

## **Internal Migration and Urbanization: A case study from Semi-arid regions of Pakistan**

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### **Abstract**

The study analyses the determinants of urbanization in semi-arid regions and the role of institutions in dealing with the issue. Focusing mainly on three semi-arid districts of Pakistan, i.e. Mardan, Faisalabad, and Dera Ghazi Khan (D.G Khan), the study draws on qualitative information gathered through the in-depth interviews of rural to urban migrants and key stakeholders. The push factors described by majority of urban respondents in all three districts are mainly economic, i.e. lack of employment and business opportunities in rural areas. Few respondents considered death of family members/relatives, conflict with other tribes and lack of health facilities as significant push factors behind their decision of migration. Although socio-economic factors were the primary cause of migration, climate change was not considered a direct reason. Nevertheless, a few respondents agreed that climate change had indirect effect on their decision to migrate. The pull factors are almost common in all three districts. These include better employment opportunities, proximity to their village and access to basic facilities such as educational institutions, hospitals, road and transport networks, sanitation amenities, etc. in the cities. The urban migrants faced a number of issues as a result of their migration, viz lack of proper accommodation, inaccessibility to pure drinking water, guarantor issues, finding employment or setting up business, and lack of information about public services. This has further exacerbated the situation vis-à-vis congestion of the cities as well as an increase in slum settlements. According to development authorities, major reasons for unplanned urbanization and slums creation were lack of internal migration monitoring policy and coordination gaps between service providers and authorities concerned. Furthermore, stakeholders emphasized the need for immediate attention for overall agriculture sector development, including climate resilient and agriculture smart policies to lower the push factors of migration in rural areas.

**Key words:** internal migration, urbanization, climate change, slums, planned and unplanned urbanization, development

## I. Introduction

Urbanization is the redistribution of population from rural to urban settlements with the passage of time (Peng et al. 2011). It is the push and pull factors<sup>1</sup>, which force people to migrate. Urbanization, on the one hand, provides opportunities for growth, and on the other it gives rise to problems such as high population density, inadequate infrastructure, lack of affordable housing, pollution, slums' creation, crime, congestion, and poverty (GoP 2015).

Apart from aforementioned push and pull factors, forced migration is also a factor which contributes to internal migration. The lack of management in conflict zones is the root cause of increase in refugees and migrants (Mehdi 2007). The number of households displaced due to conflict between Pakistani forces and militant groups in FATA is 74,826. The repatriation programmes initiated by the government of Pakistan have helped approximately 94% of Internally Displaced Persons (IDPs) to return to Federally Administered Tribal Areas (FATA). Almost, 94% of IDPs have returned to their respective areas in FATA (Yousafzai 2017, USAID 2017).

Another important reason for migration is climate change (Torres 2007, Sattar 2014). Climate change refers to “a change in the state of climate that can be identified (e.g. using statistical tests) by making changes in the mean and/or the variability of its properties, and that persist for an extended period, typically decades or longer” (IPCC 2007). The problem of climate change supplements challenges that occur due to urbanization, especially in the developing countries. The rising losses in agriculture productivity force people to look for alternate modes of livelihoods. Therefore, migration is considered to be one of the various adaptation strategies that rural inhabitants employ to avoid loss of life and damage to property as a result of climate-related natural disasters (Saeed et al. 2016). The urban areas of Pakistan are also facing various issues that force people to migrate. These include urban drainage problems, inadequate potable water supply, and increased number of mortality rates due to natural disasters (Asian Development Bank 2017).

The climate induced migration is faced by people in various regions of Pakistan (Sandeelo 2017). During the past few years, unpredictable extreme weather conditions resulted in torrential rains, flash floods and landslides across Pakistan. In 2015, a heat wave resulted in the killing of 1,200 people (GoP 2015) and forced others to move during summer in Karachi. Below-average rainfall during the monsoon season in 2016 brought drought and decreased crop production, which forced hunger affected people to migrate to other areas for food (Ijaz 2017). The people residing near Indus delta have also witnessed large-scale migration because of sea-intrusion, coastal floods and rainfalls. Along with that, climate change has affected agriculture, business sector, water, health, biodiversity, forest and socioeconomic conditions in Pakistan's semi-arid regions. Climate change has also affected farm and non-farm livelihoods, which resulted in migration of farmers and others from rural to urban areas (Ibid, Rasul et al. 2012).

The climate induced migration process may be temporary (as in the case of displacement of people for a short period of time) or permanent depending upon the severity of natural disasters (Ijaz 2017). For example, one of the studies found that climate change was responsible for the

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<sup>1</sup> Push and Pull factors are those factors which force or attract to migrate.

permanent migration of farmers in Gujrat district to urban areas of Pakistan (Abid et al. 2016). Heat stress is another climatic shock that has significantly affected Pakistan's economy (Mueller et al. 2014). Interestingly, heat stress is more responsible for permanent migration as compared to floods. Other climatic changes include cyclones, desertification, and floods which cause rural to urban migration. These changes have increased land degradation and lead to a shortfall in food production, which increases rural poverty and urban turmoil (Asian Development Bank 2012).

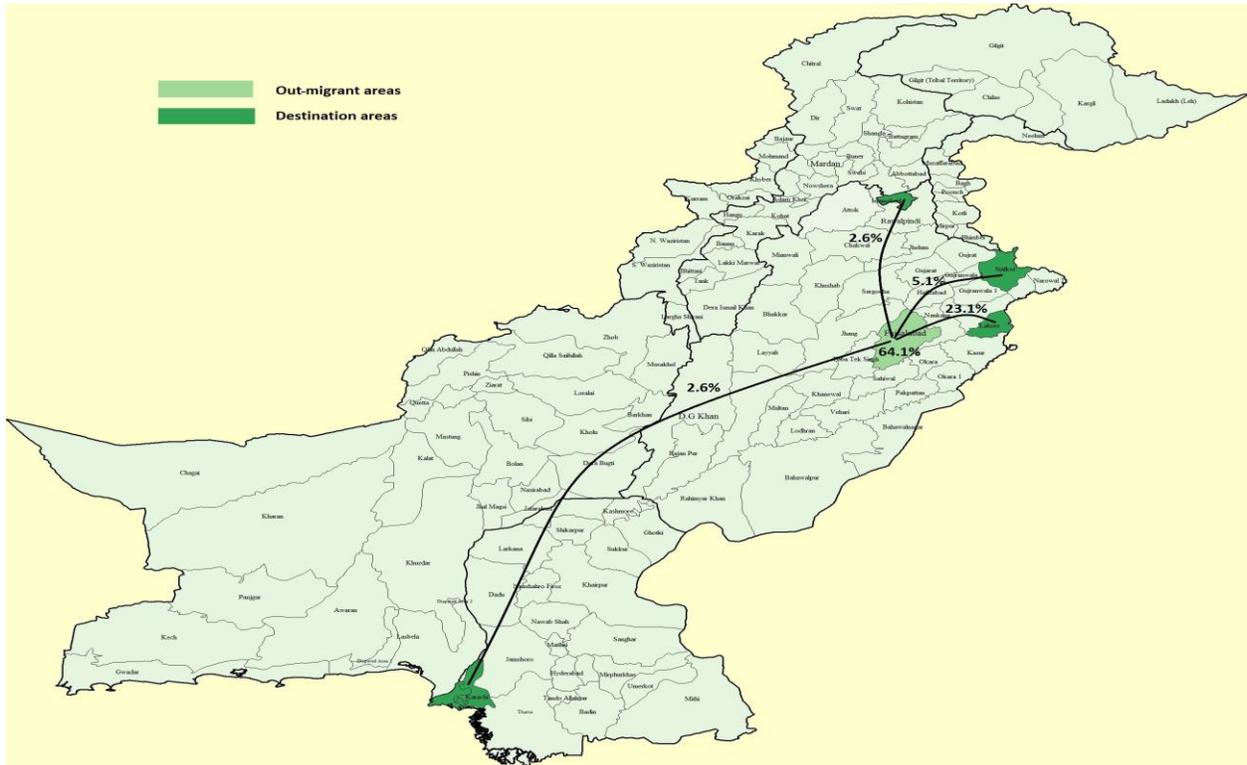
In the light of the above scenario, this study aims to contextualize rural to urban migration in terms of the contemporary push and pull factors in semi-arid regions of Pakistan. It also aspires to understand the institutional gaps that can be bridged to foster a more planned approach towards urbanization. The main objectives of this study are:

- To describe the main push and pull factors behind rural to urban migration in semi-arid regions and explore if climate change plays a role in the respondents' decision to migrate
- To investigate outcomes of rural to urban migration in terms of stresses and opportunities
- To analyze institutional gaps in dealing with the issue of urbanization

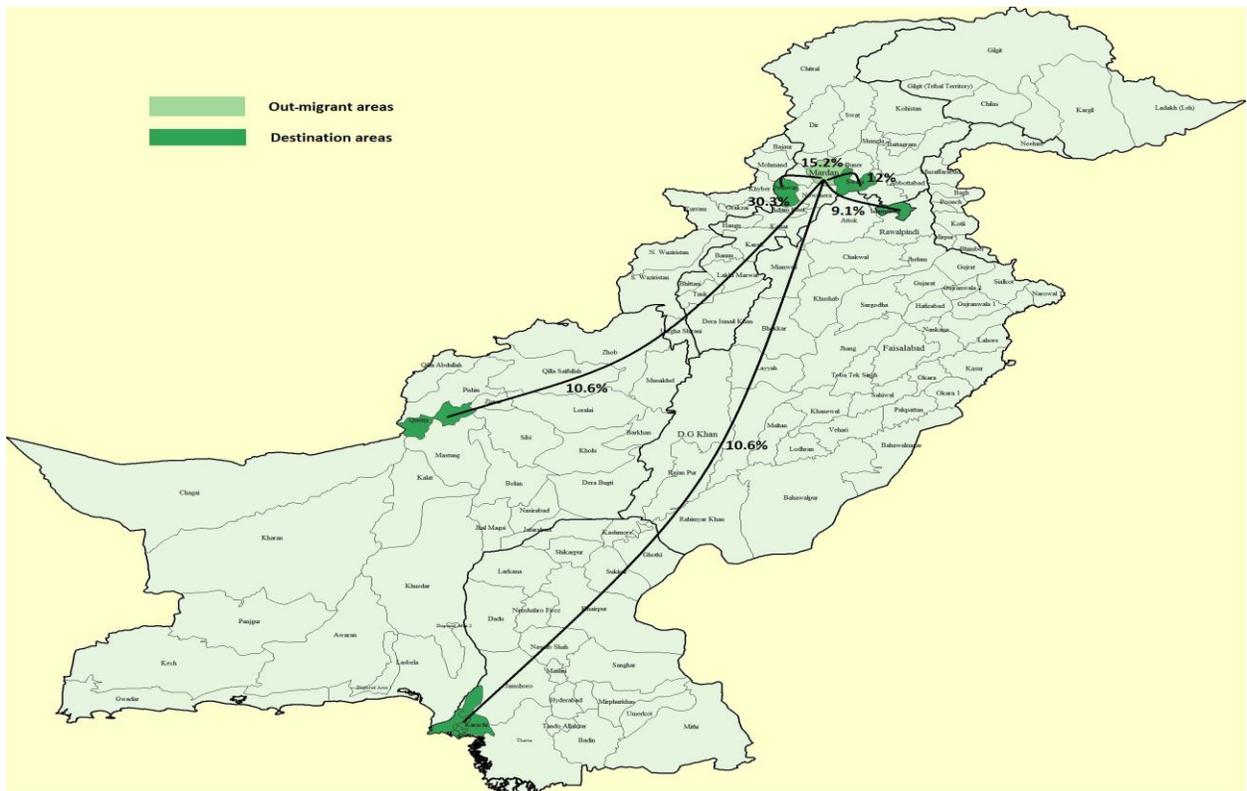
### **Rationale of Study**

Numerous studies have been conducted to analyze the reasons behind internal migration. However, reasons of migration along with post migration issues and role of institutions in semi-arid regions of Pakistan are less explored. This study adds to the literature on urbanization issue by focusing on pre and post migration issues along with institutional vulnerabilities in addressing them.

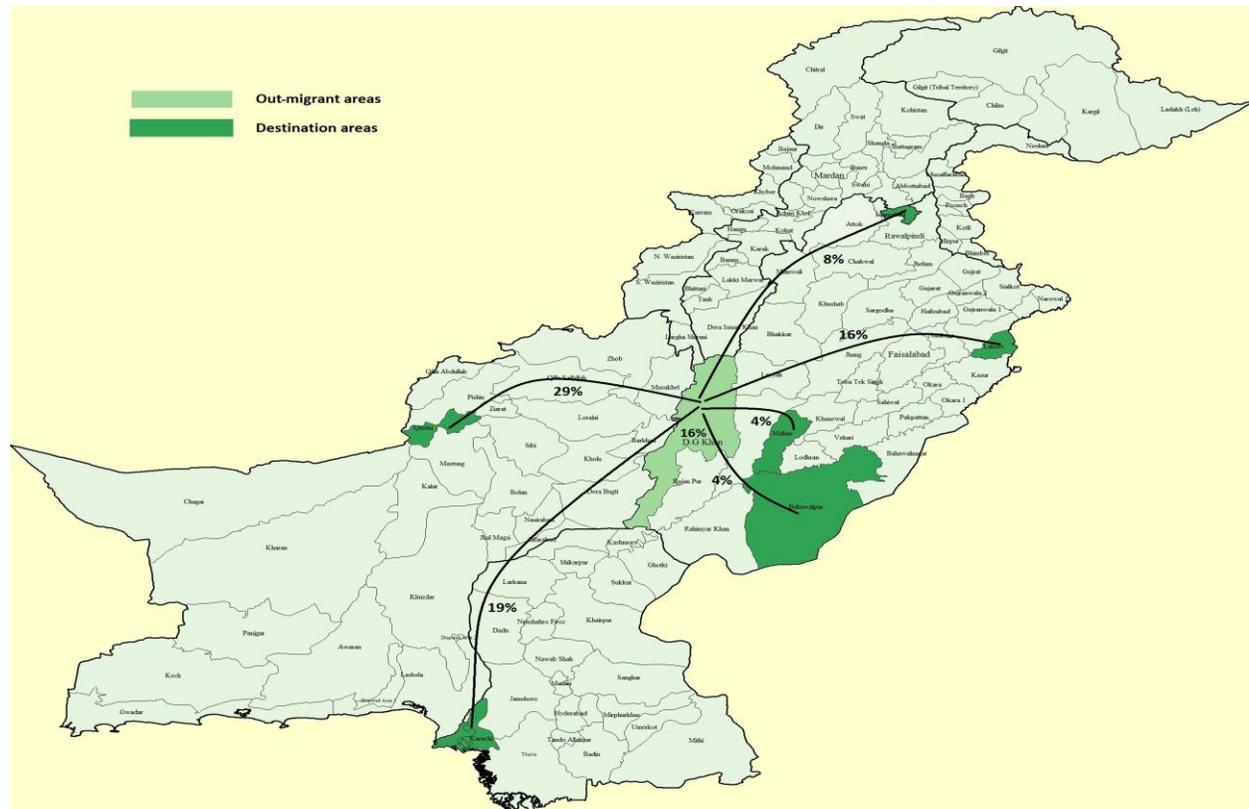
**Figure 1: Migration Destinations of Faisalabad's Migrants**



**Figure 2: Migration Destinations of Mardan's Migrants**



**Figure 3: Migration Destination of D.G Khan’s Migrants**



**Source:** Salik et al., 2017

## II. Methodology

The methodology section defines study site, sample size and estimation techniques for achieving the overall objectives.

- Study Sites:** For the study, three districts namely Mardan, Faisalabad, D.G Khan, from the semi-arid region of Pakistan were selected. The rationale behind is: Firstly, they are considered to be facing rapid climate change, including water stress (Farooqi et al. 2005). In fact, the semi-arid regions are in the phase of development since many decades which is further aggravated by climate change and extreme events (Council 2009). Therefore, semi-arid regions were chosen to observe pre and post internal migration issues, and the role of institutions in addressing urbanization and internal migration in these districts.



- Key Informant Interviews:** In total, eight key informant interviews were conducted from representatives of Faisalabad Development Authority (FDA), Mardan Development Authority (MDA), Ministry of Climate Change (MoCC), Ministry of Planning and Development, District Office Agriculture (DOA), and Pakistan Institute of Development Economics (PIDE). These multiple key informant interviews were conducted to get updated information about initiatives of government departments in rural economy and issues related to internal migration.

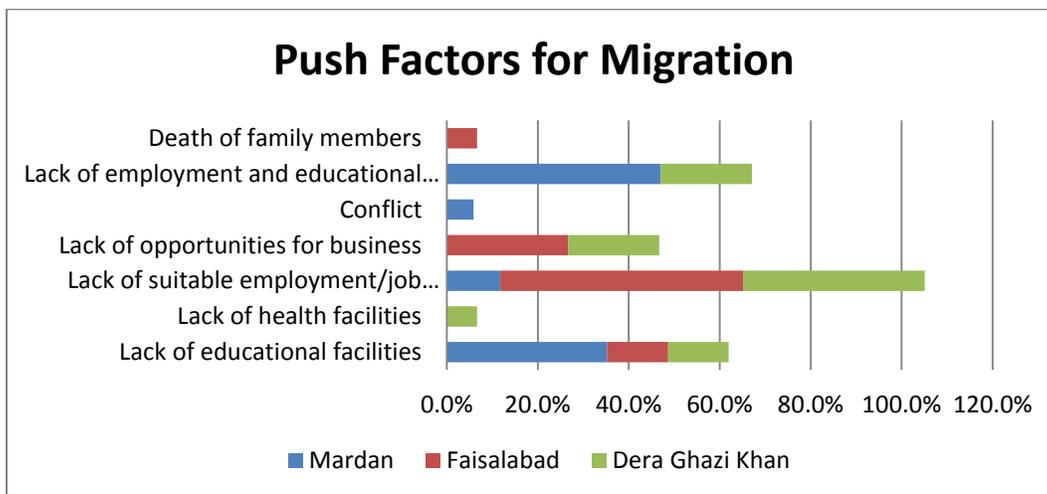
### III. Results and Discussion

This section of the study describes results and provides discussions on push-pull factors of migration, highlighting issues and opportunities introduced by migration, and institutional gaps in dealing with the management of urbanization.

#### IV.I Push Factors for Urbanization

The major push factors for migration were lack of suitable employment opportunities and educational facilities in rural areas. Other important factors included lack of infrastructure, health facilities, business opportunities, conflicts, and death of family members.

**Figure 5: Push Factors for Migration**



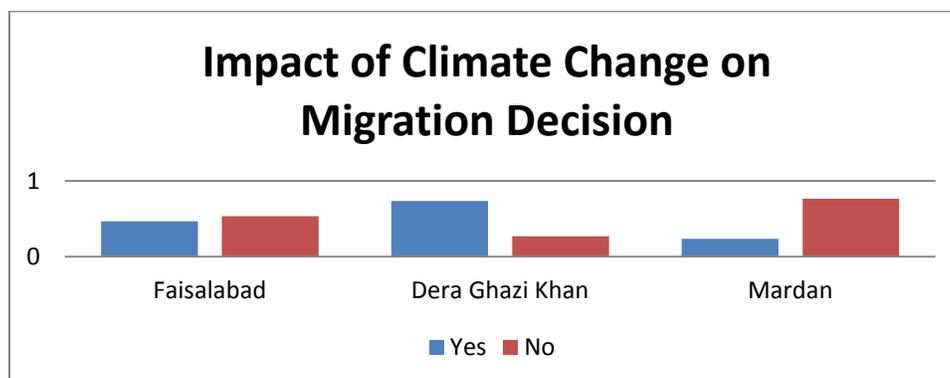
Source: Author findings from study sites

Results show that in Faisalabad, lack of business and employment opportunities in rural areas was the major push factor behind migration. Other push factors responsible for migration included: lack of educational facilities and death of a family member. In D.G Khan, lack of suitable employment/job opportunities and business opportunities was the major push factor. Other factors were lack of educational and health facilities, which forced the urban migrants for migration. In Mardan, both the lack of educational and employment opportunities were major push factors. Another reason for migration was conflict, which forced people to migrate to urban areas. The major push factor described by development authorities for rapid urbanization was lack of access to basic facilities such as access to education, health services and employment.

#### Climate Induced Migration

Apart from aforementioned push factors, climate change was found to be an emerging push factor responsible for migration of people, albeit indirectly. As such, climate change has increased stress on income sources.

**Figure 6: Impact of Climate Change on Migration Decision**



Source: Authors findings from the study sites

Among these districts, respondents from D.G Khan were having higher responses of climate induced migration as compared to other districts. Climate change was found to be negatively affecting income sources and health of individuals. Agriculture was negatively affected by climate change due to changes in rainfall schedules. Irregular rain events destroyed wheat crop during harvesting time. Another reason for negative impact was lack of rains, which increased the pest attacks. This change affected cotton crop negatively, which reduced crop productivity and raised the cost of inputs for cropping.

Apart from crops, less rainfall also caused reduction in fodder, which negatively affected livestock. This situation resulted in increased nomadic trips to feed animals. Another change was increased number of hot days and heat stress. In order to cope with it, families shifted to larger houses from small houses. Along with that the respondents, who laboured in factories, said that they were unable to continue their jobs due to heat stress, therefore, they quit their professions and switched over to businesses or comparatively less heat-stressed options.

Incidences of climatic induced disasters like floods have increased, therefore, resulting in heavy losses to crops, infrastructure, and private property. An urban respondent from D.G Khan said:

*'Owing to floods, salinity increased in soil, which diminished its productivity, so I had the only choice, i.e. to switch over a new profession and migrate to the city area'.*

Extreme climate events have also affected businesses sector, including small businesses and construction industry. Moreover, changes in the monsoon season have resulted in fewer rainy days and as such have increased the number of working days available for businesses and labourers.

Agriculture and business sectors of Faisalabad district were also negatively affected by climate change. Increase in heat and reduction in rainfall were reported to be responsible for lower crop productivity. Similarly, business sectors were also affected by climate change in different ways. The pharmaceuticals business sale increased with lower rainfall that has increased health viral issues in community such as flu, cough and fever. Contrary to pharmaceuticals, labour involved

in fabric industries said their working hours have reduced after the demand for warm clothes has decreased, ultimately resulting in financial stress on the labour class.

In Mardan, climate change was reported by very few urban respondents as a driver of migration. Some respondents mentioned indirect pathways through which climate change impacted their livelihoods. For instance, a rickshaw driver (respondent) said that due to excessive or uncertain rains his travelling to his village has reduced. These rains are responsible for commutation problems and increased the cost of vehicle's maintenance. Therefore, it was also one of the reasons for migration to urban areas by respondent for avoiding such disturbances. Other respondents said that these climatic changes were considered very sensitive for casual agriculture labour and that associated with plant nurseries. Owing to consistent impact they highlighted its influence on migration decision in terms of a search for better employment opportunities in the cities.

The issue of climate change was also discussed with key representatives of governmental organizations concerned. The acceptance of stakeholders' vis-à-vis impact of climate change on economy supports climate change as one of the emerging push factors for internal migration. The viewpoints of experts from District Office Agriculture (DOA) of Mardan, Faisalabad, and D.G Khan also support existence of this issue in influencing migration decision of people. According to them, climate change has affected agriculture sector, which is responsible for changes in crop productivity. Especially, increase in unseasonal or lack of rains caused loss to crops, such as cotton and wheat crop. Additionally, condition of drought has further reduced crop yield in past 5 to 6 years in all these districts.

In fact, increase of temperature during winter and summer season has enhanced pest attack especially on cotton crop. Another challenge is water shortage which is also affecting wheat crop in rain fed areas. Further to this, lack of variety of seeds or fertilizers has aggravated the coping mechanism to deal with climatic changes.

The view point of DOA was supported by the representative of Urban Unit in Federal Ministry of Climate Change (MoCC), who said that climate change has significantly affected the whole economy especially agriculture. The key informant interviews with academicians from Pakistan Institute of Development Economics (PIDE) further strengthen the aforementioned view point of stakeholders. They confirmed the existence of climate induced migration in Pakistan especially at arid areas like Tharparkar, Sindh.

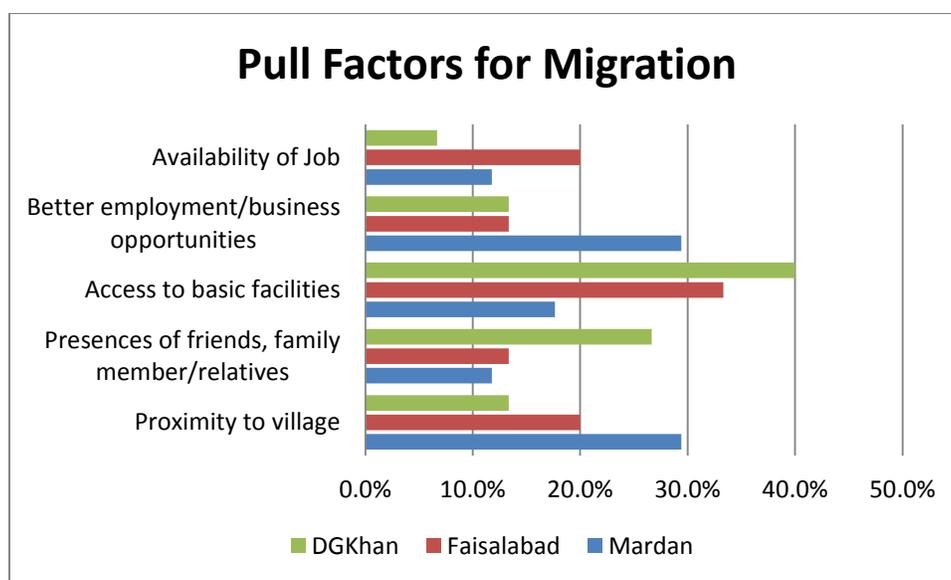
The representative of Population Unit of Ministry of Planning and Development says that there are two major reasons for rapid urbanization in the world, namely, natural birth rate and rural to urban migration. Out of these two, rural-urban migration is a major contributor. The push factors for such rise of urbanization, as described by the Development Authority, is: lack of basic facilities, especially health, education and transportation, in rural areas that forces people to migrate to cities. It creates negative pressure on urban areas. Its solution lies in the provision of basic facilities and improvement in their quality in rural areas. Faisalabad Development Authority (FDA) is in the implementation of phase of this master plan which started in 2015 and will be completed in 2035. This master plan has been developed by the Urban Unit for planning. This project defines structure of Peri-urban, and Urban areas implemented by city district development authorities in the Punjab. Another Similarly, Mardan Development Authority supports aforementioned reasons of urbanization and said the number of government housing schemes and private towns has increased due to increase in population during the past 10 years.

In the context to agriculture, representative of District Office Agriculture (DOA) said the determinants of rapid urbanization force people in rural areas to migrate. Marketing issues are common for farmers as cost of production is rising which reduces earnings of all the farmers. For example, farmers don't get their price of sugarcane from sugar-mills on time. Other negative issues are saline soil, scrap reclamation, poor quality of underground or tube well water, limited availability of canal water, and availability of less agriculture land due to rapid industrialization. Similarly, representatives from PIDE said that lack of facilities in rural areas has triggered urbanization. The permanent migration occurs due to search for employment or opportunities to start a new business while, temporary migration is occurring due to conflicts or security issues. In addition, there are many people who are unable to migrate due to lack of affordability. People can't afford to live in central city areas which are too expensive for them.

#### IV.II Pull Factors for Urbanization

The major pull factors for migrants were access to basic facilities, better employment or business opportunities, proximity to village, presence of social networks like friends, family members or relatives, and secured job in cities. The figure 5 highlights major and minor pull factors of migrants.

**Figure 7: Pull Factors for Migration**



Source: Authors findings from study sites

The pull factors as described by the respondents were similar across all the select districts. In Faisalabad, access to basic facilities (road, transport), proximity to village, and availability of job were major pull factors. Other factors included presence of family relatives, and friends, and better employment opportunities. In D.G Khan, access to basic facilities, presences of both; family relatives and friends, and availability of better employment opportunities are the main reasons for migration. In Mardan, proximity to village and better employment/business opportunities and proximity to village were considered as major pull factors.

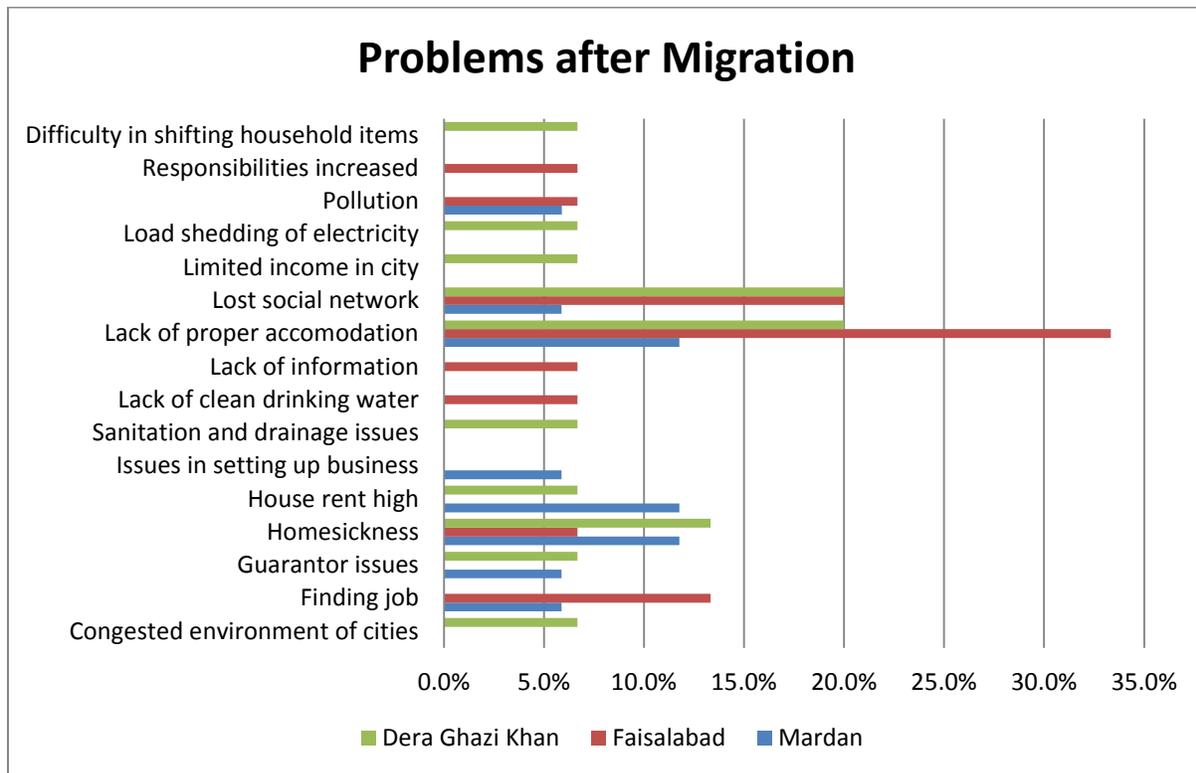
The major pull factors for rural to urban migration are access to basic facilities, especially, availability of better education institutes and proximity to large cities. That's why people prefer to live in city area as they can move for work. After observing reasons of migration, we can

conclude that push factors are more than pull factors. It means that push factors are forcing people living in rural areas to migrate to urban areas.

### IV.III Outcomes of Migration

A majority of migrants (87%) agreed that they have faced certain hurdles after migration. Therefore, outcomes of internal migration were also inquired from urban migrants. The chart given below provides details of those outcomes of migration hurdles that were major causes of lack of satisfaction in selected districts.

**Figure 8: Problems Faced after Migration**



Source: Authors findings from study sites

Urban residents said that major problems faced by them after settling in cities were lack of proper accommodation and social networking. Apart from that, other problems were jobs search, lack of access to clean drinking water, homesickness, asymmetric information about access to other services, pollution and increased responsibilities for managing home.

For D.G Khan, a majority of urban residents described the same problems after migration as faced by urban residents of Faisalabad, These are: lack of proper accommodation, and lack of social networking. The other problems faced by them are home sickness, guarantor issues for residence, congested city environment, load-shedding, high rents, limited income, poor sanitation and drainage services, shifting luggage due to lack of transportation facilities and road facilities in rural areas.

In the above chart, it can be seen that some respondents of Mardan faced no issue after settlement in urban areas. Apart from those, few respondents mentioned lack of proper

accommodation, higher amount of house rents, homesickness and no social networking issues in settling up business, and jobs search were problems faced by them. Along with that, migrants said providing guarantor is a big issue when they go to take house on rent. Owing to lack of social networking, it became one major issue in settlement in urban areas. Despite facing such difficulties, all the respondents see improvement in their overall living standard after migration.

The major reason for migration problems was lack of urban planning. This argument is supported by key informant interviews which discussed significance of planned and unplanned migration. The academicians from PIDE described that mega cities are outcome of rapid urbanization which requires effective governance to gain from it. The existence of unplanned urbanization can be seen from environmental degradation and lack of proper services provision of Sanitation and Solid Waste management services. Along with these problems, another research highlights unplanned urbanization increasing problems, like, poor housing quality and affordability, transport, health, education, and land management (Shaikh and Nabi 2017).

The reasons for lack of better services provision have been explained by the development authorities of Faisalabad and Mardan. First, there is a lack of internal migration policy for managing and controlling rapid urbanization. The Ministry of Overseas Pakistanis only deals with the international migration and has nothing to do with the internal migration. Management of migration requires a platform that can regularize private construction and builders under development authorities. The major barrier behind planned urbanization is the lack of coordination between development authorities and other service providers such as responsible for electricity, gas, water and sanitation. The major reasons for lack of coordination were absence of mandate, political support, resources insufficiency and lack of authority. These contribute to inefficiency of development authorities in dealing with planned urbanization. Therefore, this lack of coordination with development authorities is one of the major reasons for unplanned urbanization or creation of slums. A representative of the development authority said:

*'Earlier, No Objection Certificate (NOC) from Taluka/Tehsil Municipal Administration was a must for an organization (such as Water and Power Development Authority, Communication and Works, Public Health, and others) before it had started development works. Nowadays these service providers don't get NOCs as there is a lack of coordination among different departments which results in financial losses. We are trying to regulate them but there is no control on people and service providers. For example, one of the duties of development authority is to construct roads whereas Water and Sanitation Authority (WASA) is excluded from the process. So, roads were dug up to inlay sanitation and drinking water pipelines without consulting the development authority. This lack of coordination results in heavy financial losses'.*

Hence, aforementioned concerns of development authorities are important to address rapid and haphazard settlement of migrants from rural to urban areas. If these concerns are properly addressed that can reduce institutional vulnerabilities and improve urban planning.

#### **IV. Conclusion and Recommendations**

This study was conducted to understand internal migration through push and pull factors, outcomes of internal migration and institutional vulnerability in dealing with urbanization problems. The results show that common push factors were lack of employment and business opportunities in rural areas. Minor push factors were lack of infrastructure for sanitation, drainage system, roads, and transport. A few also reported deaths of family/relatives, conflict with other tribes and lack of health facilities as push factors in Faisalabad, Mardan, and D.G

Khan respectively. Apart from common push factors, climate change was the indirect reason which influenced the decision to migrate. Climate change negatively impacted the agriculture and non-agriculture income of individuals, which ultimately forced people to migrate and find alternate means of income in urban areas. The number of respondents from D.G Khan was higher than the remaining districts who reported that climate change impacted their decision to migrate in some way. The pull factors responded by urban migrants were almost common in all districts. The pull factors are better employment opportunities, proximity to their village (hometown) and access to basic facilities (educational facilities, hospitals, road & transport facility, sanitation, etc).

The outcomes of internal migration are congested environment of cities, lack of proper accommodation, impure drinking water, guarantor issues, employment/setting up business and lack of availability of information about public services. Amid such issues, urban migrants even considered significant improvement in their living standard after migration. These urban problems faced by urban migration occurred due to unplanned urbanization. The major reasons for this unplanned urbanization are lack of internal migration policy for monitoring issues of new rural to urban settlers and lack of mandate to development authorities for taking action against service providers and private builders for not following urban planning.

In the light of above discuss, following are the recommendations that the government needs to consider:

- Initiate rural development and capacity building programmes on agriculture smart practices
- Develop a joint coordination unit at district level for removing coordination gaps between public service providers and development authorities for an appropriate land use
- Develop an institution to register rural to urban migrants that may help them provide information related to employment or business setup. It should also focus on reasons and dynamics behind internal migration. After analyzing reasons, it should try to address their issues.
- Set up new industrial units in peri-urban areas near villages that will reduce pressure on urban areas by rural employment seekers.

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