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Understanding the poor economic performance of Bihar and Uttar Pradesh, India: a macro-perspective

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This paper investigates the underlying causes of poor economic growth of Bihar and Uttar Pradesh (UP), India, despite being endowed with relatively rich natural resources. Against the conventional view, the analysis reveals that poor economic growth is not due to a particular factor but an outcome of a myriad of social, economic and political factors rooted in structural, historical and macro-economic policies. The economic marginalization of Bihar and UP began in the colonial era through the establishment of an exploitative landlord class, which constantly resisted economic and social development even after independence in 1947. The process of marginalization has further been reinforced by the federal central government's policy of 'freight equalization', which nullified the comparative advantage of Bihar and UP in natural resources by subsidizing railway freights of industrial inputs like coal, iron ore, steel, cement and other bulk resources. This, combined with relatively low financial resources received from central government over the consecutive plan periods, has undermined these states' capacity to invest in health, education, and other social and physical infrastructure and resulted in low human development. The poor performance of Bihar and UP may be attributed to low human capital, weak institutions and poor infrastructure coupled with political instability and social conflict rooted in sectarian politics based on caste, class and ethnic division.

Keywords: economic growth; resources endowment; government policy; institutions; Bihar; Uttar Pradesh; India

Introduction

India has experienced impressive economic growth since the 1990s. Its growth patterns, however, are uneven. While some states like Maharashtra, Punjab, Haryana and Gujarat are growing by 7–10%, others, particularly Bihar¹ and Uttar Pradesh (UP),² have lagged behind (Dreze & Gazdar, 2006; Parker & Kozel, 2007; Shand & Bhide, 2000). Bihar and UP (Figure 1) are the least developed states in India. With economies that are still mainly agricultural, both are categorized as low economic performers or BIMARU ('sick' in Hindi)³⁴ states (Ahluwalia, 2001), though recently Bihar's economy has made a remarkable improvement which will be discussed below. Industry and service sectors are still nascent in these states. Per capita state domestic product is very low at Rs5465 in Bihar and Rs8298 in UP (rupees), much less than the national average of Rs11 936. Bihar's per capita state domestic product is less than one-third of Maharashtra's. One out of three of India's 400 million poor live in Bihar and UP. As can be seen in Table 1, levels of human development (e.g. literacy, malnutrition, life expectancy, etc.) are also much lower than the national average in these two states.

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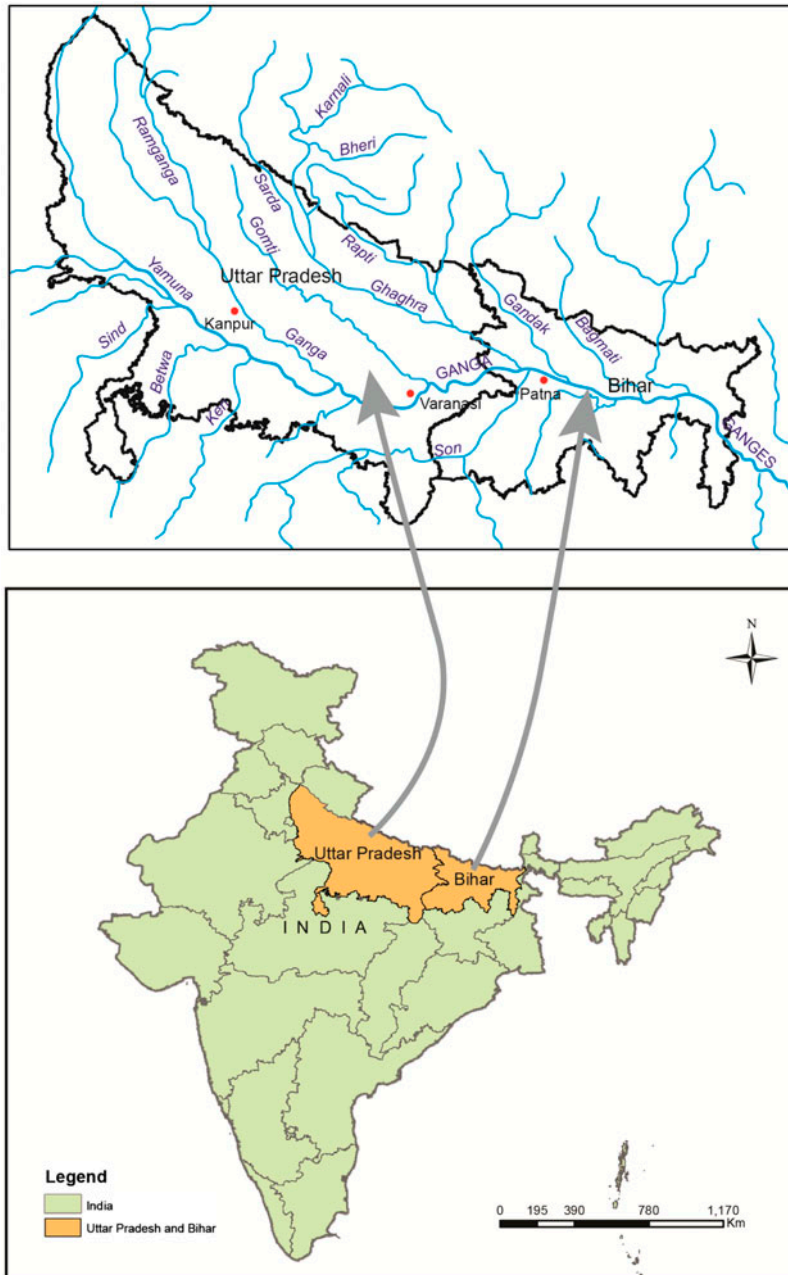


Figure 1. Study area: the states of Bihar and Uttar Pradesh, India.

Bihar and UP are lagging behind in socio-economic condition compared with the national average (Figure 2).

Paradoxically, Bihar and UP are endowed with better natural resources and agro-climatic conditions than most other Indian states. Most of Bihar and UP are part of the

Table 1. Socio-economic status of Bihar and Uttar Pradesh with other selected states of India.

	Bihar ^a	Uttar Pradesh ^b	Gujarat	Haryana	Maharashtra	Punjab	All India	Bihar as a % of India	UP as a % of India
Geographical area (thousands km ²)	94	236	196	44	307	50	3287	2.86	7.18
Population (millions)	83	166	51	21	97	24	1027	8	16
Population density (persons/km ²)	880	690	258	478	315	484	329	267.47	209.72
Per capita net state domestic product (NSDP) average for 1996 to 1998–99 (indian Rupees) ^f	5465	8298	17 393	17 804	19 248	18 924	11 936	45.78	69.52
Average annual economic growth rate of NSDP, 1993–2004	4.9	3.8	7.9	6.1	5.4	4.0	6.3	77.77	60.31
Sectoral share in gross state domestic product in 2004–05 (%)									
Primary ^c	40.19	33.40	18.45	28.19	11.93	37.07	22.81	176	146
Secondary ^d	11.73	23.61	39.08	27.45	29.22	23.48	24.78	47	95
Tertiary ^e	48.07	42.98	42.45	44.35	58.85	39.45	52.41	92	82
Poverty ratio	42.6	31.2	14.1	8.7	25	6.2	26.1	163.21	119.54
Absolute number of poor (millions)	50.49	63.92	9.25	3.27	31.65	2.14	315.48	16.00	20.26
Human Poverty Index	40.07	34.58	27.47	25.58	26.63	22.54	31.02	129	111.47
Literacy rate	47.5	57.4	70	68.6	77.3	70	65.4	72.62	87.76
Life expectancy, 1994–97 (years)	59.4	57.2	61.4	63.8	65.2	67.4	60.7	97.85	94.23
Infant mortality rate (per thousand)	62	83	60	66	45	52	66	93.93	125.75
Malnutrition of children (0–3 years) (%) ^g	58.4	47.3	47.4	41.9	39.7	27.0	45.9	127.23	103.05

Notes: ^aThere is intra-state variation, however this paper focuses on state-level economic and social performances.

^bSome parts of UP, particularly Western UP, are more developed than other regions due to industrial development. However, in this paper data are considered for the entire UP.

^cPrimary sector includes agriculture, forestry, fishing, mining and quarrying.

^dSecondary sector includes manufacturing, electricity, gas, water supply and construction trade.

^eTertiary sector includes trade, tourism, transport, communication, banking and insurance, and other services.

Sources: ^fBagchi and Kurian, 2005; ^gPlanning Commission, 2008; rest of the data are from Himanshu, 2007.

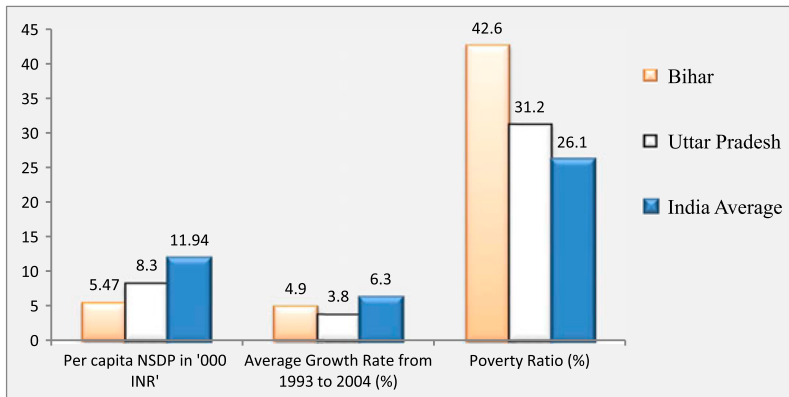


Figure 2. Socio-economic conditions of Bihar and Uttar Pradesh.

Gangetic plains with fertile alluvial soil. Besides the river – the Ganges – a large number of smaller rivers originating from the Himalayas flow through this region to meet the Ganges. High rainfall, along with the melting of snow from the Himalayan Mountains, feeds the Ganges and its tributaries with water during the dry season and provide a perennial source of irrigation to large areas in Bihar and UP. This water and the silt from the Himalaya make the soil fertile and suitable for agriculture, fishery, live-stock and forestry. Bihar and UP are also rich in mineral resources and forests. More than 40% of India's coal, 32% of its bauxite, 59% of its copper, 17% of its iron ore, about 80% of its silver and 60% of its mica comes from Bihar (Sharma, 1985). UP is also rich in mineral resources. Such an ample rich resource base would lead to one to expect that Bihar and UP would be relatively well-off compared with other states of India. Unfortunately, these two states seem to be caught in the trap of underdevelopment. The question is why.

Bihar and UP pose a serious development challenge not only for India, but also for the global community because India's achievement of Millennium Development Goals (MDGs) will be difficult unless poverty is reduced substantially in these two states. To design policies and strategies for accelerating economic and social development in Bihar and UP, it is vital to identify the underlying factors that have stalled development there. While huge efforts have been made to document the diverse patterns of economic growth in India (e.g., Ghosh, 2008; Parker & Kozel, 2007), little systematic work has been done to understand the factors that contributed to different growth patterns within the country. The focus has often been on micro-issues overlooking the broader structural and policy matters that shape the patterns of development (e.g., Parker & Kozel, 2007; Thakur, Bose, Hossain, & Janaiah, 2000). This paper explores the factors responsible for low levels of economic development in Bihar and UP from a macro-perspective. The purpose of the paper is not to identify the determinants of economic growth and quantify their role or testing hypothesis of any growth model, rather it is to understand what conditioned the economic growth and social development by looking at different strands of thought from an historical perspective. The contribution of this paper is therefore descriptive, aimed at a deeper understanding of social, political, economic and historical context that shaped the speed and path of socio-economic development of Bihar and UP.

Although reducing poverty and accelerating economic growth has been the key focus in development economics, understanding about the causes of economic growth has remained poor (Kenny & Williams, 2001). While the empirical literature has contributed to an enhanced understanding of cross-country growth performance and recent development in econometric methods allowed endogeneity and model uncertainty to be explained (e.g. Dollar, 1992); Brock & Durlauf, 2001; Doppelhofer, Miller, & Sala-i-Martin, 2000; Mirestean & Tsangarides, 2009), econometric models fail to grasp fully the complex causal nature of the social world, underlying economic and social processes that reinforce each other and shape development patterns and space (Bunce, 2004; Mayntz, 2004; Pierson, 2007). Strategies and policies based on such analysis fail to address the fundamental causes of underdevelopment, as economic development is a multifaceted complex and dynamic process (Adelman, 2001; Kenny & Williams, 2001). This paper focuses on understanding the diverse factors and their underlying processes that contribute to the poor development of Bihar and UP. It examines structural and historical factors and macro-policies (at the state and national level). Although the focus of this study is on Bihar and UP, the lessons that have emerged through this study would be useful for other countries of South Asia and elsewhere as similar development challenges are being faced by many countries in the world including China, Brazil, Mexico and Nigeria, where growth patterns are uneven (Jalan & Ravallion, 2002; Ravallion & Chen, 2007). This study relies on information drawn from various secondary sources including books, journals, and government reports and planning commission documents.

The paper is structured as follows: The second section develops a conceptual framework to understand the crucial factors that influence the development performance of a state by reviewing basic literature on economic development. This is followed by the presentation of data and interpretation of results in the third section. The fourth section draws conclusions and reflects on recent development in Bihar.

Factors influencing economic growth: a conceptual framework

The reason that different countries – even different regions within a country – achieve different levels of economic growth has been the focus of enquiry since the beginning of modern economics. The search for the drivers of national wealth can be traced back to the 1700s to the writings of physiocrats who believed that agriculture was the lone source of production; and that an increase in the productivity of agriculture increases the wealth of a nation (Brunnschweiler, 2008; Fontaine, 1996; Steiner, 2007). Adam Smith, David Ricardo and other classical economists considered land, labour and capital as the key factors of production and the major contributors to a nation's wealth (O'Brien, 2004). The followers of classical economists such as Gallup, Sachs, & Mellinger (1999), Ding & Field (2005) and Stijns (2005) consider resource endowment (i.e., natural wealth, land, soil, weather, climate and mineral resources) as the primary basis of agriculture and industrial growth. The differences in resource endowment among the different countries and regions lead to differential rates and levels of economic growth (Stijns, 2005). While there is general agreement that natural resource endowment is important for economic growth, there is a debate among scholars about whether this alone is the determining factor. The extent to which resource endowment contributes to economic growth depends upon how well the resources are managed. A large number of empirical studies (Hodler, 2006; Sachs & Warner, 2001; Stijns, 2005) show that though resource endowment may stimulate growth in the short run, abundance of natural resources can be also a 'curse' as it often fails to sustain the growth in the long run as the state is often unsuccessful in

developing the strong governance institutions and market mechanisms needed to harnessing the resources in an efficient, equitable and sustainable way.

In contrast to classical economists who consider natural capital as the prime basis for economic well-being, neo-classical economists (such as Solow, 1956; Romer, 1986; and Auty, 2007) consider human-made capital as the engine of economic growth. They argue that it is not the abundance of natural resources, but technology, investment, capital formation and savings that drive the economy. They contend that for sustained economic growth, productivity needs to be maintained through constant improvement of technologies and increased capital investment. As investment is a function of capital formation and savings of a nation, the growth differences between the countries and regions, therefore, are primarily due to the differences in the rate of savings, capital formation, technological progress and investment.

The neo-classical approach, however, failed to appreciate the policy and institutional environment under which savings, capital formation and investment take place. Institutional economists (e.g., North, 1990; Acemoglu, Johnson, & Robinson, 2001; Rodrik, Subramanian, & Trebbi, 2004) argue that investment is not a function of savings and capital formation alone but also depends on the institutional environment – things like property rights, macro-economic management and rule of law that can either support expectations of profit or undermine them. In North's well-known words, institutions are 'the rules of the game' that can shape economic behaviour either in a way that stimulates economic growth or in a way that makes economic players risk averse and reluctant to invest (North, 1990).

While institutions influence economic growth, the question remains: why have some nations managed to establish better institutions than others? Institutionalists have not provided a fully satisfactory answer to this. Structuralists (e.g., Belotti, 2006; Chenery, 1979; Justman, 1991) believe that the form and nature of institutions in a given country or region are rooted in historical and socio-economic conditions that have prevailed there. In their view, a nation's structural condition (i.e., its human resources, their dynamism and capacity to innovate and respond to new opportunities and constraints) is the key factor of economic growth. In contrast to the classical and neo-classical views, structuralists think that the comparative advantage of a nation is not its physical or even its human capital, but rather its social structure. This is because the way power relations between different classes and identity groups are structured regulates the access to productive resources and the way they are used; it also helps determine access to specific skills, capacities, and infrastructure for better utilization of human and physical capital (Dreze & Gazdar, 2006). Structuralists maintain that sustained economic growth requires appropriate policies, institutions and technologies, which in turn depend on ideological coherence, bureaucratic instruments and political commitment. They advocate a critical role of the state in facilitating changes in the way access to these critical features is structured to expedite economic growth (Gereffi & Fonda, 1992; Nayyar, 2008).

Drawing on a structuralist approach, Nurkse (1953) argues the lack of capital required for large-scale investment is a major cause of low economic growth in developing countries. Low capital resulting from low savings rate due to low productivity and high propensity to consumption reinforces the 'vicious circle' of poverty and the 'low-level equilibrium trap' (Nelson, 1956; Nurkse, 1953). To transform the vicious circle into a virtuous circle, increased savings, capital formation and a big push in investment are needed (Rosenstein-Rodan, 1961). Against the mono-causal explanation, Myrdal (1957) sees economic growth as a 'cumulative causation' through mutual interaction of

economic and social factors including initial resource endowment, demographic factors, macro-economic policies, economies of scales and specializations.

Looking at political economy perspectives, Marx (1867) considered that the fundamental driving force of economic growth is continuous improvement of productive forces, which is influenced by the production relations. According to Marx, production relations constitute the economic structure of a society that is shaped by ideological, political and social systems. This structure defines the mode of access to resources, exchange, and distribution of income and benefits. Political elites do not always support economic development when development erodes their authority and power and thus thwart economic growth (Acemoglu & Robinson, 2006).

While Marx saw improving production relation as a means to unleash economic growth, Sen (1999) considers removing inequalities, injustice and deprivation (hunger, illiteracy, poor health, powerlessness), and improving opportunities for social and human development as the means – and the end – of economic growth. According to him, political choices, institutional structures, and forms and quality of governance influence the economic choices and development path, which, in turn, shape the pace and patterns of economic development (Sen, 1999). Although efforts have been made to understand the underlying causes and process of differential development outcome in different regions, and huge theoretical and empirical literature has generated, there is still no agreement on this (Mirestean & Tsangarides, 2009). Drawing lessons from Bihar and UP, this paper is expected to shed more light on this.

Empirical evidence

This section explores the factors responsible for low levels of development of Bihar and UP and is organized around structural, institutional and macro-economic factors.

Structural factors

High population and low skill

While skilled human resources are a driving force for economic growth, a balance between population and economic growth is essential for the manpower to be absorbed by the productive sector. The population density of Bihar and UP is more than double (800 and 690 persons/km² respectively) the national average of 329 persons/km² (Table 1). People are an asset when they are skilled enough to take the existing opportunities or create new opportunities through innovation and entrepreneurship. However, a large section of the population in Bihar and UP has remained unskilled and poorly educated. Due to the absence of a dynamic non-farm or industrial sector in Bihar and UP, the growing low-skilled population has created tremendous pressure on the agriculture sector. The percentage of agriculture workers in Bihar has increased from 41.8% of the economically active population in 1971 to 48% in 2001. In UP it increased from 22.2% to 24.8%, while in India as a whole the proportion of agricultural workers in the overall workforce has declined from 31.4% to 26.5% (Ghosh, 2008) in the same period. As the agriculture sector has limited capacity to absorb the additional labour force, the extra hands have failed to contribute to agriculture production, in what is referred to as disguised unemployment.

Due to high poverty, inequality and a poor education system resulting from low investment and poor governance, the education and health condition of Bihar and UP is

poor. Vocational training has also been inadequate leaving the vast majority of the rural workforce unskilled and engaged mostly in agriculture. Many have been forced to migrate to other states for seasonal or long-term work (*Bihari Times*, 26 June 2009). Thus, the large population could not contribute to economic growth as expected by Boserupian theory due to an absence of social and economic conditions to absorb the additional population and support innovative technologies (Boserup, 1965).

Weak agrarian structure

Bihar and UP are primarily agricultural states with about 80% of their population living in rural areas and depending on agriculture directly or indirectly. Land, the primary basis of agriculture, and social and political power have remained in the hands of the elite class.

Although some efforts were made in land reform, the elite class frustrated them as it went against their economic and political interest. Consequently, about one-third of rural households of Bihar in 2002–03 were landless and another 15% operated holdings smaller than 400 m² (NSS Report No. 492, 2002–03, p. 176, cited in Mishra, 2007). A similar situation existed in UP (Dreze & Gazdar, 2006).

While large landlords still control vast expanses of land, agriculture generally remains in the hands of small holders and tenants. Tenants who have low levels of savings and who must share the harvest with landlords have little capital to invest in agriculture and less incentive to do so because of their insecure property rights. The landholders, who have the capital, have little interest in investing because agriculture is not their prime occupation and most of them live in towns and cities. As a result, private investment to increase agricultural productivity has remained suboptimal. The situation has been further exacerbated by low investment by the public sector in building physical and economic infrastructures, as explained below.

Poor physical and economic infrastructure

Like private investment, public investment in agriculture in Bihar and UP has remained inadequate. Per hectare capital expenditure in agriculture in Bihar is less than one-fourth of that of Punjab and less than half the national average (Guruswamy & Kaul, 2003).

Bihar and UP have not made enough investment in irrigation infrastructure. Only 50% of agricultural land is irrigated in Bihar and 60% in UP, compared with 90% in Punjab and 87% in Gujarat. Owing to poor public infrastructure for surface water and increased water stress, farmers of Bihar have shifted to ground water irrigation as in the case of other states. There was a huge surge in the 1980s in Bihar and UP in ground water irrigation. This, however, did not yield higher productivity because the poor electricity supply and sharp increase in diesel prices increased the costs of irrigation, land preparation and threshing (Ramagundam, 2009; World Bank, 2005). Fertilizer and pesticide prices also increased substantially. Yet, while input prices had increased significantly, the output price of agriculture remained almost stagnant. Thus, the output–input price ratio changed and reduced profitability. To keep the farming remunerative, the states of Punjab, Haryana, Gujarat, Maharashtra and Karnataka provided concessions in electricity and diesel prices. The Bihar government, however, could not provide such concessions to farmers due to financial constraints (Kishore, 2004). In addition, most of the farmers in Bihar and UP are not able to receive the price incentives given by central government through food grain collection owing to small land holdings and little

surplus. Bihar's food grain yield is lower than the national average and less than half of Punjab's (Government of India, 2007).

Low public and private investment, poor physical and institutional infrastructure, unequal land distribution, poor agrarian social structure including persistence of feudal elements not only hindered the growth of productivity in agriculture but also reinforced social inequality that creates structural barriers to the overall development of the society and economy.

Governance and institutional factors

Well-functioning institutions, good governance and strong leadership play critical roles in economic development (Beer & Clower, 2014; Nayyar, 2008). Bihar and UP are rated as the most poorly governed states of India (World Bank, 2005). After independence in 1947, Bihar and UP were ruled by the high-caste elites with strong economic and political power. Since the dominant political parties failed to respond to their needs and demands, so-called lower castes and ethnic minorities began to organize themselves in the 1970s under socialist leaders. This led to the alignment of political forces on the basis of caste and ethnic identity. As a result, several parties emerged in UP and Bihar to represent caste and ethnic interests of less powerful groups. The Bahujan Samaj Party (BSP), Samajwadi Party (SP) and Janata Dal are a few examples. Although this has changed the political landscape of Bihar and UP and the parties representing discriminated caste and ethnic groups have won elections in both states, sectarian caste-based politics have failed to improve government performance in terms of economic growth. Caste-based politics in Bihar and UP promoted an electoral culture that locks in votes for candidates based on caste, regardless of their competence or performance. The conflict between the so-called 'backward' and 'forward' castes has been an ongoing phenomenon in Bihar and UP since the independence of the country.

Sectarian politics and weak leadership have undermined political stability and weakened government capacity seriously. For instance, in a span of 12 years from 1991 to 2002, there were eight governments and three spells of the president's rule in UP (Pai, 2005, p. 105). Likewise, more than 20 governments were in power in Bihar from 1961 to 1990, of which none was able to complete its term of office. As a result, most of the governments remained dysfunctional with a weak capacity to enforce law and order, regulate and guide the activities of the private sector, and design and implement programmes and projects effectively (World Bank, 2005). The administrative capacity of both states has weakened during this period, as did the quality of governance, the rule of law, financial management, and implementation of developmental plans and programmes (Saxena, 2007). Due to poor governance, physical and economic infrastructures such as roads, transportation and electricity, essential for attracting investment and pursuing other development efforts, have remained inadequate in Bihar and UP. The Index of Infrastructure developed by the Finance Commission of India shows that Bihar is on the lowest rung in terms of physical infrastructure (Planning Commission, 2012). Poor governance not only hampered the implementation of public funded programmes and projects, but also increased the costs and risks to private business – from small entrepreneurs to large business houses – in the face of poor law and order and increased corruption (World Bank, 2005). Weak administration also undermined government's capacity to mobilize local resources effectively to fund development expenditure. As a result, the lion's share of revenue went to paying salaries and other administrative costs,

while expenditure for health, education and infrastructure development depended heavily on central government (Saxena, 2007).

Macro-economic factors

Transfer of resources from the centre to the states

The Indian Constitution divides government functions and financial authority between the central and state governments. Central government provides financial support to state governments through different mechanisms, such as the finance commission, planning commission, allocations to line ministries for centrally funded programmes and through special projects implemented by central government and additional central assistance. Table 2 presents the per capita plan allocation to the states from the centre in the 1st to 11th Five-Year Plan period (1951–2012). Bihar and UP have been receiving less per capita allocation from the centre for development expenditure (Table 3) than any other of the states. Until the 7th Plan (1990), Bihar and UP received less than half the national average allocation. Although in the 8th Plan Bihar and UP received slightly higher per capita resource allocations, they still received much less than the all-India per capita average. After the 8th Plan, allocations to Bihar and UP were once again reduced. Bihar received less than half the all-India average and UP got two-thirds to two-fifths.

If the planned allocation is compared with the developed states such as Punjab, Haryana, Gujarat and Maharashtra, it is clear that Bihar and UP have been systematically deprived of funds. In the 1st Plan, Bihar and UP's planned allocation was less than one-fourth of Punjab. This pattern has continued for almost the entire plan period. Contrarily, Gujarat, Maharashtra and Haryana received per capita allocation of more than double that of Bihar and UP during the entire plan period.

Because Bihar and UP have relatively undeveloped industry and services sectors, the fiscal resource base of both states is relatively small. Moreover, their low administrative capacity (coupled with the reliance on patronage politics) has weakened the ability of both states to collect revenue. Bihar and UP were not even able to manage the matching funds required for centrally sponsored development programmes. The weak administrative capacity has also led to low utilization of development funds in Bihar and UP. For instance, in the 8th and 9th Plans Bihar's utilization rate of all development funds was less than 50% (Saxena, 2007). In spite of the greatest need for development assistance from the centre, Bihar has the lowest resource utilization rate in India (Saxena, 2011). The unused funds in Bihar are transferred to more efficient states. Moreover, since resource allocation partly depends on resource utilization capacity, Bihar and UP received relatively low per capita allocations. This has resulted in a vicious circle starting from a low fiscal resource base, leading to low resource capacity to attract matching funds, low absorptive capacity, low investment, poor infrastructure, low human resources leading once again to low private investment and low fiscal resource base.

Bihar and UP have been further disadvantaged by receiving relatively less externally funded projects and financial resources including loans and grants from the centre. The non-plan development allocations and grants received by the states from the centre also follow the trend of the plan allocation where Bihar and UP receive less than the national average. Bihar received half of the national average of the grants and UP just over two-fifths (Table 3). Low levels of financial grants and centrally assisted projects combined with low saving rates and low state revenues because of both states' weak industrial

Table 2. Per capita plan resource allocation from the 1st to 11th Five-Year Plan (FYP), 1951–2012.

States/fiscal year	Uttar Pradesh		Gujarat	Maharashtra	Haryana	Punjab	All India	Bihar as a % of all India		UP as a % of all India
	Bihar									
1st FYP (1951–56)	26.98	26.25	n.a	n.a	n.a	136.26	109.28	24.69	24.02	
2nd FYP (1956–61)	41.85	34.34	n.a	n.a	n.a	117.7	109.28	38.30	31.42	
3rd FYP (1961–66)	72.72	67.44	114.08	98.73	n.a.	204.77	170.75	42.59	39.50	
4th FYP (1969–74)	97.79	113.02	179.13	186.23	236.84	224.35	302.12	32.37	37.41	
5th FYP (1974–79)	61.04	84.11	120.89	138.04	180.6	152.32	452.31	13.50	18.60	
6th FYP (1980–85)	475.66	550.33	1132.31	1025.75	1463.41	1218.56	1483.88	32.06	37.09	
7th FYP (1985–90)	667.54	855.61	1657.46	1519.54	2027.97	1814.92	2402.88	27.78	35.61	
8th FYP (1992–97)	1511.63	1480.96	2725.12	2294.92	3372.78	3189.32	2154.5	70.16	68.74	
9th FYP (1997–02)	1805.19	2985.82	5983.12	4095.98	4848.44	5088.5	3667.53	49.22	81.41	
10th FYP (2002–07)	2536.23	3596.87	7922.18	6890.59	4897.62	7709.5	5667.57	44.75	63.46	
11th FYP (2007–12)	6800	10 067	19 000	14 576	12 337	11 232				

Note: Values are projected per capita outlay (rupees).

Sources: Plan Documents, 1st–11th FYs, Planning Commission, Government of India.

Table 3. Per capita plan and non-plan development expenditures in Bihar and Uttar Pradesh and selected other states of India.

	Bihar	Uttar Pradesh	Gujarat	Haryana	Maharashtra	Punjab	India	Bihar as a % of India	UP as a % of India
Development expenditures from 2002–03 to 2004–05 (Rs)	3206	3786.3	12047.7	9520.1	7619.8	9467.9	6748.5	47.5	56.1
Average per capita annual grants from the centre from 2002–03 to 2004–05 (Rs)	272.66	227.33	431	333.33	313.00	533.66	543.33	50	42
Additional assistance for externally aided projects in states from 1998–99 to 2000–01 (Rs per capita) ^a	37	156.2	330.3	352.2	120	191.3	187.5	20	83

Sources: Guruswamy & Kaul (2003), Guruswamy, Sharma, & Prakash (2006), ^aKurian (2008).

base have kept Bihar and UP from making the investments in physical and economic infrastructures necessary for economic development.

Industrial policy

Bihar was famous for textile handloom and spinning. During the early 19th century, about 20% of the state's population was involved in spinning and other industrial work. However, due to the British policy of discouraging cottage industries and the promotion of indigo cultivation, these industries employed only 8.5% of the state's working population (Bagchi, 1976). This declining trend continued even after independence.

The government policy of 'freight equalization' introduced in 1952 further marginalized Bihar and UP. Under this policy, railway freight rates for industrial inputs like coal, iron ore, steel and cement were structured in a way that would ensure that they were available at the same price in all parts of the country through government subsidies (Kant, 1999; Mukherji & Mukherji, 2012). The impact of this policy is distributed unevenly. While this policy helped some states of the south and west to build industries with raw materials sourced from Bihar and UP at subsidized transport costs, it neutralized the benefits of proximity and comparative advantage of Bihar and UP in establishing locally available mineral resource-based industries (Guruswamy, Sharma, Prakash, 2006; Kant, 1999). While coal and other natural resources available in Bihar and other eastern states were made available inexpensively to other parts of India, other industrial inputs available in other parts of India were not included in the freight equalization scheme, such as petroleum products. This policy negated the comparative advantages of Bihar's and UP's mineral resources and affected industrial and economic growth through dynamic loss of forward and backward linkages (Mukherji & Mukherji, 2012). For instance, the Tata group decided to invest in Bihar because of its natural advantage of minerals, but changed its decision after the introduction of this policy. Even after withdrawal of the policy, industrial agglomeration bias continued. Engineering industries were established in areas closer to markets or elsewhere where better infrastructure was available or there were other financial incentives or benefits (Guruswamy et al., 2005).

While the freight equalization policy was cancelled in 1992, Bihar and UP had already fallen behind and in addition they continued to be constrained by an unfriendly investment climate arising from weak physical and social infrastructure and poor governance. While state-business relationship have improved significantly since the mid-1980s in most states of India, it deteriorated in Bihar and minimum progress was made in UP (Cali & Sen, 2011). The poor economic environment brought about by conflict and poor governance reduces the security of property rights, increases costs and the risks in investment. It drives investors to safer places and quick-earning activities. As a result, private investment in Bihar is only 2.68% and in UP 12.22% of gross state domestic products, while the average is 16.45% in major 14 states (Ahluwalia, 2000).

Foreign direct investments (FDI) has remained negligible in Bihar and UP. Bihar has received only 0.10% of national FDI since 1991 to 1998, and UP 1.96% (Rao & Murthy, 2006). While per capita FDI is Rs5019 in Maharashtra, in Bihar it is only Rs89 and in UP Rs289 (Government of India, 2007). Because of its proximity to Delhi, UP should have attracted much more investment from the private sector. However, private investment is also much less in Bihar and UP due to weak physical and economic infrastructures together with social and political instability and poor governance.

Discussion and conclusion

Bihar and UP are classic examples of how a rich natural resource-based economy can be caught by a low-level equilibrium trap. This study analysed the underlying causes of low levels of development of Bihar and UP. The analysis revealed that a host of interacting factors ranging from social and economic to historical and political directly or indirectly influenced the development path and pace of Bihar and UP. The causes of poor economic performance of Bihar and UP can be traced back to British colonial policy that not only created an intermediary exploitative class through Permanent Settlement, but also destroyed local knowledge-based industries that provided livelihoods to many urban and rural artisans.⁴ This policy also frustrated agricultural growth by strengthening the elite feudal class and creating landless agricultural workers. Moreover, it increased the pressure on agricultural land by transforming industrial workers to agricultural labourers. This has not only retarded the agricultural and industrial growth but also created an unproductive class that has been constantly resisting the economic and social development as the tsar and landlord class opposed industrialization in Russia in the early 19th century (Acemoglu & Robinson, 2006). This policy has also created a political ethos of class-based resentment that has damaged the trust essential for being able to act together in the collective interest (Banerjee & Iyer, 2005).

The economic marginalization that started during the colonial period continued even after independence. Despite several attempts, land, which is the main productive asset in rural areas, has remained in the hands of a few absentee landlords, who have little interest to invest in land to increase productivity. The sharecroppers, on the other hand, have little ability or incentive to invest in land. Consequently, investment in land, irrigation and flood controls has remained inadequate and agricultural productivity remained low.

The process of marginalization has further been reinforced by central government's policy of freight equalization, which diminished the comparative advantage of Bihar and UP and retarded the path of resource-based industrialization. Consequently, the economy of Bihar and UP has remained agricultural despite possessing huge mineral resources. This, combined with continued minimal financial support from the centre, has undermined these states' capacity to invest in health, education, and other social and physical infrastructure. Hence, the states' vast human population has remained as a liability with poverty, illiteracy, malnutrition and low skill. Low human capital, weak institutions and poor infrastructure, together with political instability and social conflict, have put these two resource-rich states in the low-level equilibrium trap. The social structure, particularly caste, class and ethnic division, has made the development process more complicated and difficult. These, combined with unstable centre-state power relations that determine the resource availability from the centre, have undermined the capacity of the governments of Bihar and UP to plan, implement and support development activities, and frustrated their attempts to create a conducive environment for investment, private sector engagement, infrastructure development and establishment of the rule of law. Despite recent changes in power structure, conditions favourable for investment, growth and social development have yet to be put in place due to political turmoil, corruption, and poor law and order conditions. As a result, Bihar and UP lagged behind in economic growth.

The question arises: which theory best explains the poor economic performance of Bihar and UP in the past? Against the views of classical economists, this study reveals that resource endowment alone does not guarantee high economic growth. Given the huge agro-climatic potential and cheap agricultural labour, one could expect

agriculture-led growth in Bihar and UP similar to that in Punjab. But, Bihar and UP were not able to utilize this potential for several reasons, including incomplete land reforms and low investment, inadequate physical infrastructure and poor institutional support. The result, therefore, suggests that while resource endowment is important, it is not the primary determinant of economic growth. How these resources are being used, what types of investments are made, what incentive mechanisms are available, and what types of governance systems and institutions are in place – all these influence the development performance (Nayyar, 2008).

Similarly, the neo-classical theory, which sees capital formation and investment as the engine of economic growth, also cannot fully explain the poor economic performance of these two states. It cannot elucidate why capital formation and FDI are low in Bihar and UP despite the availability of large amounts of raw materials, as it considers public policies to be exogenous to economic growth (Romer, 1986). The power relations between centre and state, which influences resource allocation, go beyond neo-classical economic explanations. Higher economic growth cannot be achieved without good governance, right policies and appropriate institutions (North, 1990; Tran, Grafton, & Kompas, 2009). While institutional explanations shed light on how poor governance and weak institutions are unable to create a conducive environment for economic growth in Bihar and UP, the question still remains why Maharashtra, Punjab, Haryana and Gujarat could develop institutions and establish good governance where Bihar and UP could not succeed. To answer this question, one needs to delve into more fundamental issues: social structure, power relations and cultural root. Historical and social factors play a critical role in institution development (Chang, 2001; Tran et al., 2009). In a country like India, the federal system and power relations between federal and state government play a critical role in institution-building, governance structure and economic growth. Structuralist theory appears partly to explain the poor performance of Bihar and UP. The social and political structures of Bihar and UP, particularly caste and class structure as well as the governance system and performance, have considerably affected the economic growth of these states. Social structure, however, is not static. Why could Bihar and UP not manage to change the social structure required for higher economic growth as did other states in India? The foregoing discussion suggests that there are several underlying factors – such as social, political, economic, institutional and historical – that have interacted and interplayed together and influenced the growth process and pace of Bihar and UP.

The question again arises, what explains recent economic growth of Bihar? Bihar's recent turnaround has attracted a lot of interest of academia and development practitioners. According to scholars (e.g., Mukherji & Mukherji, 2012; Saxena, 2011; Singh & Stern, 2013), a number of factors have contributed to the positive turn.

First, Nitish Kumar's government made an attempt to give development aspirations to all sections of society including low caste and ethnic minorities and practical measures have been taken to improve the quality of governance, including law and order, an increase in the efficiency of administration, the curbing of corruption, as well as increased development funds from the centre – all have contributed significantly to bring confidence and enhance development effectiveness (Gupta, 2010; Singh & Stern, 2013). Law and order have improved recently; the efficiency of the judiciary in terms of the disposal of cases has increased; and the effectiveness of bureaucracies, including law enforcing agencies, has increased, all of which have helped to increase confidence of citizens and enhanced the development effectiveness of government (Mukherji & Mukherji, 2012; Mundle, 2013; Singh & Stern, 2013). This has created favourable

conditions for investment and growth. This process was further facilitated by the increased resource allocation by central government. Due to increased funds from central government, Bihar's planned development expenditure has increased from Rs12 billion in 2002 to Rs160 billion in 2009 (Mukherji & Mukherji, 2012). More than 6800 km of roads have been rebuilt and some 1500 bridges and culverts have been constructed or repaired in the last five years (Mukherji & Mukherji, 2012).

The present economic growth of Bihar supports the findings of this study that improvement in governance, effective administration and large investments are major stimuli of economic growth. The findings of this study offer some important insights into the economic literature that often considers economic growth as a function of selected parameters. This finding also supports the views of Adelman (2001) who considers economic growth to be a dynamic process that depends on resource endowment, social structure, institutional arrangements, economic policies, and environment and technological and human resource development. The result suggests that a holistic analysis that focuses not only on individual choices but also on social structure, caste, class, institutions and historical factors is necessary to understand the sources of economic growth. Although not surprising, this finding emphasizes the complex interplay of multiple factors for economic growth, which many scholars have so far failed to appreciate.

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Notes

1. Since 2005–06 Bihar has achieved attractive economic growth, although there are some disagreements about the quality of the data (Gupta, 2010).
2. UP is a large state with high diversity in economic and social development. Eastern UP is lagging behind in economic development in comparison with Western UP (Dreze & Gazdar, 2006) and poor performers like Bihar (Ahluwalia, 2001). Although there are some differences, 'the causes of backwardness' between the two states are common and have similarities in social, cultural and political development (Dreze & Gazdar, 2006, p. 34). The focus in this paper is on Eastern UP, which has remained almost at the same level as Bihar in economic and social development.
3. The states of Bihar, Madhya Pradesh, Rajasthan and UP are popularly known as the BI-MARU states: a homogeneous group of poor performers (Ahluwalia, 2001).
4. There were two major types of revenue settlements in British India: Permanent Settlement and Ryotwari Settlement. While the rest of India practised the Ryotwari system where the land belonged to the farmers, in Bihar and UP *zamindars* became land owners under the Permanent Settlement system. According to this settlement, farmers only had tenancy right by paying tax to *zamindars*. The *zamindars* exploited farmers and neglected to improve technology and land productivity (Banerjee & Iyer, 2005).

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