

# DEMOGRAPHIC FEATURES OF COAL FIELD AREA OF DISTRICT THARPARKAR

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## **Abstract**

*After the discovery of country's leading coal reserves 175,506 million tones in Thar Desert of district Tharparkar. Tharparkar has been highlighted at provincial and federal level because of its remarkable economic value of coal. Pakistan is facing worst energy shortfall and these coal deposits are regarded as the only solution of energy crisis in Pakistan. However, Pakistan lost 2.5 percent of growth rate of economy and also loses 400 thousand new jobs every year. The objective of the research paper is to highlight the coal related development activities and its impacts on demographic changes in district Tharparkar. Research found that the demographic changes significantly noted after discovery of huge coal reserves of Tharparkar District such as migration from rural desert areas towards urban desert areas are improved. Consequently, the population of towns are rapidly increased significantly Islam Kot town. Likewise, facilities are improved in the shape of new roads, electricity, fresh water supply, education, health and urban town planning.*

**Keywords:** *Demography, Coal, Rain Fed Economy, Agriculture, Income Generating Opportunities, Desert, Enemy Land, Discovery, Socioeconomic Conditions.*

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## Introduction

The enormous coal reserves were discovered in 1988 at Village\*\* Khario Ghulam Shah near Islam Kot of District Tharparkar. The estimated coal reserves are 175.5 billion tons which uplifts Pakistan's coal reserves at 186.65 billion tons and ranked 6<sup>th</sup> largest coal reserves country among top 12 coal reserves countries in the World (Memon, 2003). The economic value of Thar coal reserves are about 25 Trillion United State Dollar (USD) which can generate electricity of Pakistan for next 100 years and also save 4Billion USD in oil import bill. Only 2 percent of Thar coal reserves will provide 20,000 megawatts for next 40 years. Initially investment is 420 Billion PKR and earn 1,220 Billion PKR from tax only (Murtaza, 2008). Due to short fall of energy, Pakistan lost its 2.5 percent of growth rate of economy (ESP, 2012-13) and Pakistan deprived from 400 thousands new jobs every year (Samar, 2011).

The study focuses upon demographic features of communities of coal field area in Tharparkar District Substantially, population of the community, educational standards, facilities, occupational trend and etc. The data reveals in the context of development and economic growth of the study area significantly lacking behind. In the context of the coal reserves and its exploration for converting into energy resources required substantial impact at first stage towards development and economic growth of the people living in the vicinity. At the later part the likely benefits of coal reserves can be replicated all over the province and country.

This paper is divided into three major parts. Part one provides recent developments in the coal field in the context of world that in study area. Part two analyses demographic features and present an assessment of social-economic indicators. Finally, part three presents conclusions and recommendations along with appropriate citations.

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\*\* The smallest unit of settlement which can be equated with a hamlet or village

## AN OVERVIEW OF THE STUDY AREA

The entire area of Thar Desert in more than 2.34 million square kilometers and it is a 6<sup>th</sup> largest desert in Asia and the largest desert area of subcontinent<sup>++</sup> which is parted into two countries India and Pakistan. The natural boundary is running along with the borders of India and Pakistan. The major part of Thar Desert lies in the Indian States of Rajasthan, Haryana, Punjab and Gujarat. In Pakistan, the desert covers eastern part of Sindh Province and the southeastern part of Punjab Province of Pakistan (Sinha et al, 1997). However, the major portion of the desert is counted in Sindh province spreading in the districts of Tharparkar, Umerkot, Sanghar, Khairpur Mirs, Sukkar and Ghotki respectively. Whereas, Tharparkar District retains 99 percent of the Thar Desert. Tharparkar has a rain feed agriculture economy and rainfall pattern is not constant, ranges from 50 mm to 300 mm mostly during the monsoon season (Memon, 2003). The district lies in the south-eastern part of Sindh province of Pakistan. The present boundary has come into existence in 2<sup>nd</sup> December, 1990 after discovery of coal deposits. It was bifurcated into 2 Districts i.e. Mirpurkhas District & Tharparkar District. The head quarter of Tharparkar was established at Mithi which is situated at 24-26 North latitude and 69-51 East Longitude. The boundaries of the District are as under: in the north: Mirpurkhas & Umerkot Districts, in the East: Barmer & Jessalmer District of India, in the west: District Badin and the south: Runn of Kuchh of India<sup>++</sup>. This district is specially name according to geographical conditions, i.e. “Thar & Parkar”. “Thar” means desert while “Parkar” is rocky & hilly park.

The leading coal reserves of Pakistan are reported in Tharparkar district is 175,506 million tones, spread in 9100 km<sup>2</sup>. Due to these deposits, Sindh claims 99.7 percent coal reserves are existed in Sindh province. However, coal found in three other district of Sindh such as

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<sup>++</sup> Includes the countries of India, Pakistan, Bangladesh, Nepal, Bhutan, Maldives and Sri Lanka

<sup>##</sup> District Tharparkar Official website download on 20<sup>th</sup> December, 2011 ([www.tharparkar.gov.pk](http://www.tharparkar.gov.pk))

in Thatta 7,773 million tones, Badin 1358 million tons and Jamshoro 1,328 million tons respectively (TCEB, 2013).

**Table 3.1: Coal Deposits in Sindh Province of Pakistan**

District	Coal Area (Sq. km)	Million Tons	Percent
1. Tharparkar	9,100	175,506	94.375
2. Thatta	1,822	7,773	4.179
3. Jamshoro	1,309	1,328	0.714
4. Badin	1,110	1,358	0.730
Total		185,965	100

Source: (1) Thar Coal Energy Board, Government of Sindh ([www.sindhcoal.gos.pk](http://www.sindhcoal.gos.pk))  
(2) Geological Survey of Pakistan ([www.gsp.gov.pk](http://www.gsp.gov.pk))

**RESULTS AND DISCUSSION**

**Demographic Features of Study Area**

The research is based on secondary and primary data associated with demographic features and discovery of coal resources in Tharparkar District. The secondary data is collected from government and non-government organizations and the primary data is collected through multi-stage sampling, cluster sampling and random sampling at the household level of the fifteen villages of Tharparkar District. It has a highly diverse population that 59 percent are Muslims and 41 percent are Non-Muslims live peacefully without any inter-religion or sectarian hostility in 2400 villages and 6 Towns. The main Muslim castes are Memon, Nohri. Rahuma, Junejo, Sameja, Halepota, Khaosa, Syed, Bajeer. Samma, Khaskhali, Dal, Mehar, Panhwar, Chandio, Nareja, Faqeer, Sand, Channa and Khokar. The majority of Non-Muslims consists on the Hindu Castes include Thakurs, Mahraj, Birhman, Mahshwari, Lohana, Menghwar, Kolhi, Bheel and Bajeer (TCEB, 2013). The increase in the total population of Tharparkar

between 1981 and 1998 has been worked out as 4.97 percent per year growth rate of Pakistan national average. Thus the population of Thar has increased from 5, 46,000 to 9, 14,291. The projected population of the district is more than 1.5 million with 3.12 growth rate in 2013.

**Table 4.1: Population of District Tharparkar**

(In Thousand)

Year	1951	1961	1972	1981	1998	2013
Population	249	290	359	540	914	1500
Growth	-	1.55	1.85	4.97	3.13	3.13

Source: District Census Report of Tharparkar 1998.

The human population of the study area was distributed according to their habitation and the population in rural and urban. Further disseminated according to their sex ratio. The Table (4.2) indicated that Sindh, 100 female population were observed against 112.2 males, while in the study area 100 females for 120.6 males. District Tharparkar the least urbanized only 4.36 people live in Mithi, Islamkot, Diplo, Chelhar, Chachro and Nagarparkar.

**Table 4.2: Urban Rural Population by Sex Ratio in Sindh and Tharparkar**

(In Thousand)

Province /District	Population				Rural				Urban			
	Both sexes	Male	Female	Sex Ratio	Both sexes	Male	Female	Sex Ratio	Both Sexes	Male	Female	Sex Ratio
Sindh	30439	16107	14342	112.2	1560	819	740	110.6	1484	790	693	114
Tharparkar	914	500	414	120.6	874	479	395	121	40	21	19	111

Source:- Population Census Report- 1998

The census report of Pakistan 1998 identified that the population aged under 15 was 50.28 percent of the total population of the District

Tharparkar while above 15 years was 49.72 percent. The percentage of infants less than one year was only 2.65 percent and children less than 5 years was 18.21 percent. The above 15 years to 64 years 45.98 percent population in Pakistan which has been known as working group and above 65 years old dependent people were 3.73 percent of the total population.

**Table 4.3: Age Groups of Rural and Urban Areas**  
(In Percent)

Age (Years)	Population			Rural			Urban		
	Both	Male	Female	Both	Male	Female	Both	Male	Female
0- 1	2.65	2.94	2.29	2.66	2.96	2.30	2.25	2.46	2.02
0 -5	18.21	19.29	16.91	18.37	19.48	17.2	14.89	15.12	14.63
0 -10	36.41	38.04	34.44	36.71	38.41	34.66	29.64	29.49	29.81
0 – 15	50.28	52.33	47.82	50.61	52.73	48.05	43.04	43.02	43.06
18 - >	44.73	42.54	47.37	44.45	42.18	47.21	50.80	50.87	50.72
21 - >	38.34	36.66	40.37	38.09	36.32	40.23	43.88	44.33	43.38
15 - 64	45.98	44.19	48.15	45.61	43.74	47.88	54.05	54.32	53.75
65 - >	3.73	3.49	4.03	3.77	3.52	4.07	2.91	2.66	3.19

Source: Pakistan Census Report 1998 by Population Census Organization, Islamabad

Those individuals who were crossed 15 years were titled in married or never married in accordance of census 1998. Married couples have been 72.36 percent, never married 22.53 percent, widowed and negligible was 5.07 and only 0.04 divorced. The never married males were 28.45 percent that has been higher than females. The age of male and female were different at average level 22.46 years of age of males and 19.34 years of age of females. The largest portion of minorities is living in urban areas. On the other hand, the Muslim population of Sindh was 91.31 percent and the rest of other community was 8.69 lived is Sindh province. Interestingly 93 percent of Non-Muslims communities of Pakistan are living in Sindh. These minorities belong

to Hindu upper caste, Hindu Scheduled caste, Christians, Qadianis, Parsi and others. Surprisingly, the religion figures of the district Tharparkar are dissimilar from other areas of the country and even other districts of Sindh province where Non-Muslims were 41 percent and Muslims were 59 percent. However, 57 percent urban population of the Non-Muslims and 43 percent were Muslims lived in the towns of the district such as Mithi, Islamkot, Diplo, Chelhar, Chachro and Nagarparkar. The population of the Non-Muslims in rural areas was 38 Percent and Muslims are 62 percent are lived in the rural areas of the district.

**Table 4.4: Population by Religion in Rural and Urban areas of Sindh and Study Area**

(In Percent)

Religion	Sindh			Tharparkar		
	Sindh	Rural	Urban	Tharpakar	Rural	Jrbn
Muslims	91.31	88.12	94.67	59.42	62	43
Non-Muslims	8.69	11.88	5.33	40.58	38	57

Source: Pakistan Census Report 1998 by Population Census Organisation, Islamabad.

**Socioeconomic Conditions of the Study Area**

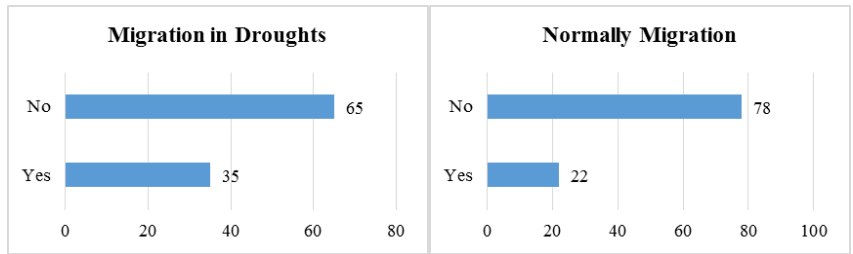
The socioeconomic condition of the Tharparkar district depends on monsoon rain because 99% *Barani Land* §§ which is cultivated on organic method (Memon, 2003). The rain water accumulated in a natural depression between sand dunes which is known in local term *Tarai*\*\*\*. This water fulfils the need of people and as well as livestock of the desert area till water dried. Meanwhile, people collects pastoral and wild vegetables after monsoon rain that is preserved till next

§§ Rain feed land

\*\*\* Water accumulated in basins which were looked like a pond or a small lake

season come. They use *wild vegetable*<sup>+++</sup> themselves and gifted their friends and relatives. A fodder tree Kandi<sup>+++</sup> has importance as its leaves are useful for animals’ feeding and its peas are eaten as vegetable even preserved. Moreover, in the absence of seasonal rains till 15<sup>th</sup> August, the Government of Sindh declared occurrence of drought in Thar Desert. Due to inception of drought, the significant number of people migrate to adjacent barrage areas of District Tharparkar, in the search of food and fodder (Memon, 2003). The droughts are frequently occurred every three to four years in Tharparkar District (Samo, 1999).

**Figure 4.1: Migration Trend in Tharparkar District (In percent)**  
n=290



Source: Authors’ Study Survey 2012

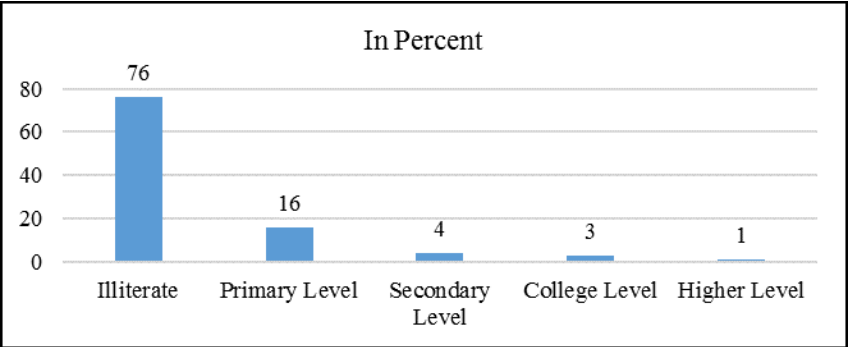
Figure 4.1 states that the people of Tharparkar migrates in the time of droughts. Data reveals that in case of drought disaster in the study area 35 percent of the total population migrated with their families and livestock to adjacent areas of District Tharparkar. However, every year 22 percent marginalized communities of the total population seasonally migrated (in the time of the agricultural off season in Tharparkar) to barrage areas of Sindh for laboring in the harvest of wheat, sugarcane and picking cotton.

<sup>+++</sup> The plants that are harvested from a growing site that is not conventionally maintained. The land that wild plants are grown on may not be cultivated by growers and may not be under other agricultural management.  
<sup>+++</sup> Kandi is a name of tree (Prosopes Ginerasia)



**Figure 4.2: Literacy Rate of the Study Area**

n=290

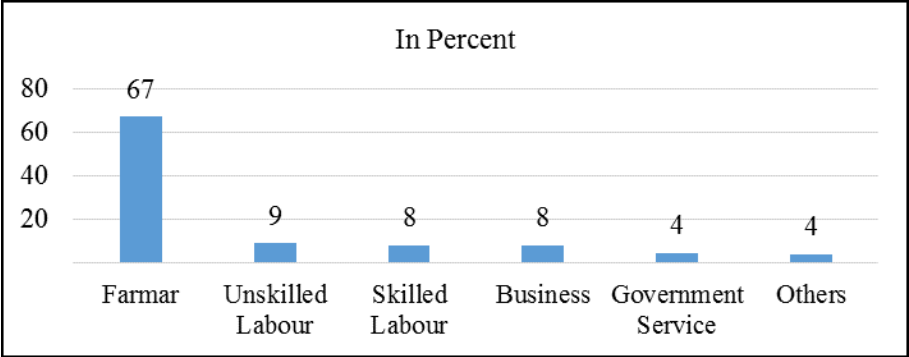


Source: Authors’ Study Survey 2012

Figure (4.2) States that the majority of the informants (76 percent) is illiterate in the study area. Whereas, only 24 percent respondents are literate. The majority of literate respondents are between class one to class five that is indicated as primary level in Pakistan. The four percent literate respondents are reported at secondary level which is between class five to class ten. However, only three percent attended college level and only one percent people attained the higher education in different universities or institutions i.e. graduate and post graduate level in the study area.

**Figure 4.3: Occupational Trends in the Study Area**

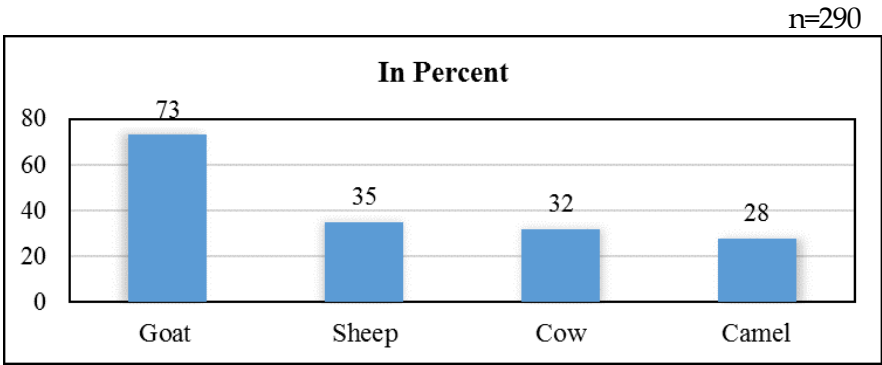
n=290



Source: Authors’ Study Survey 2012

Figure (4.3) reports that 67% of total respondents are farmers included livestock breeders in the desert area where only one crop is cultivated in a year. Agriculture is completely depend upon the substantial amount of rain. Farmers are involved in agricultural activities with their families while maintaining land for agriculture to harvesting of the crops. 9 percent unskilled labour and 8 percent unskilled labors are working on daily basis in the local areas or working in different cities of Sindh province at hotels, garments factories and at houses as house drivers, servants and cooks. 8 percent respondents run their own business such as livestock trading, grain trading, handicrafts, carpet units and grocery shops. 4 percent has government jobs significantly in education, local government, health and etc. 4 percent are others<sup>sss</sup> which are counted as jobless, widows and women headed households. Agricultural crops in the desert area are sowing after monsoon rain. The main crops are Bajra (Parl millet), Gowar (Cluster bean) Korar, Mung, and Tir. The average production per acre Bajra, Gowar, Korar and Mung 8, 7, 4 and 4 mounds respectively.

Figure 4.3: Livestock Ownership Trends in Study Area



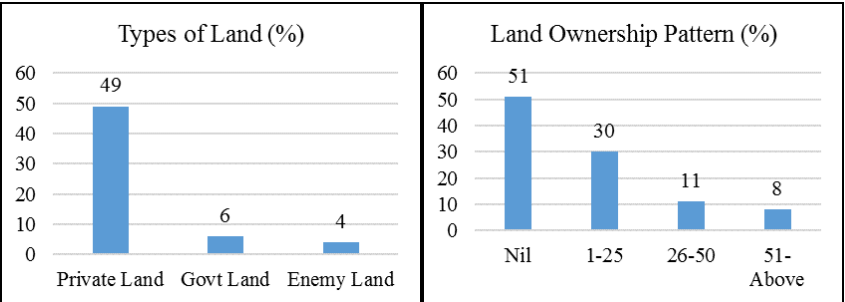
Source: Authors’ Study Survey 2012

The Rangeland forests in the desert area of the district represents the main sour of fodder for livestock and these rangeland areas are known as grazing and pasture lands. Livestock is the major source of livelihood of the people of study area. The above figure reveals that

<sup>sss</sup> Jobless or depends on social support

the respondents’ livestock ownership trends such as 73 percent goats, 35 percent sheep, 32 percent cow and 28 percent are camels. Thar is a densely populated in livestock that of other districts of Sindh province. The highest number of cattle 7,52,265, goats 22,17,876, sheep 11,85,122, camels 1,35,356, Asses 2,46,657 and Horses 8,519, are inhabited and second largest in mules in all districts of Sindh (Livestock Census, 2006).

**Figure 4.4: Types of Land and Ownership Pattern in the Study Area**



Source: Authors’ Study Survey 2012

Figure (4.4) depicts that 49 percent Respondents have their personal agricultural land, 6 percent respondents utilize government land for agricultural purpose whereas 4 percent respondents occupied enemy property (The land left by minorities (Hindus) in 1965 and 1971 war) and 51 percent people are landless in the study area. However, study reveals that 100% targeted respondent have their personal houses. 93% Respondents have Kacha Chowra\*\*\*\* Houses which protect them from scorching heat in summer, 5% Semi Pakka Chowra++++ Houses and only 2% respondent has Pakka#### or a room structure house.

\*\*\*\* It is built on mud plastered platform and conical roof are covered with scrub and grass  
++++ It is built on cemented plastered platform and conical roof are covered with scrub and grass  
#### It is built on cemented formal room structure house

## CONCLUSION

The low literacy rate and low standard of education, lack of health facilities, shaky economy and poverty is prevailed. The principal occupational is agriculture and livestock because majority of population 96 percent are been in rural areas and only 4 percent lived in towns. Least densely populated district in Sindh only 47 person per km<sup>2</sup>. however the most densely populated in livestock in Sindh significantly in goat, sheep, cattle, camel, horse and ass. On the other hand, Tharparkar endowed huge coal reserves. The economic value of coal reserves are more than oil value of Saudi Arabia and Iran. In addition, it is opted that this is an only solution of energy crisis of Pakistan because Just two percent of these coal deposits can generated electricity for next 40 years without any load shedding. Both provincial and federal government are started different development coal related projects in Tharparkar such as construction of road network, Thar airport, railway line, Thar Lodge, fresh water supply line, electricity and etc. These development attracted the local and international investors. Four project developers are working block I, II, V and VI. These development activities motivated the local community to migrate from rural areas to urban towns of district significantly in Islam Kot town. Resultantly town are expanding day by day with a business activities.

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