability (120 persons), domestic work (493 persons). Another 210 workers were engaged in as part-time workers (82 as casual workers and 128 as self-earners). 407 employed persons were exclusively in the category of self-employment. Another 66 persons combines the self-employment-cum-wage-employment set. Moreover, 33 persons were available for work but did not seek work actively. The dominant proportion (555 in number) of female workers could not participate as full-time work because of domestic work and other reasons. The proportion of females in self-employment was very small, whereas the maximum males were in self-employment.

Since an active/sensitive international border full of uncertainty of war, the border risk, therefore, adversely influenced the investment magnitude and resource endowment levels of households that resided in border areas. The nearer the border they reside and, in tern, the more it perpetuates debt and poverty. The increasing proportion of yellow card holders and debted households is indicative of this trend. Similarly, type of house and the degree of facilities enjoyed at the residential premises by a rural household are sensitive

to its location form the border. Similar trends are also witnessed in the case of communication modes, entertainment products, weather normalising products and farm related assets also. Thus, **border risk injects a pessimistic outlook even among the rural entrepreneurs and dampens their enterprising spirit.**

8.2.5 Border Risk and Employment Search Behaviour

With regard to the rural employment search behaviour and border risk, the study points out that, **(i)** The work search mode through the relatively costly and time consuming intermediary agents (employment exchanges, private placement agencies and influential persons), as expected, is of negligible importance in rural-belt of Ferozepur district (Only three unemployed work seekers reported this mode); **(ii)** The relatively cheap direct work search is almost the solo mode of employment search adopted by the unemployed rural border youth (217 out of 255). Out of 217, two-thirds of unemployed workers (65.4 percent, 155) actively seek work on daily basis by attending the labour market/Chowk. The remaining one-third search for a regular job through application/test/interview; **(iii)** Both direct work search forms, as expected, are sensitive to the border distance. The declining proportion of unemployed workers actively seeking work on **daily basis** as we move away from border-vicinity villages (73.9 percent) to other-border villages (64.3 percent) to non-border village (45.8 percent) lends support to hypothesis of inverse relationship between the distance of the village from the international border and daily-basis work search mode; **(iv)** Regarding employment search problems, about one-third of the unemployed work-seekers considered the temporary mismatch between the demand for and supply of labour force, about two-thirds are unemployed due to low activity level equilibrium caused by structural factors emanating from the economic and political environment; and **(v) None of the actively work-seekers reported that the available work opportunity was not accepted due to its socially unacceptable status**.

8.3 Policy Import of Analysis

The analysis reveals that the economy of the border sub-set of Punjab, a border state of Indian Union, *suffers from a high rate of unemployment*. For instance, Punjab with **every fifth person** (as per official statistics) **as unemployed** and willing to engage even in self-employment (the second-best employment option) depicts a dangerous signal to the economy of the state in particular and that of the Nation in general. This is owing to the shying away of investors from the region, particularly from the high-end value creating secondary sector activities. Consequently, *the economy of the region is caught at low level of economic activity equilibrium*. Recall that per capita income of the set of border districts is lower *by 10 percentage points than the set of non-border districts* and that the contribution of registered component of manufacturing sector is markedly weak in the border region. This is despite the fact that the state-supported socio-economic infrastructure is well dispersed in both the sets of districts.

For a typical Punjab economy and its border region, one can visualise three sets of employment promotion policies to tackle the acute and wide spread unemployment crisis in the state. **One set** requires the desired changes in macroeconomic policies which should have positive bearings on the accelerated pace of economic growth that yields expanding avenues of employment. Under this, rejuvenation of the agriculture, expansion of small and medium enterprises and the development of human resources, particularly in the border regions must be emphasised. These measures require a wide range of policy interventions such as stepping up the economic growth, getting the factor

prices right, public investment in strategic areas, improving tax and subsidy structure, setting monetary instruments, etc. However, the weak link between economic growth and employment creation in Punjab suggests that no macroeconomic policy of market-led growth will be successful in dealing with the problem of unemployment.

The **second set** consists of direct employment promotion policies which should be region-specific and target-oriented one. In India, various employment generation schemes/programmes initiated at the national level (IRDP, JRY, PMRY, TRYSEM, etc.) must be reviewed in the case of Punjab, and should take into account the quality aspect of employment to fulfill the aspirations of unemployed persons, particularly the educated ones. However, these programmes cannot operate in the vacuum. For success of these programmes, whatever their orientation, content or clientele, high economic growth is an inescapable pre-requisite because even the most powerful and well-intentional special employment promotion programmes may flounder in the areas or during the times of slow economic growth. Further, people's democratic institutions at the grass-roots level, public-private sector partnership, decentralised functioning of government agencies, etc. are important elements to ensure the success of these programmes. The permanent solution to the rural unemployment problem is to bring these persons in the high growth productive activities by proper training, skill formation and accessibility to the basic infrastructure created in rural Punjab. Thus, the public awareness and appropriate economic, demographic and social policies should be developed to upgrade the skills of border region's people up to a reasonable level to integrate them into the mainstream market activities.

For the sorry state of health of the economy of border region of the border state of Punjab, the foreign policy of the Nation in particular and popular politic-oriented weak-nee jerk policies of the state in general are responsible. The **third set,** obviously, calls for a bold politico-economic initiative from the Indian state to act as a catalyst in creating a soothing investment friendly environment.

Is there a way out of this mess? *Yes, there always exists a scope to start afresh provided there is a will power and the economic interest of the region, those of the state and the Nation are allowed to over-ride the individual, group and political narrow partisan interests*. Even after five decades of independence existence of the Indian State, *is it a tall order to expect this from the elite of the nation?* If the answer is no, the future of the economy of the set of border districts, the border state and that of the India is bleak. If the answer is yes, then a number of initiatives by the state are called for.

1. The first and foremost amongst the ***initiatives is the governance***. The state must ensure that employees are, at least, physically present at the places of their postings for the specified hours of the day. The custom *of sub-letting of* the permanent positions, particularly in rural and backward areas, must be dealt with an iron hand. The message to the masses must go that before the law all are equal. Those who fail to be transparent must get exemplary punishment in the shortest time. Towards this end, there is an urgent need to build a *transparent computerised data base*, initially, by putting available historical facts from the record files lying in the government offices and, later, by updating and strengthening these.

2. There is a need to have a fresh look at our state policies. This is a pre-requisite to survive in a globalised market driven world order of which Indian economy is a part.

It demands the creation of a level playing field by organising the numerous domestic producers, say as *producer cooperatives*, with state acting as facilitator and not, as in the past, controller. This will enable them to bargain with the big international players and venture for a respectable share/niche in the world market. But the success of such a cooperative venture will depend, as the past experience of successful producer cooperative ventures demonstrate, on its transparent working in the eyes of its producer members/shareholders who are likely to be scattered across spatial units. Besides, such ventures must be *run on strictly professional lines to ensure product* quality under a brand name to compete with competitors – a hallmark of marketing of branded goods of multinationals. By minimising market risk of producers, such an initiative is expected to sensitise producers to concentrate on enlarging the production base and improve the product quality and, in turn, help break the web of low economic activity equilibrium in which the economy is currently caught.

3. A market driven economy assumes sufficient availability of the services of a solid base of socio-economic infrastructure but at a price, howsoever, low it may be. The responsibility of maintenance, *updating and strengthening of existing social and economic infrastructure* remains with the state. *The price of these services must cover their maintenance cost.*

The preceding policy measures unwittingly assign equal weightage to rural and urban activity paradigms. It is no so. **Every tenth rural person or every sixth worker and every second rural household is under the influence of unemployment** in the Ferozepur district. Obviously, it adversely influences their levels of resource endowment as well as the standard of living. The analysis proves that whenever alternative choices exist, even rural activity related assets are sensitive to border risk. This applies equally to general assets owned by rural households which range from residential buildings, services embedded in these buildings, entertainment related assets (Television) and human capital formation. The two measures of poverty - the proportion of yellow card holding families and the proportion of families under debt - further, establish that border nearness injects poverty and indebtedness. The **resource endowment behaviour of rural households establishes that border risk injects a pessimistic outlook even among the rural entrepreneurs and dampens their enterprising spirit. As a consequence, poverty and debt perpetuate**. Thus, **those who live in the vicinity of the international border**, i.e. within six kilometers, **suffer the gravest impact**.

These households and their residents deserve special state support to mitigate their sufferings. Unfortunately, the revenue authorities lacked a distance-wise list of villages from the international border at the time of survey. There is a need to have dossiers on all the residents of these villages so that they are able to get requisite state support. This support is a must as their economy is caught, and will remain caught, at low level of economic activity equilibrium.

The observed two-digit range unemployment rate is partly attributable to the mismatch formulation but mainly to structural factors that manifest in low activity level equilibrium. The minimisation of the **adverse effects of such a mismatch** between supply and demand for labour services requires **strengthening of** such **social infrastructure** as educational and training institutions in rural border areas. Similarly, the minimisation of the **adverse effects of low activity level equilibrium** requires **injection of new activities into the system** as earlier referred. To create substantial

value-additions (income) possibilities, **the new activity set should be such that it involves substantial value creation possibilities at primary, secondary and tertiary production stages**.

This may take the form of **diversification of rural activity** set. But, it is easier said than achieved. Otherwise, Punjab economy, which has diversification of rural economy on its agenda for over two decades, might have not been where it is now. **The success of such an initiative demands a lot of vision, will power and drive on the part of political leadership, particularly to counter the resistance from the prosperous vested interest groups created by the existing system.**

The new initiatives may broadly be conceived in terms of their inter-temporal influence, namely short-term, medium-term and long-term. The **short-term measures** must aim at re-establishing the credibility of the system that has got eroded overtime. The message must go that before the law, irrespective of the social, economic or political position held by the individual, all is equal. The deviants must get the due punishment in the shortest possible time - the key to success of this drive. (At present, they are often rewarded for their deviant acts.) The developed world enjoys such a system. Why does not Punjab/India move towards this goal, which is well enshrined in our Constitution? **The transparent governance is, thus, the pre-requisite towards the attainment of positive vision of society**. This is the only key to improve state finances.

The **medium-term measures** must aim at strengthening the existing social infrastructure so as to enhance its reliability (in the first round) and accessibility (in the second round). In the labour market, it will help to minimise the mismatch problem. This will create an environment that will encourage the application of existing knowledge for human betterment. Also, it will help to break the barriers of low-level activity equilibrium web in which the border economy is caught.

The **long-term measures** must aim at developing the research base through enhancing the research and development (R & D) in the state, which are aimed at conquering the natural barriers and applying the knowledge for the betterment of humanity that resides in such regions.

Appendix A

Table A.1: Salient demographic features of sampled villages of Ferozepur   district

Village Features	Frequency of Villages	Population		Female per 1000 Male	% Share in Population of		% Share in Workforce of Non-Agriculture Workforce
		1991	1981-91 compound growth rate		S. C. Population	Workforce	
Sampled Villages of Ferozepur District							
Zero-border villages (0-2 km)	8	1365	2.6	914	16.5	34.0	18.9
Near-border villages (2-6 km)	7	1530	3.3	906	8.8	30.0	23.3
Other-border villages (6-16 km)	10	3695	2.3	911	26.3	37.8	58.3
Border villages (0-16 km)	**25**	**2343**	**2.6**	**911**	**21.3**	**35.7**	**45.9**
Non-border villages	*5*	*2682*	*2.1*	*897*	*19.1*	*30.4*	*38.8*
Overall	**30**	**2400**	**2.5**	**908**	**20.9**	**34.7**	**44.8**
Least Developed Blocks namely Abohar, Fazilka and Khuian Sarver							
Zero-border villages (0-2 km)	2	1424	3.1	887	40.7	28.1	42.9
Near-border villages (2-6 km)	1	4725	4.1	919	0.9	28.4	9.4
Other-border villages (6-16 km)	2	1709	1.1	870	25.8	29.3	34
Border villages (0-16 km)	**5**	**2198**	**2.8**	**895**	**19.0**	**29**	**26**
Non-border villages	*1*	*6827*	*2.3*	*890*	*16.4*	*31*	*35*
Overall	**6**	**2970**	**2.6**	**893**	**18.0**	**29**	**30**
Medium Developed Blocks namely Jalalabad and Guru Har Sahai							
Zero-border villages (0-2 km)	2	1108	2.3	921	5.6	42	13
Near-border villages (2-6 km)	2	1786	2.9	916	9.5	32	42
Other-border villages (6-16 km)	3	5452	1.6	936	23.7	31	54
Border villages (0-16 km)	**7**	**3093**	**2.0**	**932**	**19.6**	**32**	**47**
Non-border villages	*2*	*1327*	*2.2*	*905*	*16.2*	*31*	*32*
Overall	**9**	**2701**	**2.0**	**929**	**19.2**	**32**	**45**
Developed Blocks namely Mumdot, Ferozepur, Zira, Makhu and Ghall Khurd							
Zero-border villages (0-2 km)	4	1587	2.1	922	9.7	33	13
Near-border villages (2-6 km)	4	604	2.3	868	23.2	31	20
Other-border villages (6-16 km)	5	3436	3.4	897	28.9	46	64
Border villages (0-16 km)	**13**	**1996**	**3.0**	**900**	**23.7**	**42**	**51**
Non-border villages	*2*	*1964*	*1.7*	*904*	*25.8*	*30*	*50*
Overall	**15**	**1991**	**2.8**	**901**	**24.0**	**40**	**51**

Source: Derived from village–wise information supplied by the office of Deputy Economic and Statistical Advisor, Ferozepur.

Table A.2: Salient cropping features of sampled villages of Ferozepur district

Village Features	% of Village Area Cropped	Irrigation Intensity	Cropping Intensity	% of Net Cropped Area under				
				Wheat	Rice	Cotton	Orchards	Sugar cane
Sampled Villages of Ferozepur District								
Zero-border villages (0-2 km)	77.0	194	196	91	61	16.3	0.1	2.6
Near-border villages (2-6 km)	82.5	199	195	90	79	10.8	0.0	1.2
Other-border villages (6-16 km)	78.4	193	198	90	78	10.1	0.1	1.3
Border villages (0-16 km)	**78.8**	**194**	**197**	**90**	**74**	**11.6**	**0.1**	**1.6**
Non-border villages	*84.1*	*195*	*198*	*89*	*36*	*43.4*	*8.2*	*0.8*
Overall	**80.1**	**194**	**197**	**90**	**64**	**19.9**	**2.2**	**1.4**
Least Developed Blocks namely Abohar, Fazilka and Khuian Sarver								
Zero-border villages (0-2 km)	90.2	181	190	91	14	62.9	0.5	2.5
Near-border villages (2-6 km)	96.0	200	190	90	69	18.1	0.0	2.1
Other-border villages (6-16 km)	91.7	183	196	68	20	53.5	0.8	5.4
Border villages (0-16 km)	**92.7**	**188**	**193**	**81**	**34**	**44.1**	**0.5**	**3.6**
Non-border villages	*87.8*	*194*	*198*	*87*	*4*	*68.9*	*13.1*	*1.1*
verall	**90.2**	**191**	**195**	**84**	**20**	**56.1**	**6.6**	**2.4**
Medium Developed Blocks namely Jalalabad and Guru Har Sahai								
Zero-border villages (0-2 km)	63.8	197	197	87	86	1.7	0.0	0.5
Near-border villages (2-6 km)	69.4	199	200	93	85	10.6	0.0	0.5
Other-border Villages (6-16 km)	68.8	192	200	93	93	1.5	0.0	0.3
Border villages (0-16 km)	**69.0**	**193**	**200**	**93**	**92**	**2.8**	**0.0**	**0.3**
Non-border villages	*76.9*	*198*	*200*	*94*	*92*	*0.6*	*0.1*	*0.6*
Overall	**70.3**	**194**	**200**	**93**	**92**	**2.4**	**0.0**	**0.4**
Developed Blocks namely Mumdot, Ferozepur, Zira, Makhu and Ghall Khurd								
Zero-border villages (0-2 Km)	74.4	198	198	90	72	0.5	0.0	3.1
Near-border villages (2-6 km)	78.5	197	197	89	88	1.4	0.0	0.5
Other-border villages (6-16 km)	83.8	198	198	96	87	1.1	0.0	0.6
Border villages (0-16 km)	**80.1**	**198**	**198**	**94**	**82**	**1.0**	**0.0**	**1.3**
Non-border villages	*80.4*	*196*	*196*	*92*	*89*	*0.8*	*0.0*	*0.0*
Overall	**80.1**	**197**	**197**	**94**	**83**	**0.9**	**0.0**	**1.2**

Source: Derived from village–wise information supplied by the office of Deputy Economic and Statistical Advisor, Ferozepur.

Table A.3: Salient industrial, educational and health infrastructure of sampled villages of Ferozepur district

Village Features	Industrial Units		Industrial Employment		Share of Villages with			
	Khadi & Village	Small Scale	Khadi & Village	Small Scale	Middle School	High School	Allopathic Dispensary	Primary Health Centre
Sampled Villages of Ferozepur District								
Zero-border villages (0-2 km)	1	1	1	2	0.25	0.00	0.25	0.00
Near-border villages (2-6 km)	1	2	2	3	0.14	0.29	0.14	0.00
Other-border villages (6-16 km)	2	4	3	10	0.20	0.20	0.40	0.10
Border villages (0-16 km)	**2**	**3**	**2**	**5**	**0.20**	**0.16**	**0.28**	**0.04**
Non-border villages	*0*	*2*	*0*	*4*	*0.20*	*0.20*	*0.20*	*0.20*
Overall	**1**	**2**	**2**	**5**	**0.20**	**0.17**	**0.27**	**0.07**
Least Developed Blocks namely Abohar, Fazilka and Khuian Sarver								
Zero-border villages (0-2 km)	1	2	2	3	0.50	0.00	0.50	0.00
Near-border villages (2-6 km)	4	6	8	15	1.00	0.00	0.00	0.00
Other-border villages (6-16 km)	2	3	3	5	0.50	0.00	0.00	0.00
Border villages (0-16 km)	**2**	**3**	**3**	**6**	**0.60**	**0.00**	**0.20**	**0.00**
Non-border villages	*0*	*6*	*0*	*8*	*0.00*	*0.00*	*0.00*	*0.00*
Overall	**2**	**4**	**3**	**7**	**0.50**	**0.00**	**0.17**	**0.00**
Medium Developed Blocks namely Jalalabad and Guru Har Sahai								
Zero-border villages (0-2 km)	1	1	1	1	0.25	0.00	0.25	0.00
Near-border villages (2-6 km)	1	3	1	4	0.00	0.50	0.50	0.00
Other-border villages (6-16 km)	1	2	1	5	0.00	0.33	0.33	0.33
Border villages (0-16 km)	**0**	**2**	**1**	**4**	**0.00**	**0.29**	**0.29**	**0.14**
Non-border villages	*0*	*1*	*0*	*2*	*0.00*	*0.00*	*0.50*	*0.00*
Overall	**0**	**2**	**1**	**3**	**0.00**	**0.22**	**0.33**	**0.11**
Developed Blocks namely Mumdot, Ferozepur, Zira, Makhu and Ghall Khurd								
Zero-border villages (0-2 km)	2	1	2	1	0.25	0.00	0.25	0.00
Near-border villages (2-6km)	0	0	0	0	0.00	0.25	0.00	0.00
Other-border villages (6-16km)	3	6	4	14	0.20	0.20	0.60	0.00
Border villages (0-16km)	**2**	**3**	**2**	**6**	**0.15**	**0.15**	**0.31**	**0.00**
Non-border villages	*0*	*2*	*0*	*4*	*0.50*	*0.50*	*0.00*	*0.50*
Overall	**2**	**2**	**2**	**5**	**0.20**	**0.20**	**0.27**	**0.07**

Note: Primary school exists in each of the village. However, none of the village had a High School, College, ITI or Hospital.

Source: Derived from village–wise information supplied by the office of Deputy Economic and Statistical Advisor, Ferozepur.

Table A.4: Farm equipment per 100 net sown acres of sampled villages of Ferozepur district

Village Features	Per 100 Net Sown Acres the Number of							
	Tube-well	Diesel Engine	Tractor	Thresher	Reaper	Harvester Combine	Tractor Combine	Tube-well*
Sampled Villages of Ferozepur District								
Zero-border villages (0-2 km)	11.4	15	2	4	0.0	0.0	0.1	44.3
Near-border villages (2-6km)	17.6	12	3	10	0.0	0.2	0.1	59.1
Other-border villages (6-16km)	12.7	10	3	4	0.0	0.2	0.0	51.9
Border villages (0-16km)	**13.2**	**11**	**3**	**5**	**0.0**	**0.2**	**0.1**	**51.4**
Non-border villages	*4.8*	*4*	*2*	*2*	*0.0*	*0.0*	*0.0*	*22.9*
Overall	**11.0**	**9**	**3**	**4**	**0.0**	**0.1**	**0.0**	**44.0**
Least Developed Blocks namely Abohar, Fazilka and Khuian Sarver								
Zero-border villages (0-2 Km)	7.6	7	2	2	0.2	0.2	0.2	37.9
Near-border villages (2-6km)	14.4	10	1	15	0.0	0.2	0.0	45.7
Other-border villages (6-16km)	2.4	6	2	2	0.1	0.1	0.0	29.3
Border villages (0-16km)	**7.6**	**8**	**2**	**6**	**0.1**	**0.2**	**0.0**	**36.8**
Non-border villages	*0.2*	*0*	*1*	*1*	*0.0*	*0.0*	*0.0*	*9.1*
Overall	**4.0**	**4**	**2**	**4**	**0.1**	**0.1**	**0.0**	**23.4**
Medium Developed Blocks namely Jalalabad and Guru Har Sahai								
Zero-border villages (0-2 Km)	13.8	17	3	5	0.0	0.0	0.0	50.7
Near-border villages (2-6km)	16.1	9	2	2	0.0	0.2	0.4	48.5
Other-border villages (6-16km)	8.0	9	4	2	0.0	0.3	0.0	56.8
Border villages (0-16km)	**9.1**	**9**	**4**	**3**	**0.0**	**0.3**	**0.1**	**54.0**
Non-border villages	*6.2*	*8*	*3*	*3*	*0.0*	*0.0*	*0.1*	*37.7*
Overall	**8.6**	**9**	**4**	**3**	**0.0**	**0.2**	**0.1**	**51.0**
Developed Blocks namely Mumdot, Ferozepur, Zira, Makhu and Ghall Khurd								
Zero-border villages (0-2 Km)	13.7	19	2	4	0.0	0.0	0.0	47.3
Near-border villages (2-6km)	22.7	16	6	8	0.0	0.1	0.0	84.1
Other-border villages (6-16km)	20.5	11	3	5	0.0	0.1	0.0	56.2
Border villages (0-16km)	**18.7**	**14**	**3**	**5**	**0.0**	**0.1**	**0.0**	**57.1**
Non-border villages	*19.0*	*11*	*3*	*5*	*0.0*	*0.2*	*0.0*	*54.6*
Overall	**18.8**	**14**	**3**	**5**	**0.0**	**0.1**	**0.0**	**56.8**

Note: The weight used for evolving Tubewell* equivalent equipment are Tubewell -1, Tubewell-extension -0.75, Diesel Engine -0.6, Threshers -0.6, Tractor -8, Reapers -3, Harvester combine -24, and Tractor driven Hervester Combine -16.

Source: Derived from village–wise information supplied by the office of Deputy Economic and Statistical Advisor, Ferozepur.

Appendix B

Table B.1: Block-wise and occupation-wise self-employment preference behaviour of rural unemployed youth (18-35 years) and households of the Ferozepur, Punjab, April-June 1998

Salient Features	Dharamkot	Zira	Ferozepur	Ghal Khurd	Guru Har Sahai	Fazilka	Jalalabad	Abohar	huhian arwar	Makhu	Mamdot	Total
Unemployed Persons (18-35 years) Desirous of Seeking Self-Employment in Rural Ferozepur												
Total	8006	7653	6960	9949	5400	16690	11110	12088	10387	6186	6789	101,218
	7.9	7.6	6.9	9.8	5.3	16.5	11.0	11.9	10.3	6.1	6.7	100.0
Matric & above	4259	3551	2205	5416	3300	4979	3810	5413	4261	2510	2291	41,995
	10.1	8.4	5.3	12.9	7.9	11.9	9.1	12.9	10.1	6.0	5.4	100.0
% of matric & above	**53**	**46**	**32**	**54**	**61**	**30**	**34**	**45**	**41**	**41**	**34**	**42**
Occupation Preference in Rural Ferozepur (Number of Households)												
Agro-based	627	877	635	1264	310	1406	577	1082	739	601	647	8765
Animal husbandry	1635	2086	1885	1691	877	1884	831	2026	922	1175	1712	16,724
Manufacturing	89	84	130	137	306	298	244	218	237	161	120	2024
Artisan	164	307	80	356	307	448	282	338	367	64	150	2863
Repair services	266	79	127	334	334	407	417	251	312	52	80	2659
Trade	137	79	96	275	91	167	136	339	242	85	89	1736
Transport	164	78	102	320	115	207	145	165	64	123	111	1594
Dhaba, tea stall, etc.	208	77	67	245	74	197	245	339	138	50	48	1688
Others	505	1066	940	1325	1749	3156	3459	3422	3490	728	1042	20,882
Total	3795	4733	4062	5947	4163	8170	6336	8180	6511	3039	3999	58,935
	6.4	8.0	6.9	10.1	7.1	13.8	10.8	13.9	11.0	5.2	6.8	100.0
Unemployed Persons per Household Desirous of Self-Employment												
	2.1	1.6	1.7	1.7	1.3	2.0	1.8	1.5	1.6	2.0	1.7	1.7
Occupation Preference in Rural Ferozepur (Percentage share of Households)												
Agro-based	16.5	18.5	15.6	21.3	7.4	17.2	9.1	13.2	11.4	19.8	16.2	14.9
Animal husbandry	43.1	44.1	46.4	28.4	21.0	23.1	13.1	24.8	14.2	38.7	42.8	28.4
Manufacturing	2.4	1.8	3.2	2.3	7.4	3.6	3.8	2.7	3.6	5.3	3.0	3.4
Artisan	4.3	6.5	2.0	6.0	7.4	5.5	4.4	4.1	5.6	2.1	3.8	4.9
Repair services	7.0	1.7	3.1	5.6	8.0	5.0	6.6	3.1	4.8	1.7	2.0	4.5
Trade	3.6	1.7	2.4	4.6	2.2	2.1	2.2	4.1	3.7	2.8	2.2	2.9
Transport	4.3	1.6	2.5	5.4	2.8	2.5	2.3	2.0	1.0	4.1	2.8	2.7
Dhaba, tea stall, etc.	5.5	1.6	1.7	4.1	1.8	2.4	3.9	4.1	2.1	1.6	1.2	2.9
Others	13.3	22.5	23.1	22.3	42.0	38.6	54.6	41.9	53.6	23.9	26.0	35.4
Total	100	100	100	100	100	100	100	100	100	100	100	100

Source: Economic Adviser, *Report on Unemployed Persons (Age Group 18-35 Years) Desirous of Seeking Self-Employment in Punjab State* prepared, from Fourth Economic Census conducted during April-June, 1998, by **Economic Census Section, Economic and Statistical Organisation, Punjab.** Derived from Annexure –III.

Table B.2: Block-wise and occupation-wise self-employment preference behaviour of urban unemployed youth (18-35 years) and households of the Firozpur, Punjab, April-June 1998.

Salient Features	Abohar	Dharam Kot	Fazilka	erozepur ity	Ferozepur Cant	Guru Har Sahai	Jalalabad	Talwandi Bhai	Zira	Total
Unemployed Persons (18-35 years) Desirous of Seeking Self-Employment in Urban Ferozepur										
Total	11674	766	6337	5721	2654	457	1763	1219	1710	32,301
	36.1	2.4	19.6	17.7	8.2	1.4	5.5	3.8	5.3	100.0
Matric & above	9279	279	4775	4326	1908	374	1288	608	1341	24,178
	38.4	1.2	19.8	17.9	7.9	1.5	5.3	2.5	5.5	100.0
% of matric & above	79.5	36.4	75.4	75.6	71.9	81.8	73.1	49.9	78.4	74.8
Occupation Preference in Urban Ferozepur (Number of Households)										
Agro-based	145	100	79	29	102	8	134	35	314	946
Animal Husbandry	198	80	94	122	87	5	103	26	100	815
Manufacturing	234	59	200	31	85	1	25	27	123	785
Artisan	737	16	131	65	100	-	35	64	44	1,192
Repair services	218	30	149	156	208	4	55	20	45	885
Trade	757	22	480	240	102	9	34	23	126	1793
Transport	179	8	73	88	11	18	24	4	23	428
Dhaba, tea stall etc	294	4	140	129	121	16	52	13	62	831
Others	3,627	64	1993	2,593	672	249	654	486	162	10,500
Total	**6,389**	**383**	**3339**	**3,453**	**1488**	**310**	**1,116**	**698**	**999**	**18,175**
	35.2	2.1	18.4	19.0	8.2	1.7	6.1	3.8	5.5	100.0
Unemployed Persons per Household Desirous of Self-Employment										
	1.8	2.0	1.9	1.7	1.8	1.5	1.6	1.7	1.7	1.8
Occupation Preference in Urban Ferozepur (Percentage Share of Households)										
Agro-based	2.3	26.1	2.4	0.8	6.8	2.6	12.0	5.0	31.4	5.2
Animal husbandry	3.1	20.9	2.8	3.5	5.8	1.6	9.2	3.7	10.0	4.5
Manufacturing	3.7	15.4	6.0	0.9	5.7	0.3	2.2	3.9	12.3	4.3
Artisan	11.5	4.2	3.9	1.9	6.7	0.0	3.1	9.2	4.4	6.6
Repair services	3.4	7.8	4.5	4.5	14.0	1.3	4.9	2.9	4.5	4.9
Trade	11.8	5.8	14.4	7.0	6.9	2.9	3.1	3.3	12.7	9.9
Transport	2.8	2.1	2.2	2.6	0.7	5.8	2.2	0.6	2.3	2.3
Dhaba, tea stall, etc.	4.6	1.0	4.2	3.7	8.1	5.2	4.7	1.8	6.2	4.6
Others	56.8	16.7	59.7	75.1	45.2	80.3	58.6	69.6	16.2	57.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Economic Advisor, *Report on Unemployed Persons (Age Group 18-35 Years) Desirous of Seeking Self-Employment in Punjab State* prepared, from Fourth Economic Census conducted during April-June, 1998, by **Economic Census Section, Economic and Statistical Organisation, Punjab.** Derived from Annexure –IV.

Appendix C

Department of Economics, Punjabi University, Patiala
*(Questionnaire relating to **Planning Commission Sponsored Project**)*
Extent of Unemployment in the Border Districts of Punjab

District	Ferozepur	Block		Village	
Investigator's name		Interview date		Household Head	
Type of family (Tick)	Nuclear/ Joint	Household's Main Occupation		Household's Secondary Occupation	
Family Members		Male Members		Female members	

Adults (18-60 years)	Total		Elders (above 60 Years)	Total		Children (Below 18 years)	Total	
	Male			Male			Student	

Emigration by family members, if yes	Place (code)		**Reason for Migration** (code)		
	Number of members		Remittances sent last year (Rs.)		

Religion (Tick)	Hindu/ Sikh/ Christian/ others	Caste	Name		Yellow card Holder	Yes/ No
			S. C./ O.B.C./ Others			

If yes, since how many years?		Social Participation (Code)		Political Participation (Code)	
Source of Drinking Water		House Ownership	Owned/Rented	House Type (tick)	Pucca/ Katcha/ Semi-Pucca/ Others (specify)

House facilities (tick)		Living/ Drawing Room	Yes/ No	Bed Room	Yes/ No
Kitchen	Yes/ No	Bathroom	Yes/ No	Toilet	Yes/no	Verandah	Yes/ No
Cattle shed (separate)	Yes/ No	Courtyard	Yes/ No	Garage	Yes/no	Servant Room	Yes/ No

Owned land (acres)		Operated land (acres)		Percentage Irrigated Land	

Last year Cropped area in acres		Wheat	Paddy	Cotton	Fodder	Vegetables	Others (specify)
	Sown						
	Irrigated						
	Combine harvested						
	Output net value						

Ownership of agricultural assets (Tick, if owned): Tractor, Harvester combine, Reaper, Tube-well, Diesel pump, other power driven implements (specify)

Ownership of Other assets (Tick, if owned): Jeep/car, scooter/motor cycle, Bicycle, Fans, Desert cooler, Television (b/w, C), Fridge, Generator, Telephone, others (specify)

Household **annual income** (in Rs.) from	Food crops		Cotton/ sugarcane		Vegetables		Dairy	
	Allied activities		Non-farming		Remittances/ pension		Total	

Debt value Rs.	Total		For production		For consumption	
	Interest rate p.m.		Interest rate p.m.		Interest rate p.m.	

Block B: Time disposition during the week ended on ---

Salient particulars of household member	Name of the household member				

		code	hours	code	hours	code	hours	code	hours	code	hours
Sex (Male = 1, Female =2)											
Age (Years)											
Marital status (code)											
Educational level (code)											
Seeking work (code)											
Status of work(code)											
Operations status (code)											
Current day activity particulars (Hours per day)	1st day										
	2nd day										
	3rd day										
	4th day										
	5th day										
	6th day										
	7th day										
Daily routine of work hours during last week	5 am –8 am										
	8 am- 12 am										
	12 am-3 pm										
	3 pm-6 pm										
	After 6 pm										
During last 30 days, working	Days										
	Hours per day										
During last 90 days, working	Days										
	Hours per day										
Work payment received for the month	Cash										
	Kind										
	Total										
Frequency of payment											
If unemployed on all 7 days, particulars of last employment	Duration (code)										
	Status of work (code)										
	Operations status (code)										
	Reasons for break-in of employment (code)										
If employee is an in-migrant specify	When migrated (Years)										
	Place of migration(code)										
	Last year Remittances (Rs.)										
	Reasons for migration (code)										

Block C: Usual principal activity-wise employment behaviour

Usual Principal Activity - Crop Farming or specify (codes)		Target days	Name of the household member							
			Days/ hours actually worked							
			Days	Hours per day	Days	Hours per day	Days	Hours per day	Days	Hours per day
Sowing/planting	Rabi									
	Kharif									
Harvesting/ **picking**	Rabi									
	Kharif									
Crop raising	Rabi									
	Kharif									
Others (specify)										
Sub -totals										
Usual principal *Non-farm* activity (Season-wise) (codes)	**July – September**									
	October-December									
	January – March									
	April - June									
Sub -totals										
Usual subsidiary activity (Season-wise) (codes)	**July – September**									
	October-December									
	January – March									
	April - June									
Sub -totals										
Annual income (Rs.)										

Block D: Activity-wise behaviour of Unemployed / Under-employed under Usual Principal Status

If unemployed/ under-employed, what		Name of the household member			
Efforts were made to seek work (code)					
Problems encountered to seek work (code)					
Would you like to continue in your family occupation?		Yes/ No	Yes/ No	Yes/ No	Yes/ No
If yes, specify the ways you would adopt to improve the family income from the occupation?					
If no, which type of work would you like to do? (tick)		Self/ wage employment	Self/ wage employment	Self/ wage employment	Self/ wage employment
If you prefer self-employment, what type of activities would you undertake?					
Does there exist potential to set up such an activity at or around the village/ locality?		**Yes/ No**	**Yes/ No**	**Yes/ No**	**Yes/ No**
Who persuaded you to go for this activity? (own effort, relative/friends, institutional support, others (specify))					
Are you aware of any scheme that will help you to set up the venture? (specify)					
Estimated cost of operating the activity	**Premises:** Rent of land				
	Machinery/equipment				
	Manpower				
	Others				
	Total (Rs.)				
What type of help/assistance you require? (specify)					
From which source you visualise this help? (specify)					
If salaried/ wage work is preferred, specify	*Minimum acceptable wages per month*				
	Type of employment				
	Location (code)				
	Other conditions				
Are you willing to do job in private sector?					
Are you aware of any programme of employment generation launched by state? Name these.					
Did you join it?	If no, why you did not join it?				
	If yes, are you satisfied?				
	If not satisfied, what improvements you suggest?				
Any addiction habit? (specify)					

Details of Codes

Political Activism (codes):

- Hold/held a political Office (M.P./M.L.A./Sarpanch/Panch/ District/ Block functionaries of political parties, etc.) **1**,
- Organises visits of Political leaders (M.P./M.L.A., etc.) -**2**; Active worker (registered member) of a political group -**3**;
- Hold political ambitions (active participation in rallies, engages in transfer trade, accompanies others to influence police/revenue authorities, etc.) –**4**,
- Inactive –**5**, Any other (specify) –**6**.

Social Activism/Pro-social behaviour/community participation (codes):

- Head of social, religious, sports, and/or cultural organisations –**1**,
- Collection of donations for school buildings, Gurdwara, roads, common land leveling (Toaba filling), etc and their management -**2**;
- Active participation in social (death, marriage, etc.) & religious functions -**3**; Organisation of camps for medical support (eye camp, etc.) –**4**;
- Organisation of meets of youth club, sports club, etc. –**5**; Organisation of cultural events (inviting singers, etc.) or religious functions (inviting saints, etc.) –**6**;
- Helping the needy –**7**, Socially inactive –**8**.

Marital Status (codes): Unmarried –**1**, Married –**2**, Widowed –**3**, Divorced/Separated –**4**.

Educational level (codes):

- Illiterate –**1**,
- Literate but below primary –**2**, Primary –**3**, Middle –**4**, Matric –**5**, +2 level –**6**, Graduate and above –**7**,
- Technical **Diploma/Certificate** in Agriculture/ Engineering/ Technology –**8**, Technical **Degree** in Agriculture/Engineering/Technology –**9**.

Seeking work (codes):

- Not seeking work –**1**,
- *Seeking Work*: for less than one month –**2**, 1 to 3 months –**3**, 3 to 6 months –**4**,
- Registered with employment exchange –**5**, Registered with private placement agencies –**6**, Requested influential persons -**7**, Applied, appeared in test, or interview –**8**, Stayed away from home for more than 60 days in search of employment –**9**, Attendance at labour market, say Chowk – **10**, Others (specify) -**11**.

Status of work (codes):

- Worked in household enterprise (self-employed): Own account worker –**1**, Attend domestic duties and own account worker –**2,** Employer –**3**, Employer-cum-worker –**4**, Unpaid family worker –**5**, Regular salaried/wage employee –**6**, Salaried employee-cum-own account worker -**7**; Worked as casual wage labour in: Public works –**8**, Other type of works –**9**, Attend domestic duties and did casual work -**10**;
- **Did not work but was seeking work and/or available for work** –**11**, *Did not seek work but was available for work* – **12**,
- Attended educational institution –**13**,

- Attended domestic duties only –**14**, Supplemented domestic duties through free collection of goods e.g. vegetables, firewood, cattle feed etc. –**15**,
- Retirees, pensioners, remittance recipients, etc. - **16**, Not able to work due to disability –**17**, others –**18**. Did not work due to sickness in household enterprise –**19**,
- In regular salaried employment – **20**, As casual worker –**21**, Unpaid family worker-cum-supervisor (e.g. old person partly supervising own account work) –**22**, Casual wage labour-cum-own account worker –**23**, Trainee i.e. on the job trainee –**24**

Operations status (codes):

- Manual work in cultivation: Ploughing –**1**, Sowing –**2**, Transplanting -**3**, Harvesting –**4**, Other cultivation activities –**5;**
- Manual work in allied agricultural activities: Social forestry –**6**, Horticultural plantation –**7**, Animal husbandry – **8**, Poultry –**9,** Fisheries –**10**,
- Lending of agricultural machinery and implements (tractors, thrashers, sheller and oil engines) activities –**11**,
- Mixed set of agricultural related activities (including supervision) during normal period -**12**
- Manual work in non-farm (artisan, trade/business, etc.) activities –**13**;
- Domestic chores -**14**
- Non-manual (supervisory/white-collared) work in: cultivation –**15**,
- non-cultivation (trade/business, defense/civil services, money lending) activities, –**16**, Others (specify) –**17**

Duration of last employment (codes):

Only one week –**1**, 1 to 2 weeks –**2**, 2 to 4 weeks –**3**, 1 to 2 months –**4**, 2 to 3 months –**5**, 3 to 6 months –**6**, 6 to 12 months –**7**, 12 months & above - **8**.

Reasons for break in employment (codes):

- Loss of earlier job –**1**, Quit earlier job –**2**, Lay-off without pay –**3**, Unit has closed down –**4**,
- Loss of work in enterprise (for self-employed persons) –**5**,
- Lack of work in the area (for casual labour) –**6**.

Reasons for quitting job (codes):

Less remunerative work –**1**, Unpleasant environment –**2**, employer harsh –**3**, Health hazard –**4**, Others (specify) –**5**.

Place of Migration (codes):

Within the district –**1**, Within the state from other districts –**2**, Other states –**3**, Across national boundaries –**4**.

Migration Reasons (codes):

- In search of employment –**1**, In search of better employment –**2**, To take up employment/better employment –**3**, Transfer of service/contract work –**4**,
- Proximity to place of work –**5**, Social and political problem –**6**, Others (specify) –**7**.

Self-employment *financing* recommended through (codes):

Rural Development Agency –**1**, District Industries Centre –**2,** Punjab Scheduled Caste and Backward Classes Welfare Corporation –**3**, Khadi and Village Industry Board –**4**, Any other (specify) -**5**.

Problems encountered in seeking work or getting employment (codes):

Low education level –**1**, Lack of experience –**2,** Lack of influence –**3**, Work available below socially mind-set status (specify)–**4**, Non-availability of work in the local market –**5**, Lack of information –**6**, Lack of financial resources –**7**.

Usual Activity Status (codes):

Farming –**1**, Non-farming –**2**, Crop cultivation –**3**, Dairy –**4**, Poultry –**5**, Bee-keeping –**6**, Horticulture –**7**, General Merchant Shop –**8,** Repair shop –**9,** Agricultural inputs shop –**10**, Commission agent –**11**, Agro-processing unit –**12,** Agricultural implements manufacturing unit – **13**, Wage worker –**14,** Salaried person –**15**, Others (specify) –**16.**

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