

## **Likely Channels of Spillover of Poverty in India: An Exploratory Analysis**

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**Abstract:** Though poverty occurs in all the states of India, is it a coincidence that the three states of India: Uttar Pradesh; Bihar; and Madhya Pradesh all sharing borders with Uttar Pradesh are low income, less developed and high poverty states. Though poverty in India is much explored in many aspects, it remains a puzzle that these three states of northern India besides sharing borders also share poverty, both income and non-income. This study using district level data examines poverty spillover among the states in northern India.

### **1. Introduction**

The headcount poverty in India was 54.9 percent in 1973-74 which declined to 27.5 percent in 2004-05. The decline was both in the rural and urban poverty from 56.4 percent and 49.0 percent in 1973-74 to 28.3 percent and 25.7 percent respectively in 2004-05. Across the states, it ranged from 28.2 percent in Punjab in 1973-74 to 66.2 percent in Orissa. In 2004-05, this varied from 8.4 percent in Punjab to 46.4 percent in Orissa. The density of poverty or the number of poor per unit of land area in India was 91.8 per sq km in 2004-05. This varied significantly from 39.4 people per sq km in Rajasthan to 392 per sq km in Bihar. The states with, particularly, high poverty levels are Orissa, Bihar, Madhya Pradesh (MP), Uttar Pradesh (UP) and also Maharashtra. Among these states UP, Bihar, and MP also share borders with each other. Is it a coincidence that these three states of northern India also share poverty, both income and non-income? Is a poverty spillover taking place among these states due to their 'neighbourliness'?

Some studies have argued that the regions are not autonomous and independent of each other and, a possibility of spillover exists among the regions (Parr, 2001; Luo 2005; Moreno and Trehan 1997). Parr (2001) added, "most importantly, this perspective (that regions are independent) fails to emphasize the existence of powerful economic relationships among regions, and in particular a given region's capacity to influence other regions by means of various spillover mechanisms." This spillover may be strong among the immediate neighbours and can be termed as the 'neighbourhood effect'. The spillover is positive, if the neighbouring state is rich, and reverses if the neighbours themselves are poor.

Spatially, Case, Rosen and Hines (1993) considered neighbourhood as similarities in demographic structure and level of economic development, besides ‘geographical proximity’. In our study neighbourhood implies states’ sharing borders with each other. Yet, we do not preclude the possibility of districts farther from borders having poverty spillover.

In the Indian context it remains unexamined whether adjoining states lead to poverty among themselves. Our study explores poverty spillover among the selected districts of three states UP, Bihar and MP and examine whether poverty spillover occurs due to geographical proximity (Table 1).

**Table 1: Districts adjoining UP, Bihar and MP**

UP with MP	MP with UP	UP with Bihar	Bihar with UP
Lalitpur	Bhind	Sonabhadra	Paschim Champaran
Jhansi	Datia	Chandauli	Gopalganj
Mahoba	Shivpuri	Ghazipur	Siwan
Banda	Guna	Ballia	Buxar
Chitrakoot	Sagar	Deoria	Bhojpur
Allahabad	Chattarpur	Gorakhpur	Bhabhua
Mirzapur	Tikamgarh		
Sonbhadra	Panna		
	Satna		
	Rewa		

The purpose of this paper is limited to examining specifically whether and through what channels poverty spillover can take place among the districts. This approach does have limitations as it misses out the bigger picture of poverty, but is also advantageous as it leads to better understanding of the reasons for poverty persistence in selected districts and can lead to focused policy prescriptions.

**2. Channels of Poverty Spillover in States**

Hyman, Larrea and Farrow (2005) argue that diffusion of innovation and technology or knowledge transfer; social capital; trade and economies of scale could cause poverty spillover or its reverse, prosperity spillover among the regions. In our study, we identify the major channels of poverty spillover as inter-state migration; absence of trade; lack of infrastructure; lack of adequate human capital; lack of access to finance and lastly, lack of agricultural and industrial development.

### **2.1. Inter-state Migration**

The contribution of migration to development can be both positive and negative. The positive effect of migration is associated with an increase in employment opportunities, and improved incomes. The negative effect, particularly associated with rural-urban migration is decline in urban life quality, slums congestion, burden on urban infrastructure and spread of poverty if the poor migrate. Hempstead (2001) observed that the regions situated next to each other are able to attract more migrants. Thus, although migration from one state to the other could be anywhere, perhaps migration to the nearest district would be higher particularly, for poor who may not like to travel long distances due to high costs and to maintain home ties.

The movement of people in the districts covered mostly involved less skilled people in search of employment (also short-term seasonal employment). The rural-rural migration is more common as urbanisation is low and as the migrants are less skilled, lesser opportunities exist for them in the urban areas. Migration plays an important role in UP's economy, particularly in eastern UP (Paris, Singh, Luis, & Hossain, 2005) which Lieten even called as "labour export zone" (Lieten, 2003, p.57). About 74 percent of the people migrating from the state are from rural areas and temporary seasonal migration is common. Rural poverty is one of the major reasons for migration to other areas. The maximum inter-state migration in 2001 was from UP to MP (54.5 percent), Bihar (47.6 percent), Chattisgarh (24.5 percent) and Jharkhand (6.8 percent). High inter-state migration among these states is due to their commonality in language - Hindi (although there are several regional dialects), food, customs and culture. Although rural-rural migration is a source of livelihood for many rural households and could lead to "accumulation of wealth" (Deshingkar & Anderson, 2004), yet such incomes are low and infrequent and do not effectively lead to reduction in poverty.

High out-migration whether to rural or urban areas, has also been observed in case of Bihar (World Bank 2005). Srivastava (2003) pointed out that across the different consumption groups' out-migration was in the lowest (due to poverty) and highest income groups (in search of better prospects).

### **2.2. Absence of Intra-state and Inter-state Trade Opportunities**

Absence of trade opportunities among these districts may also lead to poverty spillover. This could be due to the lack of demand and lack of market among these districts. An evidence of low demand is the homogeneity in the standard of living in these districts. More than 60 percent of the districts' population has low living standards. According to the Reproductive Health Survey 32 out of 37 districts in Bihar; 32 out of 70 districts in UP

and in MP, 14 out of 45 districts had low standard of living. Lack of trade could also be due to high inter-state barriers in trade and regulations (Bhide, Chadha, & Kalirajan, 2005).

### **2.3. Lack of Infrastructure**

Absence of adequate infrastructure such as, roads and availability of electricity also act as a deterrent in the industrial development of these districts. In Bihar just 33 percent of the villages in the districts had access to electricity. The situation in UP and MP was relatively better as in these states approximately 71 percent (UP) and 95 percent (MP) of the villages had access to electricity. Regarding access to surfaced paved roads, just 29 percent of the MP villages and 35 percent of the villages in Bihar had access to surfaced paved roads. This was 53 percent in UP.

### **2.4. Low Human Capital**

An important factor causing poverty spillover is the existence of poor human capital. Low human capital including health and education in the districts surrounding UP could further lead to poverty spillover, as poor regions cluster together resulting in the lack of knowledge transfer. An evidence of this is the high percentage of the literate population in some districts with not having completed even primary education. For instance in Chitrakoot (UP) 47 percent of the total literate population has not even completed primary level. In three MP districts -Shivpuri, Guna and Panna, such population is more than 45 percent. The illiteracy rate in UP districts, on an average, was 42.4 percent. In Lalitpur (UP), illiteracy rate is as high as 51 percent. In Bihar in the districts adjoining UP, the average illiteracy rate was 49 percent and in Paschim Champaran alone, the illiteracy rate was high at 61 percent. Furthermore, access to schools, both government and private, to the people living in these districts is low, particularly in UP and Bihar districts. The population covered per school is very high in Bihar and UP districts, though it is lower in MP districts.

### **2.5. Lack of Capital or Financial Exclusion**

Another reason attributed for the perpetuation and spillover of poverty is lack of finance in these districts. Lately, the significance of financial inclusion has been realized in the development policy field (Demirguc-Kunt & Levine, 2008; World Bank, 2008). A measure used to judge financial inclusion of the population is the number of deposit accounts to the ratio of adult population. As per this, the level of financial inclusion was only 40 percent in Bihar and 51.5 percent and 66.9 percent in MP and UP respectively. This measure, however, takes into account only number of accounts, which could be concentrated in a few bank branches. It does not take into account the spread of branch

banking in the state. The presence of few bank branches and not within the easy access of the population, particularly in the rural areas would exclude many people from having access to the financial services. Population covered per bank branch in the districts under study was much higher than the state average and national average. This ranged from 16,157 in the Jhansi district to 28,829 in Chandauli in the eastern region. Similarly in MP too, a number of districts have per bank branch population much above the state average.

Fewer bank branches results in excluding population from accessing financial services, particularly in the rural areas. In the literature on economic development, increasing number of bank branches is expected to lead to increased savings and investment (Lewis, 1955; Porter, 1966). Burgess and Pande (2003) on the impact of bank branches on poverty and output in India during the period 1977-1990 found that a 1 percent increase in the number of rural banked locations reduced rural poverty by 0.36 percent and increased total output by 0.55 percent. The rural branch expansion also increased non-primary sector output, and non-agricultural employment.

## **2.6. Lack of Resources<sup>1</sup>**

The districts also share poor agricultural areas, lack adequate industrial base and have large number of unskilled labourers which result in low output and incomes. Although UP districts have industrial presence, their share in state's industrial output is very low and they are not high value added products. Compared to export oriented, high value goods industries located in the western UP low value industries such as, oil crushing including mustard exist in the eastern UP. Also, the industrialisation is skewed with only one district contributing 19 percent of the total manufacturing output in 1999-2000 and 43 districts contributing between 0-1 percent of manufacturing output.

Some districts particularly in the Bundelkhand region – Lalitpur, Jhansi, Banda are rich in minerals such as, coal, diaspore, sulphur and magnesite, prophyllite, silica sand and limestone. The industries using these minerals are fertilisers, aluminum metal, caustic soda, ferro alloys, sulphuric acid and oil refinery. Other minerals found in the districts are marble in Mirzapur and Sonbhadra, uranium in Lalitpur district and barytes and edalusite in the Mirzapur and Sonbhadra. Mineral-based industries are major contributors to the economies of these regions; however, their scale of operations is small (Table 2).

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<sup>1</sup> This section draws heavily from Chapter 1 'Uttar Pradesh Economy: Trends and Status' in Uttar Pradesh Development Report, Volume 1, Planning Commission, Government of India.

**Table 2: Industries in the Selected Districts of UP**

Districts	Export Goods	Industries	Total No. of Districts Producing in state	Share in value of output in (in percent) all manu in respective in UP industry in India	
Lalitpur	Brass work	Other Chemical Products	1	0.85	5.58
Jhansi	Brass work	cement, lime & plaster;	1	0.59	2.05
		electric motors, transformers	1	1.24	7.15
Mahoba	Betel leaves	Grain mill product	15	3.1	5.8
Banda	Shafar Stone	spinning of textile fibre	15	4.37	3.68
Chitrakoot		Refined petroleum products	3	1.16	1.28
Allahabad		spinning of textile fibre	15	4.37	3.68
Mirzapur	Carpets	man of coke oven products	2	0.38	5.69
		spinning of textile fibre	15	4.37	3.68
Sonbhadra		man of coke oven products	2	0.38	5.69
Chandauli	Rice	Prepared animal feeds	1	0.2	3.17
		Manufacturing of dairy products	9	2.64	9.27
Ghazipur		spinning of textile fibre	15	4.37	3.68
Ballia		spinning of textile fibre	15	4.37	3.68
Deoria		Sugar	24	13.33	28.78
Gorakhpur	Disposable	Fertiliser & nitogenoeus	6	8.29	18.02
	Syringe	compounds			
	Terracota				

**3. Conclusion**

Poverty has been much examined in the literature both in international and also Indian context. Although studies exist on the spatial poverty in India, yet it remains unexamined whether high poverty states could be causing poverty among each other, just by being neighbours and sharing borders with each other. This study in an attempt to examine spillover in poverty through the ‘neighbourhood’ considered three states of northern India - UP, Bihar and MP. These states are landlocked and share a number of common features including borders. Compared to the broader definition of neighbourhood adopted in some studies, this study defined neighbourhood narrowly in terms of geographical proximity. This enabled the present study to highlight that these districts not only share borders, but also share low economic and human development.

Among the likely channels of poverty spillover our study identified inter-state migration; absence of trade opportunities; poor physical and human capital; low access to finance and poor agricultural and industrial development. Migration, particularly seasonal and short-term (when agricultural and casual labourers move to other states during the harvest peak season and return once the season is over) is common among these states. This, although a significant factor in the spillover of poverty, is also an important survival and livelihood strategy for the poor in these districts. Lack of adequate trade opportunities, infrastructure including human capital, low access to finance were observed by this study as the source of spillover in poverty. Thus geographical (land characteristics) and also the non-geographical factors were responsible in high poverty levels in these districts.

The alleviation of poverty and minimising poverty spillover in these areas requires combination of strategies which aim at containing geographical effects, and also address household inbuilt effects, that is, deal with the poverty due to household characteristics on the education and health front. A more novel strategy would be for these states to cooperate and form a unified approach to push economic and social development. Such a determined approach to weed out the negative spillovers by focusing on growth and development would lead them on to higher growth paths. However, poor governance, different regional political parties in the concerned states and their own stakes, and lack of consensus, all contribute to rule out any such initiative.

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