

Population of Pakistan: An Analysis of NSER 2010-11



An Overview



Government of Pakistan

عزت نفس - بااختیار - BISP - مقصد حیات

BENAZIR INCOME
SUPPORT PROGRAMME



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Population of Pakistan: An Overview

Preface

Benazir Income Support Programme (BISP) is Pakistan's largest social safety net that provides income support to more than 5 million poor and vulnerable families. The long term objectives of the program include supporting the achievement of Sustainable Development Goals (SDGs) to eradicate extreme and chronic poverty, to empower women and to achieve universal primary education. It is the promise of BISP that the right people receive the amount of benefit at the right time, in a transparent and efficient manner and with minimum error and misuse.

To fulfill its promise, the program must be backed by scientific research. Scientific research not only helps to gauge the impact of program on the beneficiaries, but also assists to improve the program outreach, efficiency and transparency. BISP contracted Pakistan Institute of Development Economics (PIDE) to conduct research on NSER. Using NSER, PIDE has produced series of studies under broad title of "Population of Pakistan: An analysis of NSER 2010-2011" which cover various topics including population structure, education, employment, disability, housing and poverty. It is premised that these studies would assist BISP to develop and implement evidence based targeted policies formulated on the results achieved from this multi-faceted analysis.

At the end, I am very thankful to PIDE research team and appreciate their contribution in these reports. I would like to take this opportunity to express my deepest and most sincere gratitude to UNICEF for their financial support.

1. Background and Objectives

Benazir Income Support Programme (BISP) was launched as a flagship Social Safety Net (SSN) program by the government of Pakistan to provide direct support to poor and vulnerable families by raising their income. Since its inception, BISP has grown rapidly; it is now the largest single cash transfer programme in Pakistan's history and one of the largest in South Asia. Its long term objectives include supporting the achievement of Sustainable Development Goals (SDGs) to eradicate extreme and chronic poverty, to empower of women and to achieve universal primary education.

BISP, in its efforts to identify poor households through a multi-dimensional measure, conducted a national household door-to-door census in 2010-2011, which marked the genesis of National Socio-Economic Registry (NSER). The survey enabled the BISP to identify eligible households through the application of a Proxy Means Test (PMT) that determined welfare status of the household on a scale between 0-100. NSER contains socio-economic data on well over 27 million households (HHs) that constituted more than 150 million populations across the country that cover 85 percent of population. Province wise coverage shows that 14.88 million households were covered in Punjab, 6.6 million in Sindh, 3.6 million in KPK and 1.1 million in Baluchistan. In AJK around 0.58 million, in GB 0.15 million and in FATA 0.40 million were covered. NSER provides not only poverty profile of each household but also provides data on 12 key socio-economic indicators; household size, type of housing and toilet facilities, education, child status, household assets, agricultural landholding, and livestock ownership.

To achieve the results of the program, it is essential to ensure that the right people receive the amount of benefit at the right time, in a transparent and efficient manner and with minimum error and misuse. For this purpose, it is imperative that program must be backed by evidence based research. Evidence based research not only helps to gauge the impact of program on the beneficiaries, but also assists to improve the program outreach, efficiency and transparency.

As a first step, Pakistan Institute of Development Economics (PIDE) was contracted by BISP to conduct studies based on NSER. PIDE has produced a series of research studies titled "Population of Pakistan: An analysis of NSER. Under this series, six studies have been conducted in diverse but inter-linked themes with the aim to draw a socio-demographic and economic profile of the Pakistani population. It is premised that it would assist the government to develop and implement evidence based targeted policies formulated on the results achieved from this multi-faceted analysis. The findings of these studies have been disaggregated at the district level and results have been compared with the existing national data sources including the PSLM 2010 and Census 1998. Based on NSER the current initiative covers six broad themes, which are:

1. Population dynamics
2. Child Education
3. Youth and Employment Participation
4. Disable Population
5. Quantity and Quality of Housing Conditions
6. Poverty Profile

2. Key Findings

2.1. Population Dynamics

Population dynamics has serious and wide ranging implications for any country, ranging from its repercussions for education, labour, health to the general socio-political milieu. Using NSER the study looks into the dynamics of the population in the country, including its distribution, age-sex structure, dependency rates, household size and type, and marital status. All the analyses are done at the national, provincial and district levels.

Using various demographic techniques, including the Whipple's, and Myer's Indices, a look into NSER shows that it is not immune to the age-reporting issues visible in other datasets, exhibiting high level of age heaping for several digits. The mean age of the population comes out to be higher than other surveys and that is probably because of the very small proportion present in the 0-4 year age group. A slightly different pattern of age reporting is found in NSER from what we see in other surveys conducted in the country, reflected in peculiar trends of age-heaping/digit preference, and also the sex-ratios. Whether this could be ascribed to the pre-conditions associated with the BISP cash transfer is debatable and is beyond the scope of this paper. The increase in the mean age found in NSER hints towards a declining fertility rate and an increase in the life expectancy of the populace, conforming to trends found in other surveys as well. Looking at the provincial variations we see that the mean age of the population is highest in Islamabad Capital Territory, Punjab and Azad Jammu and Kashmir (AJK), and youngest in Federally Administered Tribal Areas (FATA).

Lowering of dependency rates from the very foundation of the notion of 'demographic dividend', and NSER data validates this notion. The data shows that as the dependency rate of a province/territory decreases its mean poverty score increases. Punjab, ICT and AJK with their higher mean poverty scores have lower dependency rates, while FATA with its high dependency rate has very low mean poverty score. Likewise, linking the mean poverty score, we find the household size to be negatively associated with poverty. This again conforms to trends found in other surveys conducted in the country. Smaller household size in comparatively affluent households can be attributed to lower fertility and higher proportion of nuclear families prevalent in these economic strata.

Headship of the household, especially with regard to gender, is also considered important for its social and economic implications. Proportions of female headed households in the provinces and regions of the country show a trend from which it is difficult to draw any conclusive inference, but it can probably be linked more to the prevailing economic and political factors rather than the social conditions. Highest existing estimates put female headed households in Pakistan at around 12 per cent while in NSER it ranges from 14 to 28 per cent in different areas of the country. The FATA having the highest proportion of female headed households need further probing as being the most traditional society in the country

it seems a little unlikely even if we keep migration of working age males in consideration. The mean age of the head of the household, however, does not show any vast variations among different regions.

The age at marriage has serious implications for population dynamics as it has repercussions for childbearing/fertility and thus for population growth. NSER is a good source of information to decipher the current trends of nuptiality for the population of Pakistan. NSER shows that marriage remains to be almost universal in Pakistan for both males and females with more than 90 per cent getting married in their lives. Comparing these trends with those found in the 1998 census we see fewer younger males and females being married in NSER at early ages. Delay in getting married for females has consequences for population growth in the country, as it means fewer years at risk of childbearing in countries like Pakistan where fertility equates marital fertility. Worth noting in these trends is a negative relationship between the proportions of females getting married early (15-19 years) and the mean poverty score of their households. Districts with higher poverty scores generally have lower proportions getting married early.

NSER proves useful to understand many factors about which data was lacking at the national level in the absence of census. These especially include the marital status of the population that using NSER hints at delayed marriage among females and an increasing proportion of nuclear families in the country. The first has serious consequences for child bearing and the second for the care of the ever increasing numbers of elderly in the country. In the absence of any formal social security system weakening of the family structure has far reaching repercussions.

2.2. Child Education

NSER provides a unique opportunity to study the magnitude of the out of school children (OOSC), although many efforts were made to calculate the actual size of OOSC using nationwide surveys. Following the 5 Dimension Exclusion model, the study focus only on the primary school-age OOSC. Three types of children fall into the category of OOSC: those who never entered the school; the ones who dropped out; and those who will enter late. Two types of primary school-age children are further considered to be out of school even if they attend either the preprimary school or any other informal program.

Around 12.3 million children of primary school age are out of school in Pakistan, with overall percentage of 58.88 among all primary school-age children. Although the total number of out of school children are almost equal for male and female children, attendance rate of male children is slightly better as compared to their female counterparts—respective percentages of out of school children for male and female children among the primary school-age children are 55.7 and 60.2. Age-wise attendance rates demonstrated a diminishing trend in out of school children with increase in age, this may be an indication of late entry in the school. Female dropout rates are higher for all ages. Strikingly there are very few cases of children who dropped from the primary school during the primary school-age. The estimate shows that more than 8.6 million children of the primary school age will never enter the school, which is 44 percent of the total primary school-age population. Out of these children more than 51.5 percent are to females: more than 4.8 million female primary school-age children will never enter school as compared to more than 4.5 million male children. In other words, 47.5 percent of girls as compared to 41.1 percent of boys will never enter the school.

Only 18.2 percent of the primary school-age children belonging to the poor families are enrolled in the primary schooling as compared to 52.5 percent of their non-poor counterparts. There is no difference in the enrolment rates for boys and girls belonging to poor households; however, among non-poor households girls' enrolment is higher than that of boys.

Punjab is doing relatively better than other provinces. Apart from that GB and AJK are also showing relatively encouraging results. Situation in the KPK looks quite bleak, worse than what we noticed in the FATA. Similarly Sindh has also shown some astonishing results as its percentage of out of school children is almost close to that of Baluchistan. Gender differentials also demonstrated same trends. A bigger share of female children is out of school as compared to their male counterparts. Significant difference was observed in FATA where there was a difference of 12 percentage points between male and female out of school children's percentage.

District analysis clearly depicted a north south divide in the country. Upper Punjab districts along with AJK and GB demonstrated relatively better situation, although even one-fourth of primary-age children are out of school in the best performing districts.

2.3. Youth and Employment Participation

The on-going demographic transition in Pakistan has resulted to raise significant youth population, however, labor force participation is relatively low than other countries of the region. Youth in Pakistan has been facing number of labor market challenges including, early start to work due to poor educational attainments, failing to enter the labor market with decent work, high unemployment and underemployment, rising job search periods , wage penalties and high risks of vulnerability.

NSER reveals that youth have lower employment participation rates than adult. Gender-wise age specific employment rates are inverted U-shape, reflecting that people participate less in the labor market in early ages and later age compared to the medium age. Again the reported participation level was found to be low in NSER at all the ages compared to other national data sets. Youth is facing more unemployment rates than the adults with higher youth unemployment rates in province Balochistan while the least in KPK. The estimates of unemployment rates are lower than the census 1998 and higher than the LFS survey. The trend look satisfactory as census usually confers high unemployment rates than the LFS. It was also found that district level unemployment rates have a negative association with the welfare level of district.

Near to two-third of the youth is working as self-employed with more females in self-employed category and more males in government and private jobs. While comparing the results with 1998 Census, the share of government and semi-government jobs decline across the gender and is bridged by private and self-employed jobs. Attained education of youth and the education level of head of the household raise the chances of both male and female youth to be worked in paid jobs (govt., semi-govt., and private). The educational impacts on females to be worked in paid jobs are far more than males. The analysis also reveals that youth employment participation is low in those districts having more education level. The evidences of intergenerational mobility were also found where a strong association of employment type of head of household and employment type of youth has been observed e.g. if the head of household is self-employment, there are 90 percent youth who is also in self-employed jobs.

It is believed that poverty is the problem among the people who cannot work or involved in low quality jobs. The study found that as the share of paid employment increases (both at individual and district level), it improves the welfare level/PMT score (both at individual and district level). It was also found that both the individuals and districts having high unemployment rates are facing high poverty rates (lower PMT scores).

2.4. Disable Population

Disability is complex, dynamic, and multidimensional. The disabled persons are categorized as suffering from impairments, disabilities and handicaps. Worldwide over a billion people including children (around 15 percent of the world's population) are estimated to be living with disability. The prevalence of disability among 18 years and older population, based on World Health Surveys conducted between 2002 and 2004, was 16 percent in South-East-Asia region-second to 16.4 percent reported in the European region. However, the disability prevalence based on latest population censuses which cover all age groups is 2.5 percent in Pakistan, 2.2 percent in India, 1.9 percent in Nepal, 1.6 percent in Sri Lanka and 1.4 percent in Bangladesh.

This study estimates disability prevalence in Pakistan and investigates association between disability and various individual and household level socio-economic and demographic characteristics. The analysis reveals that disability prevalence is 1.7 percent, suggesting that 17.1 persons out of 1,000 are disabled. The prevalence of disability has decreased over time as disability prevalence was found to be 2.5 percent in 1998 census. Males have slightly higher prevalence of disability as compared to females, 1.9 percent and 1.5 percent respectively. Further, males account for 57.8 percent of total disabled population, whereas females are 42.2 percent. The gender distribution of disabled persons is identical to one found in 1998 census data. The regional comparison indicates that amongst the provinces/regions, the prevalence of overall disability is the highest in Gilgit-Baltistan (2.9 percent), whereas residents of Sindh have the lowest disability prevalence (1.1 percent).

The analysis about the nature of disability exhibits that disability related to lower limb is the most prevalent (0.7 percent), whereas hearing disability is least prevalent (0.1 percent) in Pakistan. The prevalence of other forms of disability is as follows: vision (0.3 percent), speech (0.2 percent), mentally retarded (0.3 percent) and upper limb (0.2 percent). In terms of distribution of disability, out of total disabled population, 40.7 percent has lower limb related disability, 18.2 percent are mentally retarded, 15.9 percent suffer from vision related disability, 10.8 percent have upper limb, 8.8 percent have speech and 5.6 percent have hearing disability.

The age profile of disabled population reveals higher prevalence of disability among older age groups in comparison to younger groups, particularly prevalence is more than 2 percent in 46 years and older individuals. Further, prevalence rises sharply after age 65 which could be attributed to natural deterioration of health experienced by the elderly. The adults (age 18 and older) have considerably higher prevalence of disability as compared to children (under 18), 2.3 percent and 1.0 percent respectively.

The analysis about linkages between disability and poverty reveals a slightly higher prevalence of disability among non-poor (1.8 percent) as compared to poor (1.6 percent). Amongst the regions, prevalence of disability in both poor and non-poor is the highest in Gilgit-Baltistan where 3.2 percent and 2.8 percent population is disabled respectively. The

gap in disability prevalence between poor and non-poor is most visible in Azad Kashmir, whereas non-existent in FATA.

The prevalence of disability is highest among the illiterate (2.6 percent), males (3.1 percent) and females (2.2 percent). Of total disabled population, over three-fourth is illiterate. The share of illiterate women in disabled women is considerably higher (87.4 percent) as compared to illiterate men's share (70.6 percent). The examination of prevalence of disability by employment status indicates highest prevalence of disability among pensioners (3.5 percent) followed by not working (2.9 percent), self-employed (1.2 percent), private employees (0.8 percent) and government/semi government employees (0.7 percent).

The prevalence of disability is highest in the smallest houses (1 room house). Further, data also indicate that around 60 percent of the disabled persons live in the smallest houses. This has severe implications for the welfare of both disabled and fellow household members. The presence of a disabled member in a house particularly in a small house is expected to affect health and social life of fellow household members adversely. The district level analysis reveals the highest prevalence of disability in Orakzai Agency where 6.5 percent population is disabled as compared to lowest prevalence in Karachi Central district 0.8 percent.

2.5. Quantity and Quality of Housing Conditions

One of the major components of the social infrastructure is housing, the lack of which begins to offset the positive effects of economic development. Pakistan is facing unprecedented challenges of acute housing shortages, unhealthy living conditions and a dilapidated infrastructure across the country. In this regard this paper examines the quantity and quality of housing conditions in Pakistan.

Major housing features based on Population and Housing Census, 1998 indicate that Pakistan had density index of 3.1 persons per room, 2.9 rooms per housing units, household size 6.8 persons, one room housing units 38 percent and 51 percent population with no toilet system. According to PSLM, 2010-11 these statistics were stated as density index of 3.3 persons per room, 2.4 rooms per housing units, household size 6.3, 25 percent one room housing units and 18 percent population with no toilet system, indicating significant improvement in household size, single room housing units and sanitation system.

The present analysis had documented some of the patterns by which housing conditions can be analysed. This study considers a household is to be crowded if habitation density index is greater than three persons per room in a housing unit. The findings of the study are summarised as follows:

First, in Pakistan the habitation density level in terms of „average number of persons per room“ is 3.5 (recommended standard for Pakistan is 3 person per room) whereas it is greater than 4 persons per room in Sindh, Balochistan, GB and FATA. As compared to Housing Census 1998 average rooms per housing unit had decreased from 2.9 to 2.1 mounting pressure on the existing housing crises. Homelessness which is the extreme form of “housing deprivation” can also witnessed in Pakistan where 1.52 percent population is homeless.

Secondly, it was also observed that at national level 38 percent population is residing in one room housing units while in the province of Punjab and Sindh more that 50 percent population is living in one room housing units. The number of rooms in a housing unit is a good indicator for living space within it. The analysis had demonstrated that overall 28 percent housing units consist of one room while in Punjab and Sindh this figure is 36 percent and 47 percent, respectively. In NSER data the average family size at national is 6.1 persons which varies from 6.2 persons in Punjab to 7.1 persons in Balochistan.

Thirdly, this analysis shows that 73.5 percent population is living in crowding condition at national level whereas at provincial level it is highest in the province of Sindh (86 percent) and lowest in Islamabad Capital Territory (55 percent) and AJK (57 percent). The extent of crowding is also significantly higher for one and two rooms of housing units. The intensity of crowding for Sindh provinces is more intense as compared to other provinces. The analysis for magnitude of housing shortage in relation to existing housing stock indicates that it is 34 percent at national level while for Sindh province housing shortage (50 percent)

is more pronounced as compared to other provinces. Poverty can be seen through housing conditions where poor sections of the population are residing in crowding conditions in all regions of Pakistan.

Finally, to analyse the quality of housing condition, sanitation facility is used as an indicator of hygienic means of a dwelling. Based on finding of this study, 46 percent households have flush toilet while majority of the households have no proper toilet facilities in Pakistan. It is interesting to note that ICT had highest coverage of flush toilet (76.7 percent) while FATA had only 3.9 percent. Although Pakistan had made significant progress of reducing open defecation but still 34 percent population had no access to sanitation facility. Moreover, 55 percent of poor population had no toilet facility in the dwelling while majority of non-poor population had flush toilet. No flush system is still common in all regions of Pakistan.

The objective of survey was to identify beneficiaries for cash transfer by using the poverty score methodology. This study also highlights the housing and sanitation conditions of poor segment of the society in all regions of Pakistan. It was examined that a high percentage of poor household are living in single room housing units with high level of crowding while a small number of homeless population is also observed across Pakistan. The quality of housing units is also pathetic as majority of the poor have non-flush toilet or no toilet facilities inside the dwelling.

2.6. Poverty Profile

A poverty profile provides valuable information needed to develop effective anti-poverty policies and programs. The concept of poverty profile is not new for Pakistan since several studies have developed it using primarily the consumption module included in different household surveys. However, because of the data constraint, the poverty profiles at small geographical unit level have several limitations. They are in general based on small datasets, not truly representative of the districts; and they have not addressed an important aspect of the profile—who are the poor or which group is the largest among the poor, within the small geographical units, say districts. A poverty profile of Pakistan covering provinces, regions/zones and districts has been developed using NSER. The stylized facts are as follows:

First, NSER has shown Sindh as the poorest province of Pakistan. Although this finding is not consistent with earlier studies, it is likely that the rise in food inflation since 2008 has affected Sindh province more than other provinces of the country. It is well documented that sources of household income in rural Sindh are less diversified than in other provinces, so any negative shock may have serious implications for Sindh population.

Second, the findings of present study regarding the poverty differentials across agro-climatic zones of the country are largely in line with earlier studies. *Barani* zone has appeared as the least poor zone while cotton-wheat zone of Sindh is the poorest zone. Two zones of Punjab, mixed Punjab and rice-wheat Punjab, are better in wellbeing than other zones, except *barani* Punjab.

Third, based on the findings of this study, the districts of Pakistan can be grouped into three broad categories: first, the prosperous or 'least poor' districts are located in central and north Punjab, Haripur and Abbotabad in KPK and Karachi in Sindh. Second, Sindh, except Karachi, Balochistan and most districts in Southern Punjab are either 'very poor' or 'extremely poor'. Few districts of KP are also part of this group. Third, all other districts of the country are either 'poor' or 'vulnerable' to poverty.

Fourth, the analysis of sub-groups of population shows that poverty is higher in households with high dependency ratio, and headed by a person in middle age (below 50 years). Poverty rates vary a great deal by literacy and educational attainment of household heads as well as other members of families. Employment relationship with poverty is not clear in the present analysis, because of some data problems.

Finally, district-level differences in poverty can largely be explained through the differences in industrialisation, urbanisation, access to overseas labour market, human capital, access to public services, variations in infrastructure development, inequality and poor living conditions in urban structure.

This analysis provides very useful insights to understand the differences in poverty across the regions and population groups. However, the findings of the present study do not have direct implications concerning the targeting of BISP or the role of BISP transfers on poverty reduction because these issues are beyond the scope of this study. Nevertheless, the findings support the use of PMT score methodology to identify the poor. The geographical dispersion of the poor based on this methodology is generally in line with the earlier research on poverty. The analysis of relationship between poverty and sub-groups of population e.g. dependency ratios, literacy and education adds to the reliability of the socio-demographic data generated through the BISP survey.

The analysis of the sub-groups of population suggests that poverty in Pakistan needs to be addressed through a multidimensional strategy. While cash transfers can help poor in consumption smoothing, their living standard can be improved through diversification of their incomes by improving their human capital and giving them access to local and international labour markets. Similarly, the analysis of causes of poverty differentials across districts shows that infrastructure development, industrialization and equal access to public services across districts can go a long way to reduce poverty and improve the living standard of population. So a coherent approach, where poor families and poor regions are targeted through (i) income transfers to the needy, (ii) enhancing their human capital, (iii) providing better public services, and (iv) developing necessary infrastructure can help achieve the goal of poverty alleviation in Pakistan.



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