

Analysis of Emigration Rates and Levels of Development in Punjab

Ripudaman Singh and Anil Behl

Abstract

Demographic variables of any region usually affect its development levels and higher development levels of a region positively improves its population. Generally, the human resources are instrumental in higher productivity and they act as changers and movers of the regional economy. Eventually, they are the exclusive recipients of the benefits of the development process. Therefore, the main concern of the development planning should be the improvement in the quality of human resources of the region. In absence of suitable opportunities to the people in the source region, people migrate to better off areas in search for better livelihoods. Over the time, when those emigrants get better off, they start sending the remittances back home to serve their families and to do something for the betterment of their homeland. The source region gets benefitted in its socio-economic development with the passage of time. Present study endeavors in this context to analyze the association of emigration rates with the levels of development in Punjab. Proportions of families having persons abroad as per cent of total families, has been taken as a prime variable and its association with overall development levels is looked into. Deprivation and development scores have been put to use to derive composite development indices at development blocks level. Analysis confirms a positive association between emigration proportions and development levels, wherein Doaba region of the state known for its higher emigration abroad has also been noted for higher development scores.

Keywords: Diaspora, Emigrants, India, Punjab, Regional Disparities, Sikh diaspora.

Introduction

Population and human resources of an area have a considerable connotation on its development course. It has been known both as an agent and adversary of development. It has to be viewed as one of its dimensions, since the demographic patterns and trends are inseparable from overall process of socio-economic development. The preferences in any regional development strategy can be secured solely while considering its comprehensive demographic conditions. It has been a popular notion that development of any region would ultimately improve the quality of its population and Punjab has not been an exception to

this (Gosal and Krishan, 1984). Presently, it is being realized that demographic development is a component of development process and likewise, migration (in and out) of people affect the socio-economic development levels.

For long, Doaba region of Punjab has been well known for its emigration and one could find people from most of its villages, going and settling in many countries of the World (Tatla, 2004). Currently, India has become the topmost country with largest number of emigrants (16.6 million in 2017) in the world (United Nations, 2017) and it has also become the highest remittance receiving Country in the World (as per 2014 data), where maximum remittances are received from Gulf countries, followed by USA, Canada and other parts (World Bank, 2016). Remittances from the emigrants pave the way for growth and development of the region. Tumbe (2011) has found Punjab state receiving the second highest remittances amongst major states of India. Considering the higher emigration leading to higher socio-economic development of the region, it is expected that higher emigration from Punjab would be beneficial in the socio-economic development of the state, and particularly the source region. In some of the cases, it is also found that only remittance flow can't be adequate to cause significant changes, but smooth functioning of local level institutions as well as better policy interventions are also required for region's growth. Ballard (2005) compared two diaspora remittances receiving regions from neighboring Indian and Pakistani districts of Jalandhar and Mirpur. It was found that with almost same remittance flows Jalandhar experienced greater agricultural developments as compared to Mirpur. Differential infrastructural and industrial developments, and policy environments between both the places have registered different results. On the other hand, Kapuria and Birwal (2017), while analyzing the trends and challenges of international migration from Punjab, have pointed out that proper channelization of its emigrating people is required and it is necessary to develop a strategy to optimally utilize the foreign remittances. Present study intends to look into these parameters and analyze the association between emigration rates and levels of development in the state. The significance of this study lies in the fact that it contours the patterns of regional disparities in development levels and analyzing its association with emigration rates at block level in Punjab.

Methodology for Levels of Development

The study under investigation is formulated on secondary data obtained from 'block-at-a-glance' publications (Government of Punjab, 2014). The development block has been

chosen as the basic unit for data analysis. In 2013-14 there were 146 development blocks in Punjab. In order to find out regional disparities in development at block level, various indicators have been put into analysis, viz. agricultural, industrial, demographic and social indicators. The composite development index has been formed based on deprivation score and development score of each development block. The development scores of each development block on various indicators have been aggregated to calculate the block's composite development index. Data analysis included multi step process. Firstly, all the development blocks were arranged in order of their 1 to 146 rank with respect to each indicator on agricultural, industrial, demographic and social aspects. Secondly, deprivation scores of each indicator belonging to each selected dimension were computed. Thirdly, after that, all the deprivation scores were converted into development scores. Fourthly, the development scores of each development block on each indicator were summed up and divided by corresponding number of indicators included in individual dimension of development, to arrive at the development blocks' composite development index of broad category of indicators. The same procedure was followed for all the other dimensions of that development. Finally, the composite indices of each development block on different dimensions of development were once again summed up and divided by number of dimensions. Calculations for a particular indicator were computed through the following equation:

$$\text{Deprivation score} = \frac{\text{value of the block at top position} - \text{value of the specific block}}{\text{value of the block at top position} - \text{value of the block at bottom position}}$$

$$\text{Development score} = 1 - \text{Deprivation score}$$

$$\text{Composite index} = \frac{\text{Summation of development scores on the N dimensions of development}}{N}$$

The case of top ranked *Rurka Kalan* development block in overall development in the state exemplifies the technique of measurement of development levels. For agricultural infrastructure as sub group within agricultural development comprised four indicators viz. total cropped area per agricultural worker, net irrigated area as per cent of net area sown, intensity of irrigation and area under high yielding variety of major food crops as per cent

of total cropped area. For the indicator total cropped area per agricultural worker, deprivation and development scores were:

$$\text{Deprivation score} = \frac{4.60 - 4.46}{4.60 - 1.73} = 0.04$$

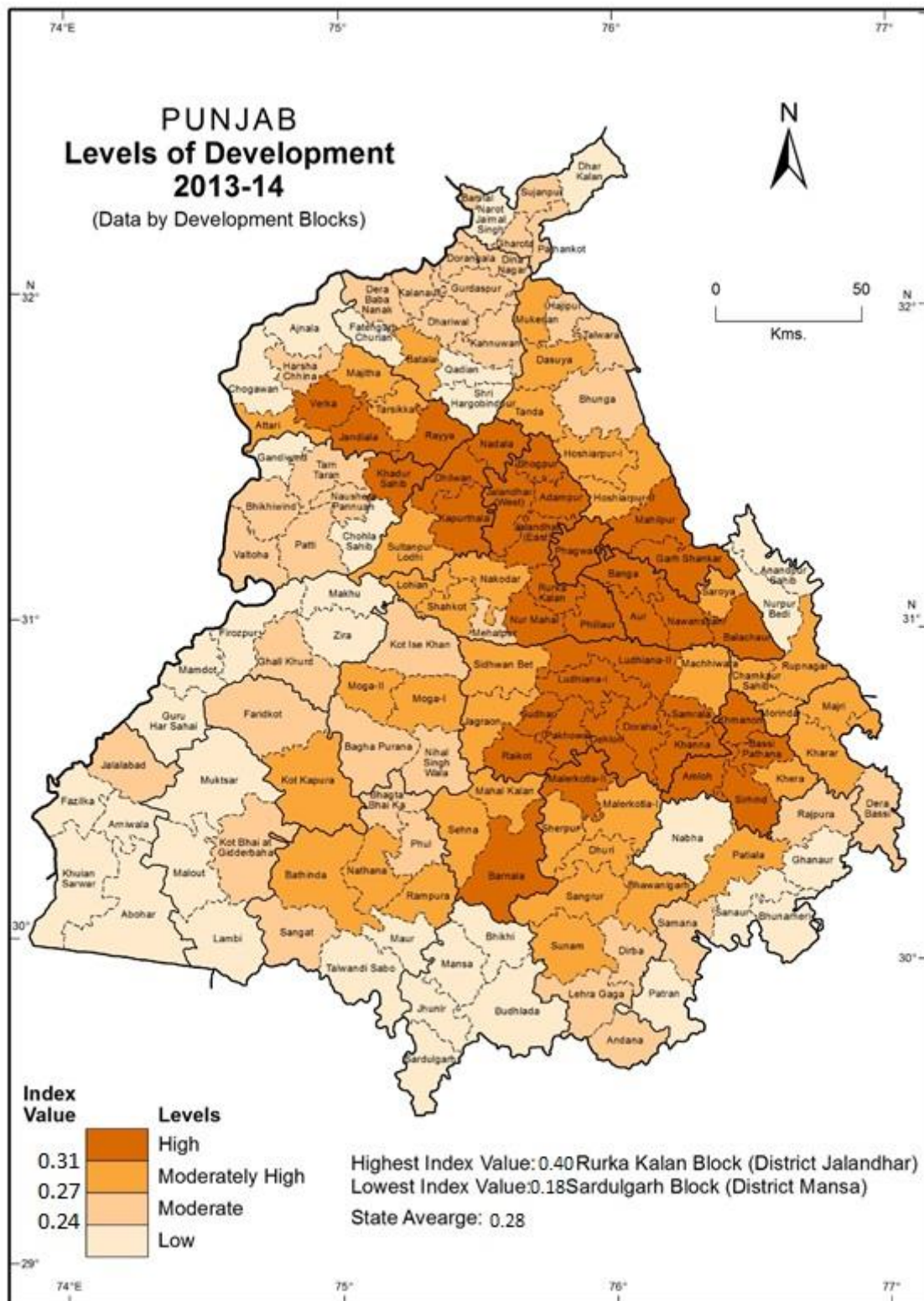
In this 4.60 was the highest value for the block at top position (*Bhagka Bhai ka*), 1.73 for the bottom ranking block (*Jandiala*) and 4.46 for *Rurka Kalan* block. Thus, the development score was derived as:

$$\text{Development score} = 1 - 0.04 = 0.96$$

Likewise, for other indicators, like net irrigated area as per cent of net area sown; intensity of irrigation; area under high yielding variety of major food grains as per cent of total cropped area, development scores were: 1, 0.75, and 0.90 respectively. Composite index for agricultural infrastructure was calculated as:

$$\text{Composite index} = \frac{0.96 + 1 + 0.75 + 0.90}{4} = 0.90$$

Similarly, deprivation / development scores and composite indices were computed for other three dimensions of agricultural development viz. agricultural implements; institutional environment and productivity. The composite indices for these dimensions of agricultural development for *Rurka Kalan* block were 0.29, 0.20 and 0.15 respectively. Hence, composite index for agricultural development was calculated as summation of composite indices for all the four sub groups of agricultural infrastructure; implements; institutional environment and productivity: Summation of 0.90, 0.29, 0.20 and 0.15 divided by 4 = 0.38. Thus, the composite index of overall agricultural development for *Rurka Kalan* block was 0.38. Likewise, deprivation scores, development scores and composite indices were computed for other three dimensions of development viz. industrial, social and demographic development, which were derived as 0.11, 0.43 and 0.70 respectively.



Map 1

Correspondingly, composite development index for overall development for *Rurka Kalan* block was computed through summation of composite indices of agricultural, industrial, social and demographic developments: summation of 0.38, 0.11, 0.43 and 0.70 divided by

4 = 0.40. The composite development index of overall development for *Rurka Kalan* block was 0.40 the highest for any development block in Punjab and the lowest for *Sardulgarh* block was calculated as 0.18 only. The state average for composite development index for Punjab was computed as 0.28.

All development blocks in the state have been congregated into four groupings of high, moderately high, moderate and lowly developed quartiles (Map 1). The highly developed blocks form a ribbon shape pattern along the Amritsar-Delhi railway track and the G T road, conforming to the economic backbone of the state. The blocks, in this specific central belt of Punjab have development levels significantly above the state average. This part of the state is noted for its progressive agriculture, significant concentration of agro-based industries, social outgrowth and demographic development (Behl and Singh, 2017). Map 1 depicts the concentration of highly developed blocks in Doaba region and its adjoining districts of Amritsar, Ludhiana and Fatehgarh Sahib. Contrarily, blocks along the international border and southwestern, southern and southeastern Malwa and some blocks in Kandi region have been noted for low levels of development. Among the three cultural regions of Punjab, Bist Doab (Doaba region) has been noted as the most developed part of the state, closely followed by northern Malwa. Among the 36 highly developed blocks of the state, 17 are located in Doaba region and other 15 blocks make a contiguous zone along its southern parts in northern Malwa (districts of Ludhiana and Fatehgarh Sahib). Blocks in the Upper Bari Doab denoted moderately developed levels with only 4 highly developed blocks. Compared to the developed blocks, an elongated belt of acute underdevelopment is found along international boundary and border with Rajasthan and Haryana states.

Emigration Patterns

People migrate from one region to another in pursuit of better opportunities, and in the search for green pastures. Emigration in this way, is a harmonizing process, which reduces regional disparities at various phases of socio-economic development and affects an individual's life at household level directly, and brings changes at societal and regional levels simultaneously. Emigrations to the developed countries fetches significant impact on the region's socio-economic development and eventually improves the regional economy in the long run.

Throughout history, people have been emigrating from one region to another for better lives and socio-economic wellbeing. After Punjab's annexation in British India in 1849 Punjabi's were moving to different parts of India and different British colonies including East Africa. During the First World War, many new recruits in the British Indian Army visited different parts of Asia, Africa and Europe and after the war, were looking to emigrate to new lands. Independence of India in 1947 brought its division, wherein, Greater Punjab also got partitioned. Many Punjabi's moved out and emigrated to different parts of the world. Decreasing landholdings in Doaba region, early educational developments and legacies of British Indian Army soldiers furthered the emigration process from Doaba region (Tatla, 2011).

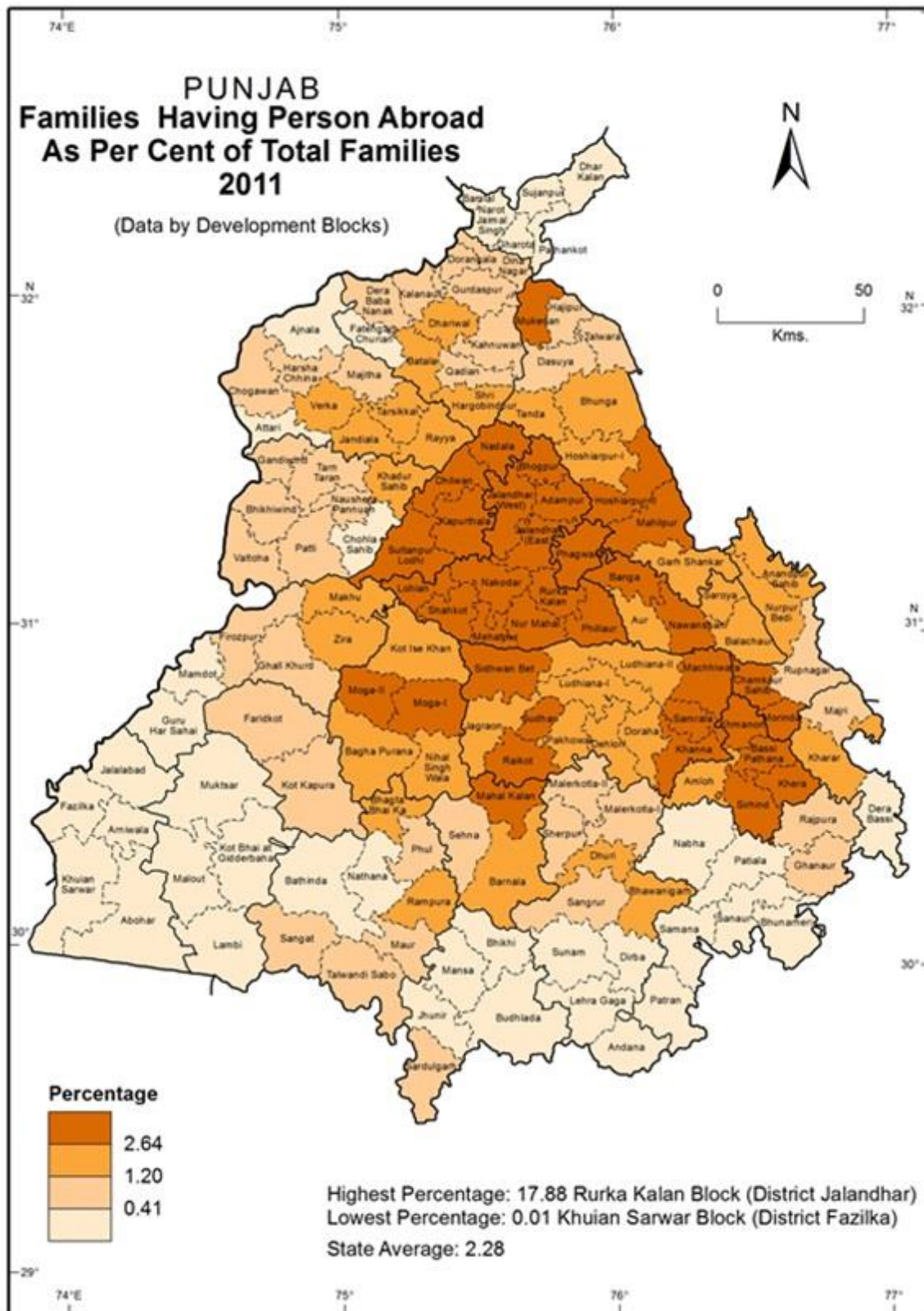
Punjab is noted for its wide diaspora, wherefrom maximum emigrants hail from Doaba region of the state. Census data (Govt. of India, 2011) shows that around 2.28 percent of families from Punjab having persons living abroad. But there have been significant regional disparities in the number of families having person abroad as per cent of total families at development block level in Punjab. Table 1 depicts the emigration proportions for all blocks as families having persons abroad as percent of total families with respect to their development levels. Distribution patterns for emigrants ranged from the highest value of 17.88 per cent for *Rurka Kalan* block in Jalandhar district to the lowest of 0.01 per cent in *Khuian Sarwar* block of Fazilka district.

Emigration has taken place from Punjab to various countries of the world including U.K., U.S.A., Canada, Australia, Singapore and East Africa. These migrants send back not only money to their families, but also brought innovative ideas, new farming techniques and new business skills from abroad that have executed a remarkable performance in the socio-economic developments in the state (Behl and Singh, 2017). Map 2 clearly depicts that the maximum outmigration from Punjab is from Doaba region and its contiguous extension in Northern and eastern Malwa. These regions are also noted for highly developed blocks.

Data Analysis and Main Findings

Figure 1 illustrates a positive association between both the variables of Development levels and Percentage of Families having Persons Abroad (emigrants). Although majority of clusters are within 5 percent of families having persons abroad and between 0.18 to 0.38 composite indices of development. A linear trend line having a positive correlation of .608

is depicted showing a positive association between emigration rates and overall development levels in Punjab at block levels (Table 2).



Map 2

**Table 1:
Punjab: Levels of Development and Percentage of Families having Person Abroad, 2013-14**

| Rank | Block | CI* | PFPA** | Rank | Block | CI* | PFPA** | Rank | Block | CI* | PFPA** |
|------|----------------|------|--------|------|------------------|------|--------|------|----------------------|-------------|-------------|
| 1 | Rurka Kalan | 0.40 | 17.88 | 50 | Sehna | 0.30 | 1.2 | 99 | Harsha Chhina | 0.25 | 0.56 |
| 2 | Banga | 0.39 | 6.55 | 51 | Tanda | 0.30 | 2.61 | 100 | Rajpura | 0.25 | 0.87 |
| 3 | Khadur Sahib | 0.39 | 1.88 | 52 | Moga-I | 0.30 | 7.37 | 101 | Dhariwal | 0.25 | 1.86 |
| 4 | Delhon | 0.39 | 1.42 | 53 | Chamkaur Sahib | 0.29 | 2.79 | 102 | Bamial | 0.25 | 0.34 |
| 5 | Phagwara | 0.38 | 3.65 | 54 | Patiala | 0.29 | 0.12 | 103 | Dera Baba Nanak | 0.25 | 0.94 |
| 6 | Pakhowal | 0.38 | 1.94 | 55 | Moga-II | 0.29 | 3.5 | 104 | Samana | 0.25 | 0.38 |
| 7 | Phillaur | 0.38 | 11.88 | 56 | Mukerian | 0.29 | 2.94 | 105 | Gidderbaha | 0.25 | 0.22 |
| 8 | Amloh | 0.37 | 2.64 | 57 | Kot Kapura | 0.29 | 0.88 | 106 | Jalalabad | 0.25 | 0.02 |
| 9 | Jalandhar East | 0.37 | 6.86 | 58 | Hoshiarpur-I | 0.29 | 1.36 | 107 | Kalanaur | 0.25 | 1.2 |
| 10 | Ludhiana-I | 0.37 | 1.87 | 59 | Batala | 0.29 | 2.2 | 108 | Naushera Pannuan | 0.25 | 0.75 |
| 11 | Sudhar | 0.36 | 6.91 | 60 | Saroya | 0.29 | 2.61 | 109 | Andana | 0.25 | 0.32 |
| 12 | Ludhiana-II | 0.36 | 2.27 | 61 | Attari | 0.29 | 0.4 | 110 | Bhikhiwind | 0.25 | 0.58 |
| 13 | Khamanon | 0.36 | 5.75 | 62 | Dasuya | 0.29 | 1.11 | 111 | Valtoha | 0.25 | 0.86 |
| 14 | Doraha | 0.35 | 1.9 | 63 | Sangrur | 0.28 | 0.74 | 112 | Ajnala | 0.24 | 0.29 |
| 15 | Kapurthala | 0.35 | 11.93 | 64 | Bathinda | 0.28 | 0.41 | 113 | Fatehgarh Churian | 0.24 | 0.39 |
| 16 | Khanna | 0.35 | 2.68 | 65 | Sultanpur Lodhi | 0.28 | 5.22 | 114 | Anandpur Sahib | 0.24 | 1.24 |
| 17 | Aur | 0.35 | 2.24 | 66 | Sunam | 0.28 | 0.37 | 115 | Qadian | 0.24 | 0.97 |
| 18 | Mahilpur | 0.35 | 13.21 | 67 | Bhawanigarh | 0.28 | 1.23 | 116 | Ghanaur | 0.24 | 0.57 |
| 19 | Barnala | 0.35 | 1.41 | 68 | Sherpur | 0.28 | 1.01 | 117 | Malout | 0.24 | 0.25 |
| 20 | Samrala | 0.34 | 3.41 | 69 | Lohian | 0.28 | 2.92 | 118 | Fazilka | 0.24 | 0.01 |
| 21 | Nawanshahar | 0.34 | 10.09 | 70 | Shahkot | 0.28 | 2.92 | 119 | Mamdot | 0.24 | 0.08 |
| 22 | Raikot | 0.34 | 5.23 | 71 | Hoshiarpur-II | 0.28 | 7.54 | 120 | Khuian Sarwar | 0.23 | 0.01 |
| 23 | Nur Mahal | 0.34 | 12.2 | 72 | Majri | 0.28 | 0.72 | 121 | Maur | 0.23 | 0.82 |
| 24 | Bhogpur | 0.33 | 6.62 | 73 | Rampura | 0.28 | 2.50 | 122 | Nabha | 0.23 | 0.07 |
| 25 | Nadala | 0.33 | 7.98 | 74 | Jagraon | 0.28 | 2.53 | 123 | Arniwala | 0.23 | 0.01 |
| 26 | Malerkotla-II | 0.33 | 0.74 | 75 | Mehatpur | 0.27 | 3.89 | 124 | Narot Jaimal Singh | 0.23 | 0.10 |
| 27 | Rayya | 0.33 | 1.89 | 76 | Sujanpur | 0.27 | 0.19 | 125 | Sri Hargobindpur | 0.23 | 2.02 |
| 28 | Adampur | 0.33 | 5.68 | 77 | Patti | 0.27 | 0.5 | 126 | Nurpur Bedi | 0.23 | 1.93 |
| 29 | Balachaur | 0.33 | 1.9 | 78 | Sangat | 0.27 | 0.46 | 127 | Talwandi Sabo | 0.23 | 0.68 |
| 30 | Bassi Pathana | 0.33 | 8.64 | 79 | Pathankot | 0.27 | 0.26 | 128 | Mansa | 0.23 | 0.3 |
| 31 | Sirhind | 0.32 | 2.81 | 80 | Ghall Khurd | 0.27 | 0.9 | 129 | Patran | 0.23 | 0.37 |
| 32 | Dhilwan | 0.32 | 5 | 81 | Dera Bassi | 0.27 | 0.22 | 130 | Guru Har Sahai | 0.22 | 0.05 |
| 33 | Verka | 0.32 | 1.26 | 82 | Bagha Purana | 0.27 | 2.6 | 131 | Dhar Kalan | 0.22 | 0.27 |
| 34 | Garhshankar | 0.32 | 2.44 | 83 | Kot Ise Khan | 0.27 | 1.38 | 132 | Zira | 0.22 | 1.71 |
| 35 | Jalandhar West | 0.32 | 9.19 | 84 | Hajipur | 0.27 | 1.05 | 133 | Budhlada | 0.22 | 0.13 |
| 36 | Jandiala | 0.32 | 2.34 | 85 | Lehragaga | 0.27 | 0.2 | 134 | Sanaur | 0.22 | 0.11 |
| 37 | Nathana | 0.31 | 0.11 | 86 | Phul | 0.26 | 0.95 | 135 | Firozpur | 0.22 | 0.49 |
| 38 | Dhuri | 0.31 | 1.28 | 87 | Gurdaspur | 0.26 | 0.66 | 136 | Chogawan | 0.22 | 0.57 |
| 39 | Malerkotla-I | 0.31 | 0.73 | 88 | Gharota | 0.26 | 0.3 | 137 | Makhu | 0.21 | 2.07 |
| 40 | Sidhwan Bet | 0.31 | 3.78 | 89 | Kahnuwan | 0.26 | 1.03 | 138 | Bhikhi | 0.21 | 0.22 |
| 41 | Morinda | 0.31 | 5.16 | 90 | Dina Nagar | 0.26 | 0.57 | 139 | Lambi | 0.21 | 0.26 |
| 42 | Nakodar | 0.31 | 4.09 | 91 | Bhagta Bhai Ka | 0.26 | 1.32 | 140 | Abohar | 0.21 | 0.01 |
| 43 | Khera | 0.30 | 6.26 | 92 | Tarn Taran | 0.26 | 0.76 | 141 | Chola Sahib | 0.20 | 0.4 |
| 44 | Rupnagar | 0.30 | 0.83 | 93 | Dorangla | 0.26 | 0.46 | 142 | Sri Muktsar Sahib | 0.20 | 0.17 |
| 45 | Majitha | 0.30 | 0.61 | 94 | Nihal Singh Wala | 0.26 | 2.37 | 143 | Gandiwind | 0.20 | 0.95 |
| 46 | Kharar | 0.30 | 1.75 | 95 | Dirba | 0.26 | 0.4 | 144 | Bhunerheri | 0.20 | 0.41 |
| 47 | Machhiwara | 0.30 | 3.21 | 96 | Talwara | 0.25 | 0.44 | 145 | Jhunir | 0.18 | 0.41 |
| 48 | Tarsika | 0.30 | 1.3 | 97 | Faridkot | 0.25 | 0.51 | 146 | Sardulgarh | 0.18 | 0.48 |
| 49 | Mahal Kalan | 0.30 | 2.74 | 98 | Bhunga | 0.25 | 1.84 | | State Average | 0.28 | 2.28 |

*CI represents: Composite Index value of the level of development.

**PFPA represents: Percentage of families having person abroad.

Source: Calculated from the values of different blocks in respect of various dimensions of development based on 2011 Census of India.

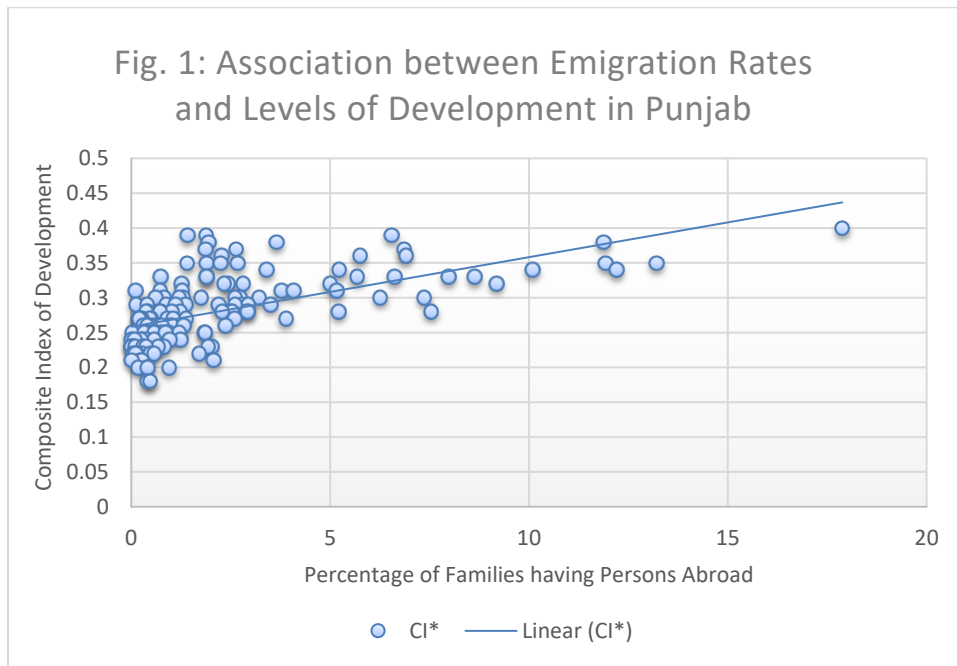


Table 2: Correlations

| | | CI | PFPA |
|------|---------------------|--------|--------|
| CI | Pearson Correlation | 1 | .608** |
| | Sig. (2-tailed) | | .000 |
| | N | 146 | 146 |
| PFPA | Pearson Correlation | .608** | 1 |
| | Sig. (2-tailed) | .000 | |
| | N | 146 | 146 |

** . Correlation is significant at the 0.01 level (2-tailed).

CI: Composite Index of Development

PFPA: Percent of Families having Persons Abroad

The spatial patterns of development in the state of Punjab clearly depicts two-fold division in terms of development as measured through agricultural, industrial, social and demographic indicators through composite index of development: the north eastern and the south western zones of Punjab. Out of the all highly developed blocks of the state, almost half lies in Doaba region and other half make a contiguous zone along its southern fringes in northern Malwa in the districts of Ludhiana and adjoining Fatehgarh Sahib. Upper Bari

Doab region depicts moderately developed levels with only four highly developed blocks along Delhi-Amritsar highway. Distinctively, blocks along GT road/Delhi-Amritsar railway line and adjoining districts are noted for high levels of development, which declines as one moves away from NH1. This zone is surrounded by moderately developed blocks and diminishes into low development levels. An elongated belt of acute underdevelopment is found along international border and boundary with Rajasthan and Haryana states. Evidently, Bist Doab is demographically the most developed region in the state, which is also noted for highest emigration proportions in the state. A strong positive association between emigration rates and levels of development is confirmed. It is further anticipated that the emigration should be properly channelized and youth from south western parts of the state should also be motivated to emigrate, but legally and to right places. Similarly, the remittances from abroad are to be optimally utilized and should be tapped towards sustainable development of the state. Government should network influential NRIs to fund for their region's as well as state's development. For this, desirable policies should be framed by the State to generate the desired outcomes towards sustainable development of all regions of the state.

References

Ballard, R. (2005) Migration, remittance, economic growth and poverty reduction: reflections on some South Asian developments, in T. Siddiqui (ed.) *Migration and Development: Pro Poor Policy Choices*. University Press, Dhaka.

Behl, A. and Singh, R. (2017) Regional Disparities in the Levels of Demographic Development in Punjab: A Block Level Study. *International Journal of Applied Business and Economic Research*, Vol. 15 (21 Part 2): 293-306.

Gosal, G.S. and Krishan, G. (1984) *Regional Disparities in Levels of Socio-Economic Development in Punjab*. Vishal Publications, Kurukshetra.

Government of India (2011) *District Census Handbooks*. Government of India, New Delhi.

Government of Punjab (2014) *Block-at-a-glance: 2013-14*, Office of the Economic Advisor to Government, Punjab, Chandigarh.

Tatla, D.S. (2004). Rural Roots of Sikh Diaspora. In Ian Talbot & Shinder Thandi (eds.) *People on the Move: Punjabi Colonial, and Post-Colonial Migration*. Oxford University Press, New Delhi, pp. 45-59.

Tumbe, C. (2011) *Remittances in India: Facts and Issues*, Working Paper No. 331. Indian Institute of Management, Bangalore.

Kapuria, S. and Birwal, D. (2017) International Migration from Punjab and Challenges. *Researchpaedia*, Vol. (1), January, 2017. pp. 27-36.

United Nations (2017) *International Migration Report: Highlights*. Economic and Social Affairs, United Nations, New York.

World Bank (2016) *Migration and Remittances Factbook: 2016*, The World Bank, Washington DC.