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# Development In The Bimaru States: Demography and HDI

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# 1. Introduction

Commenting the statement pronounced by the Prime Minister of India, Narendra Modi, on the BIMARU states, an article published on the 12th August 2015 on the webpage of the newspaper TheHindu, has drawn the attention on the following question: “which are India’s real BIMARU states?”<sup>1</sup>. In particular, offering a curious view on the case, the argumentation aims at redefining the effective actors, which constitute the group in the contemporary period.

The interest arisen from the brief piece of the newspaper, has led to further investigations on the principal definition of BIMARU, while the great amount of informations related to the discussion, inspired few important inquiries: in this sense, looking at a potential focused study through a broader perspective, a specific concern has been selected to understand why, the few principal Indian states (Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh) have been defined “sick”. Observing the theme in a socio-economic context, the idea of a “disease”, which affects the agents mentioned, has been interpreted as a very negative form of development. The primary intention of the following analysis is to trace a valid explanation of some doubtful conceptions: for example, according to which idea or model of development the states considered have been recognized unsuccessful? Why?

The first part of the research regards a general presentation of the BIMARU states and of their basic common characteristics, which have been identified across various historical periods from the examination of determinate statistical results and recurrent performances.

The purpose presented in the second section, instead, is to determine a certain model of development, according to which the Indian states under inspection have been analyzed and compared: for this reason a useful view on the definitions of development and on the implications derived from their application on the Indian background, will help to better contextualize the argumentation.

In addition, the later relevant focus will show distinctive features related to a general notion of Human Development: in particular, acknowledging the fact that, the primary connotation of the term BIMARU was given by a demographer, it seems appropriate to adjust the study according to a peculiar glimpse on the actual roles played by the demographics of the states considered. Moreover, considering that “when population is heterogeneous, additional cases are expensive, each extra element needs to be separated modeled and each modeling adjustment requires a separate assumption. (...) Growth is not a universal process, cross-country growth regressions are an intrinsically poor mechanism to analyze growth and each growth experience should be treated as potentially unique - this is, as a case study.”<sup>2</sup> In fact, trying to delineate the analysis in search for some explanations, the idea of Human Development in the BIMARU states will be further explored through some indicators pertaining to two selected social sectors which strictly involve and depend on demographic data: health and education. Since the two categories are also related to, and they often depend on, the policies promoted by the governments, both at that national and at the state level, they represent the connecting elements between causes and effects of outcomes in the developmental processes. The subsections concerning education and health will present some indexes taken as mere useful examples of the notions demonstrated; moreover, the possible answers that will be found to understand the negative achievements of the states in determinate indicators of Human Development, will be based on explanations accountable as aspects of the economic growth of the BIMARU states.

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<sup>1</sup> TheHindu, *BIMARU States: the shoe fits even now*, New Delhi, 12 August 2015

<sup>2</sup> Matthew McCartney, *Political Economy, Growth and Liberalization in India, 1991-2008*, Routledge, New York, 2010, p. 78

## 2. The BIMARU states

Observing the wide Indian socio-economic environment, several different suppositions could be examined on numerous topics through interesting specific studies: in this paper the attention will be focused on an unusual issue, which regards argumentations on the particular forms of development experienced by four States within the borders of the Indian Subcontinent. In the current section a general overview on the actors considered and on their basic common characteristics will offer the possibility to understand the reason of their selection. In fact, Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh have been defined as the BIMARU states of India: this connotation, beyond representing the acronym of their names, implies also the meaning of “sick” as translation from the hindi language. The term was used for the first time by the demographer Ashish Bose in the late 1980s when expressing a doubtful opinion on the “growing demographic disparity between different States in India, and in particular the disparity between the north (BIMARU) ... and south (Kerala Tamil Nadu, Andhra Pradesh and Karnataka. (...) These four States are truly sick (bimaru in eastern Hindi dialect) demographically, economically, and politically.”<sup>3</sup> Trying to examine the motivations that drove the author to affirm the reported statement, it is necessary to have a look to two fundamental aspects: if the “sickness” applied to the states considered refers to the degrees of their development, then an analysis of their economic paths on one side, and an observation to another social form of development on the other side, will be useful to identify the effective negative performances of the actors under examination, especially in comparison to the Indian national average.

In this case, to give a general picture of one possible measure of the economic growth of the states, as appears in the results of A. Panagariya, P. Chakraborty and M. Govind Rao<sup>4</sup>, it might be convenient to consider the per capita Growth State Domestic Product (GSDP) as an useful example. Their analysis of the calculations produced among fifteen different Indian states and across four main historical periods, allows us to construct assumptions in support of the view given by A. Bose: in fact, despite the individual improvement during the years, all four states have shown different but always lower levels of advancement compared to the general Indian average.

At the same time, a more critical and focused approach would highlight further important factors, like the issue regarding the “five policy areas that have been substantially liberalized over the course of the 1990s: fiscal policy, international trade, the capital account and foreign direct investment, the financial sector, and the role of the state”<sup>5</sup>. A consideration on these elements of governance would imply that “economic growth rates and measures of efficiency should have increased after 1991”, while a deeper observation of the last policy mentioned, suggests the necessity of a contextualized investigation on the peculiar Indian states, which, acquiring more decisional power in particular after the neoliberal reforms started in 1991, have revealed relevant consequences from the individual evolutions of the diverse political paths followed: if the “growth rate was sustained into the 1990s because the state was able to sustain a commitment to fiscal expansion”<sup>6</sup>, the explanation of the opposite outcomes experienced by the BIMARU states could relay on the idea of the inability of these governments to effectively deal with the new market economy. Thanks to this perspective it can be argued that, a fundamental responsibility in the process of improvement of a state is ascribed to

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<sup>3</sup> Ashish Bose, *North-South Divide in India's Demographic Scene*, Economic and Political Weekly, Vol. 35, No. 20 (May 13-19, 2000), p. 1699

<sup>4</sup> Panagariya, A., Chakraborty, P., & Rao, M. G. (2014). *State level reforms, growth, and development in Indian states*. Oxford University Press, New York (2014), p. 28

<sup>5</sup> Matthew McCartney, *Political Economy, Growth and Liberalization in India, 1991-2008*, Routledge, New York, 2010, p. 35

<sup>6</sup> Ibid., p. 56

decisions and practices employed by its actual decision-makers: in this sense, the study of each governance plays a crucial role in understanding causes and effects of and variations in the development of a state.

An analysis of this genre would also demonstrate that, among the cases taken under discussion, some states have been subjected to certain divisions (that is, Bihar, Madhya Pradesh and Uttar Pradesh), implying a revision of the effective nature and characteristics of the actors considered. For this reason the later study will try to focus only on the more recently period, after 2000-2001 in order to construct a more contemporary discussion, implying the new definitions of the states.

A first example of a possible economic growth occurred in the BIMARU states, can be supported by the Real Per Capita Gross State Domestic Product (GSDP).

Table 1. Real Per Capita GSDP in Constant 2004/2005 Rupees ₹

|                       | 1980-81       | 1993-94       | 2002-2003     | 2009-2010     |
|-----------------------|---------------|---------------|---------------|---------------|
| <b>Bihar</b>          | 7,159         | 8,147         | 9,845         | 15,038        |
| <b>Madhya Pradesh</b> | 13,518        | 14,749        | 16,391        | 24,420        |
| <b>Rajasthan</b>      | 9,863         | 13,916        | 17,950        | 26,441        |
| <b>Uttar Pradesh</b>  | 10,304        | 12,022        | 14,299        | 19,871        |
| <b>All 15 States</b>  | <b>12,643</b> | <b>16,885</b> | <b>22,348</b> | <b>34,796</b> |

Source: A. Panagariya, P. Chakraborty and M. Govind Rao, *Growth and Development in the Indian States: an Overview*, p. 28

Applying a simple view on the indicator taken here as mere model of the negative performances of the four states compared to the national average, another interesting argumentation should be displayed: although the index represents a clear proof of the principal claim previously arisen, by questioning its validity, it appears as a limited signal, because the per capita measures do not represent the real wealth of the population and in particular its actual distribution within a State.

The second important attribute of development traceable from the conception exhibited by A. Bose regards its social constituent: in order to demonstrate the position of the demographer in these terms, it is fundamental to exhibit the relevant outcomes proposed by the United Nations Development Programme (UNDP) concerning the Human Development Index (HDI) of the BIMARU states across distinct times. As represented in Table 2 the four Indian states have reached higher degrees in their singular courses from 1981 to 2008, but their results are always unsatisfactory in relation to the All India measures.

Table 2. Human Development Index Value (HDI) in BIMARU States

|                       | 1981         | 1991         | 2007-2008    |
|-----------------------|--------------|--------------|--------------|
| <b>Bihar</b>          | 0,237        | 0,308        | 0,367        |
| <b>Madhya Pradesh</b> | 0,245        | 0,328        | 0,375        |
| <b>Rajasthan</b>      | 0,256        | 0,347        | 0,434        |
| <b>Uttar Pradesh</b>  | 0,255        | 0,314        | 0,380        |
| <b>All India</b>      | <b>0,302</b> | <b>0,381</b> | <b>0,467</b> |

Source: UNDP, and *Backwaters of Development* p. 316

Although both the indicators utilized in this first descriptive part of the study need a deeper and more specified analysis to understand the way they have been produced and the consequential impacts they might generate on the current argumentation, they can be still recognized as elementary proofs of the reasonable concerns arisen by A. Bose when attributing an authentic pessimistic denotation to the four states. The same evident matter has played a significant role in diverse historical contexts regarding investigations on the apparent or actual socio-economic development of India in relation to the different states. Often still today a reaffirmed worry, showing that “all these four states still continue to lag behind, their people still enmeshed in poverty and under-development”<sup>7</sup> affects the general opinion. In particular, when conducting a research on the inter-state differences traceable on various sectors, an important primary distinction can be simply described in terms of population growth within the Indian federation: as A. K. Bharatiya and M. Srivastava have forcefully emphasized according to the TFR of 1997, Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh occupy the last positions because of several causes exemplified through different indicators. At the same time, observing outcomes and motivations furnishes a favorable mean to idealize policy recommendations for each specific case.<sup>8</sup>

Despite the fact that, disparate potential discourses may be developed from these first interesting introductory aspects, before advancing the analysis on a peculiar hint of the case regarding the BIMARU states, an important point regarding definitions and concepts which will be used, need to be exhaustively clarified.

### 3. Development: different definitions, forms, levels

In order to construct a useful argumentation of the topic under analysis, it is appropriate to determine first of all the basic characteristics of a conceptualization of Development. In fact, since the term has been repeatedly discussed and revisited by many scholars in different environments, it seems that, its interpretation changes over time according to the various contexts of usage. In this sense, with the aim of avoiding misinterpretations and misunderstandings in the following work, it results more adequate to distinguish some basic features of the notion upon which the attention should be focused. In particular, referring to the interesting analysis conducted by A. Sumner and M. A. Tribe, it is important to show three main groups of different meanings: the first definition given by the authors, recognizes development as a “long-term process of structural societal transformation” because it regards changes in the “socio-economic structures – including ownership, the organization of production, technology, the institutional structure and laws”<sup>9</sup>. Reading the concept in these terms, it must be also argued that Development may be applied in a wide sense to the general course followed by every type of society during the centuries in every country. Even though a broad view could represent shared ideas on the topic, it seems that Development is portrayed as a common category with the same universal causes and effects occurring in different periods but always following a certain regular path of progression. Nevertheless, since a more specified perspective on the definition could arise significant doubts and questions, in order to obtain a better understanding of the concept,

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<sup>7</sup> *BIMARU Club still has 4 states*, The Times of India online, August 13, 2015

<sup>8</sup> Anoop Kumar Bharatiya and Manish Srivastava, *Inter-state differences in terms of population growth in India: Case of BIMARU states*, pp. 155-158 in Verma, R. B. S.; Agarwal, Manoj Kumar; Singh, Raj Kumar; *Socio-Economic Development and Population Dynamics in India*, New Royal Book Co., 2007, Lucknow, p. 156

<sup>9</sup> A. Sumner & Tribe, M. A. Tribe, *International development studies: theories and methods in research and practice*. Sage, 2008, p. 12

it is necessary to examine also the particular socio-historical cases in which a theory of Development could acquire peculiar and relevant hints of significance: for this reason, A. Summer and M. A. Tribe have displayed its characteristic as a “short- to medium-term outcome of desirable targets”, to emphasize the outcomes of change. This second view on the definition furnishes the advantage of looking at “the set of (essentially bureaucratic or government) goals or objectives”<sup>10</sup>, which can be observed, for example, as implied measures in a country policy of Development. As final interpretation of the term, instead, the authors offer what they call a “‘post-modern’ conceptualization of development”: based on the recognition of bad change and bad outcomes imposed by the Western ethnocentric notions of Development upon the Third World, the concept manifests its attribute as a substantial discourse socially constructed and evaluated by the particular environment that primary produced it, the “North”<sup>11</sup>.

Despite the various useful definitions of a notion of Development, the current study must restrict the field to some peculiar aspects which are essential to formulate a possible model of the process considered: in fact, tracing a simple prospect will results convenient not only for a general understanding of the issue, but also for a successive comparative analysis.

The mentioned wide argumentation on Development has shown some recurrent traits over the years, which may further help to distinguish its distinctive permanent meaning: in this sense, I am referring, for example, to the notable World Development Indicators traceable both in the past and in the more contemporary *Reports* of the World Bank. In fact, as it can be read in the World Development Report 1980, among the various variables taken to measure the degree of Development of different countries, the principal accountable indicators regard: Growth and Structures of Production, Growth of Consumption and Investment, Industrialization, Energy, Growth of Merchandise Trade, Demographic and Fertility-related Indicators, Labor Force, Urbanization, Indicators related to Life Expectancy, Health-related Indicators, Education and Income Distribution.<sup>12</sup> At the same time, an impressive comparison with the World Bank Indicators of 2010 has reported striking similarities with the numerous variables and indexes counted under a World View of the goals of progress (defined, in particular, according to a broad explanation of the Millennium Development Goals), while other analogous considerations regarding Population, Environment, Economy, State Markets and Global Links are given basic values and general fundamental characteristics to apply to every single country.<sup>13</sup> Nevertheless, a careful observation of the two long and well elaborated analysis, will demonstrate how the main primary concerns about progress and security in the economy and in the market of an hypothetical nation, as expressed in the first *Report* of the World Bank, have shifted positions when compared to the Development indicators of the second document mentioned, published in 2010. Therefore, it must be noticed how the attention to the potential economical achievements of progress and growth which a country should have reached in respect of a past definition of Development in the terms exhibited by the World Bank in 1980, has acquired another meaning after 30 years, representing a less important measurement. The prevalent examination of societal elements have conducted the theorization of Development more on activities that interest the eradication of extreme poverty and hunger, the achievement of a universal primary education, the

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<sup>10</sup> Ibid., p. 13

<sup>11</sup> Ibid., p. 15

<sup>12</sup> The World Bank Group, *World Development Report 1980*, Open Knowledge Repository (2016)

<sup>13</sup> International Bank for Reconstruction and Development/The World Bank, *2010 World Development Indicators*, Green Press Initiative, 2010

promotion of gender equality, the reduction of child mortality, the improvement of maternal health, the combat against world diseases and the promotion of environmental sustainability.<sup>14</sup>

A possible valid explanation to understand the important change in the values and perspectives used in the Reports of the World Bank to define Development, may be seen in the new prospect encouraged by the creation of the Human Development Report launched in 1990 by the United Nation Development Program (UNDP), which “stood on distinctive ground, and called with eloquence and humanity for a different approach to economics and to development.”<sup>15</sup> In particular, as emerges from the Report, the more modern concept focused on the capabilities of people, on the process of freedom and principles of justice, recalling and complementing vigorous common ideas of human rights and democracy. Since “people” have resulted to be both the beneficiaries and the agents of equitable human development, a deeper estimation of the societal component within a nation appeared always more fundamental also for “policy makers (who) should orient the tremendously powerful processes of economic growth, industrialization, and service delivery to human freedoms.”<sup>16</sup> Adding this further point of view, it is necessary to briefly mention, on one hand the existence of a significant connection between the actual policies employed by governments and the broad schemes of action adopted by decision-makers to promote development, and on the other hand, the real outcomes and implications of the resolutions undertaken: in fact, an analysis of this kind would be appropriate to examine the general process of governance and its qualitative effects, but it requires a deep and specific view on a singular case study, through the employment of a few reliable variables. Despite the potential relevance of an investigation on the governmental operations, here the focus on Development has identified different definitions of the term and, in particular, thanks to a brief display of the main international indicators used to characterize the concept, the two principal forms must be recognized as the economic growth of a Nation or a state and its social development, as can be represented by the Human Development Index.

It must be noticed that, the various measurements and indicators used in both the models, are intrinsically related, since they clearly influence the effects and outcomes of one-another, but at the same time, confused overlapping results may guide to mis interpreted postulations. In this sense, it is helpful to view an argumentation suggested by A. N. Singh on the “false sense of growth and development” which has being given by the growth rate of the general Indian GDP. According to the author, a scrutiny on the effective governmental expenditures has manifested a decrease in the budget allocation for some of the key areas of social development: in fact, the economic growth in the Indian Subcontinent occurred without development, that resulted as a cause “to widen the inequality but also (to) give rise to the increasing sense of socio-economic paranoia and the result socio-political unrest and instability”.<sup>17</sup>

Furthermore, understanding the crucial role played by a balanced economic growth, which is interpreted as basic layer to sustain an equitable social component of development, it is also indispensable to contextualized the discussion in the Indian Subcontinent. Studying the basic form of economic development applied to the Indian case, A. Sinha has traced an alternative multilevel system in which great attention is given to the “spatial dimensions of the development process (size

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<sup>14</sup> A complete illustration of the United Nation Millennium Development Goals is available in the International Bank for Reconstruction and Development/The World Bank, *2010 World Development Indicators*, Green Press Initiative, 2010

<sup>15</sup> Sabina Alkire, *Human Development: Definitions, Critiques, and Related Concepts*, Background paper for the 2010 Human Development Report, OPHI Working Paper No. 36, May 2010, p. 22

<sup>16</sup> Ibid., p. 41

<sup>17</sup> A. N. Singh, *Pattern of socio-economic development in India*, pp. 139-147 in Verma, R. B. S.; Agarwal, Manoj Kumar; Singh, Raj Kumar; *Socio-Economic Development and Population Dynamics in India*, New Royal Book Co., 2007, Lucknow, p. 147



and geography of states) with the incentives of its rulers".<sup>18</sup> In particular, some subnational variations have been recognized principally in the various interests expressed by regional elites: nevertheless, acknowledging the fact that, these actors are not completely free in their policy-choices, they are covered with a crucial role in the process of distributing information from the center and generating the new local knowledge. For a better understanding of the actual motives, which often provoke substantial distinctions especially in the economic outcomes and achievements among the Indian states, the author argues that "subnational developmental states within India combine both vertical and horizontal dimensions with significant consequences for regional investment patterns and national regulatory policy."<sup>19</sup> Despite the important scrutiny on the peculiar role of states, A. Sinha takes the analysis to a further dynamic level: examining the complicated and diverse interactions between states and central governments, several different behaviors can be noticed also in the market governance patterns across India's provinces. Indeed, considering the different regional states elites, A. Sinha identifies different vertical strategies, constituted by the particular modalities and timing of action towards the central State and by the specific channels of access to the center. Next to an observation of the types of connection between state and national level, an horizontal institutional analysis on the argument has exhibited the relevant regional associations to other regional actors, to specific political parties and to the private sector. In this case, variations in institutions, rules and styles have revealed to be consequential for investments in the states, therefore for a potential economic development.

Recognizing the benefits of the perspective demonstrated by A. Sinha, a further notion on the form of the economic processes present in India highlights the relevant separation of two levels of development: as it has been shown also in the previous section, the national average of economic performances and HDI are clearly different from the results exhibited by the BIMARU states, which means that, a general model (described through an Indian average of various indicators) used in comparison to the singular states, must be always considered within the framework of the state level to build valid assumptions, while the national level can be seen as a peculiar branch of communication in the policies of each state. Moreover, the relations between states and the investigations between the national level and the state level, reminds us that "the macro-economic management of the economy at the Centre and in the States, in general, and that of public expenditure, in particular, also highlights the deficiencies in governance practices resulting from the inertia in the relevant institutions and their practices to keep pace with the changing contexts."<sup>20</sup>

At this point, considering the presence of numerous significant actors in the (economic, societal, political) developmental processes of an hypothetical Indian state, it is more opportune to focus the attention on one of the two main forms of development reported in this section: in particular, a deeper study on the curious results of the HDI furnished by the BIMARU States in different years, offers the possibility to better understand the implications provoked by a determinate societal element, that is demography. The singularity of this principal category for the constitution of society, will be analyzed thanks to a primary overview on the common attributes shared by the population of the BIMARU states: the indicative examples selected will be later contextualized into two main social sectors, in order to illustrate a few basic social indicators (always presented as useful archetypes for the discussion), which might cause repercussions on the identification of a potential human development.

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<sup>18</sup> Aseema Sinha, *Rethinking the Developmental State Model: Divided Leviathan and Subnational Comparisons in India*, Comparative Politics, Vol. 35, No. 4 (Jul., 2003), p. 465

<sup>19</sup> Ibid., p. 472

<sup>20</sup> Governance For Human Development, in *National Human Development Report 2001*, Planning Commission, Government of India, YOJANA BHAWAN, SANSAD MARG, New Delhi, April 4, 2014, p. 121

## 4. Demography and HDI in the BIMARU states

Evaluating a definition of Human Development, it has been argued that the primary attention in the formulation of the new concept subsidized in 1990, was based upon indicators related more to the economic spheres, such as income rates, growth of production and consumption, industrialization etc. The Report of the first HDI may be critically deconstructed also when applied to the Indian situation: in fact, as the study conducted by A. K. Shiva Kumar has noticed, the “*Report* takes the logarithm of per capita income to reflect the conversion of income into good living”<sup>21</sup>, but a deliberation of this kind cannot be statistically and conceptually equivalent and correct. Indeed, the number taken as economic proof does not show the effective distribution of wealth within a state and it cannot stand for a qualitative undefined measure of positive living for every human being.

As it has been shown, in the construction of a valid Human Development Index several different indicators must be taken into account and combined to convey a general sense of the definition in order to use the result for innovative comparative studies. Despite the importance of considering every single indicator, in this study the attention will be focused on the specific case of the demographic variable. In particular, it would be interested to notice “how the various parameters of demography are related casually to the parameters of development”<sup>22</sup>.

Observing the basic characteristics of the BIMARU states, A. Bose has directed the debate especially towards the common aspect related to the population of the cases considered: in each situation the high numbers exhibited by the different states, allow similar assumptions on the implications caused by the great density levels. In fact, “the 1991 Census Data fully confirm our prognosis that the crux of India’s population problems lies in the four problem states of Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh (in alphabetical order the acronym is BIMARU) which account for 39 per cent of India’s population and 42 per cent of the net addition to the population of India during the 1981-91 decade.”<sup>23</sup> In order to further investigate the study initiated by the demographer, it is compulsory to prove the validity of the past results through a comparison with modern and contemporary data. In particular, thanks to the statistics furnished by the Census of India of 2011, a persistent characteristic can be examined in the population of the BIMARU states: although only Bihar and Uttar Pradesh show massive rates of population densities in respect to the All India average, it appears evident that an always higher degree of population growth have affected the four states during the decade 2001-2011. Moreover, as it can be observed in Table 3, their positions differ quite substantially from the national result, with Bihar occupying the very highest detached top. The only exceptions under the national average level, can be observed in the measures of the population density in Madhya Pradesh and Rajasthan, where the wide geographical spaces decrease the general outcomes of the states, although we are not presented with specific views neither on the actual distribution of the population, (for example between rural and urban areas) nor on the concentration of certain physical locations. Another relevant point to notice regards the numbers of the percentage share to the total population of India: if we sum the data on the BIMARU states, it results that they still constitute the 36.8 per cent of the national population; it still represents a copious amount of individual, especially if we consider that these are only four of the total 35 Indian states and unions.

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<sup>21</sup> S. K. Shiva Kumar, *UNDP’s Human Development Index: A Computation for Indian States*, Economic and Political Weekly, Vol. 26, No. 41 (Oct. 12, 1991), p. 2343

<sup>22</sup> Manoj Kumar Agarwal, Changing perspectives of population change and socio-economic development, pp. 1-9 in Verma, R. B. S.; Agarwal, Manoj Kumar; Singh, Raj Kumar; *Socio-Economic Development and Population Dynamics in India*, New Royal Book Co., 2007, Lucknow, p. 3

<sup>23</sup> Bose, Ashish, *Population of India, 1991 Census Results and Methodology*, B. R. Publ. Corp., Delhi, 1991, p. 49

Table 3. Indicators on the population in the BIMARU states, 2011

|                | Total Population 2011 | Percentage share to total population of India | Population Density (per sq. km) | Growth Rate 2001-2011 Percentage | BPL 2011-12 |
|----------------|-----------------------|---|---------------------------------|----------------------------------|-------------|
| Bihar          | 103,804,637           | 8.6   | 1,102                           | 25.7                             | 33.74%      |
| Madhya Pradesh | 72,597,565            | 6.0   | 236                             | 20.3                             | 31.65%      |
| Rajasthan      | 68,621,012            | 5.7   | 201                             | 21.4                             | 14.71%      |
| Uttar Pradesh  | 199,581,477           | 16.5  | 828                             | 20.1                             | 29.43%      |
| All India      | 1,210,193,000         | 100.0   | 382                             | 17.64                            | 21.92%      |

Source: Census of India 2011, GovIndia.in and for the BPL data: Reserve Bank of India, Handbook of Statistics on Indian Economy, Table 162: Number and Percentage of Population Below Poverty Line (Sep 16, 2015)

The significant index regarding the population Below Poverty Line (BPL) in the BIMARU states here reported combines the results obtained from calculations in both the urban and rural areas: according to the data furnished by the Reserve Bank of India on the year 2011-2012,<sup>24</sup> it might be noticed that, apart from Rajasthan, all states show higher performances in comparison with the All India average. Despite the differences among various data, a look to the actual number of poor people in these territories, causes always a human worry when thinking of the terrible human conditions in which so many people are often forced to survive. Reviewing a conceptualization of Human Development in these terms, permits to introduce also an adequate concern posed by J. Ghosh, who reminds us that “social categories are strongly correlated with the incidence of poverty and that both occupation and wages differ dramatically across social categories.”<sup>25</sup> Observations on the constituency of the population offer enormous advantages to explain certain developmental outcomes, in particular when noticing that “social categories are not independent of the accumulation process (of capitalism); rather, they allow for more surplus extraction, because they reinforce low employment-generating (and therefore persistently low wage) tendencies of growth”<sup>26</sup>. Acceptable human conditions might be produced through an enforcement in the employment, and subsequently in the income levels, among an hypothetical population: as effect, the clearly higher potential performances in different areas of production would be the fundamental support to the general economic growth of a state. As final decisive assumption, it results that, the characteristics and conditions which affect demography, beyond serving as indicator of the human development of the society within which it is inserted, are also crucial causes in the performances of the other form of development, that is the economic growth. For this reason it can be evidently argued that, the persistent low achievements in the Human Development Indexes of the BIMARU states as presented in the first section, although the possible contrasting outcomes in different areas, are strictly related to the conditions affecting their populations: in particular, “Employment growth varies across the states and according to deferent

<sup>24</sup> *Number and Percentage of Population Below Poverty Line*, Reserve Bank Of India Publications, India’s Central Bank, Sep. 16, 2013, Table 162.

<sup>25</sup> Jayati Ghosh, Growth and emergent constrains in the Indian economy in the context of global uncertainty, pp. 173-194 in N. Yokokawa, J. Ghosh and R. Rowthorn, *Industrialization of China and India: their impacts on the world economy*, London and New York, Routledge, 2013, p. 186

<sup>26</sup> *Ibid.*, p. 187

measures. However, in general, we observe a decrease in employment growth in the 1990s.”<sup>27</sup> If we consider degrees of employment and per capita income as relevant motivations for the attainments of determinate Human Development outcomes, then it is also opportune to recognize the low results demonstrated in Table 2 as consequences of unsatisfactory economic factors.

Leaving a part a mere study on the interesting connections between Human Development and Economic Growth in the BIMARU states, the attention here is focused on the particular implications derived from various aspects of the demography of the actors considered. Beyond noticing that the prediction of Bose might be confirmed with the data of the Census of India of 2011, trying to connect the variables furnished by the substantial numbers of the states populations to their effective Human Development Indexes, it is essential to point out two fundamental indicators of the definition: in the following subsections, a brief analysis of the principal elements related to the health and education indicators in the BIMARU states appears particularly necessary because “they are the key social sectors in which states play a critical role”<sup>28</sup>. In these sense, it can be stated that the quantitative aspect represented by the actual numbers of the states’ demographies represent very significant associations to the causes and possible consequences on the qualitative outcomes in the developmental processes. The multiple functions that can be explored through an extended investigation on the demographies of the BIMARU states, would bring to light significant conditions and interrelated aspects, concerning their social compositions (accounting for example numerous religious and ethnic groups, Scheduled Castes and Tribes) and other diverse characteristics (like the implications on the distribution of the population in the rural and urban areas, or the levels of Employment and Unemployment). Despite the potential advantage of a survey of this genre, in this study a selection of two main areas belonging to a previously reported definition of Human Development, health and education, are investigated through the adoption of specific indexes taken as examples of the effective poor performances achieved by the Indian states under analysis.

#### 4.1 Health

In order to determine a brief and useful analysis of the health situation in the BIMARU states, it is necessary to acquire some key concepts and indicators contemplated in a general definition of the factor under analysis. Applying the notable perspective explained by A. Panagariya, P. Chakraborty and G.Rao, the four “vital statistics”<sup>29</sup> which formulate the idea of health in a state, regard levels of Life Expectancy, Infant and Child Mortality, Maternal Mortality Ratio, and the Birth Related Indicators. Once again, in this case study it seems more advantageous to consider only the aspect concerning the IMR of the BIMARU states. Moreover, it is also necessary to widen the explanations of the results obtained introducing the idea that, especially in the case of the health indicators, states play a fundamental role: indeed, since they are supposed to furnish the basic and essential infrastructure facilities for the health of the population, a look to the actual amount of public expenditures in this field will portrait the reason for the potential lack of resources in the states and, therefore for their low achievements in the developmental measures.

The advantage of the traditional method, through which certain outcomes are specifically investigated and contextualized to discern main grounding motivations, permits to start the analysis in the following

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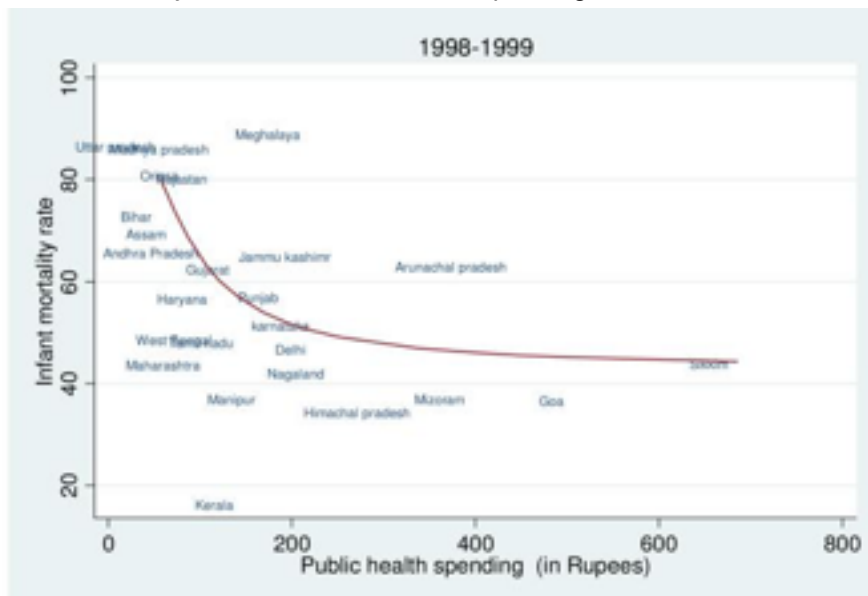
<sup>27</sup> Kausik Chaudhuri and Shovan Ray, *Growth and Human Development, A Comparison between selected States*, pp. 313- 360, in Ray, Shovan; *Backwaters of Development, Six Deprived States of India*, Oxford University Press, New Delhi, 2010, p. 321

<sup>28</sup> Panagariya, Arvind; Chakraborty, Pinaky and Govinda Rao, M.; *State Level Reforms, Growth and Development in Indian States*, Oxford University Press, New York, 2014, p. 15

<sup>29</sup> *Ibid.*, p. 184

part, with a first approach to the general Public Health Spending implemented by the Indian States in comparison with their Infant Mortality rates in the year 1998-99.

Figure 1. Infant Mortality Rate and Public Health Spending in 1998-1999 in the Indian States



Source: M. Farahani, S.V. Subramanian, and D. Canning, *Effects of State-level Public Spending on Health on the mortality Probability in India* (2010)

As it can be seen in Figure 1. the data display the four BIMARU states occupying the worst positions, still demonstrating high numbers of Infant Mortality and at the same time offering the lowest amounts of expenditures in the public health system. Moreover, according to the study introduced by M. Farahani, S. V. Subramanian and D. Canning, the “average per capita public health spending is 125 Rupees, ranging from 49 (Bihar) to 406 (Goa)”<sup>30</sup> in the period considered between 1998 and 1999. Acknowledging the fact that, States expenditures are fundamental for the benefit of the population in the health care systems, the deeper analysis carried out from the authors has also considered the variable of the private spending as potential influential effect to reduce the levels of Infant Mortality: despite the further comparison, the consequential finding allowed the authors to affirm that “each rupee of public health spending is about 4 times more effective at reducing mortality as private health spending”<sup>31</sup>. A concluding assumption on the data furnished in Figure 1. suggests that, the qualitative index regarding a certain section of the population (infants), as particular sign of Human Development, can be seen in a strong relation with the public expenditures of a state in the health system, and therefore with the incoherent or insufficient spending policies in that sector.

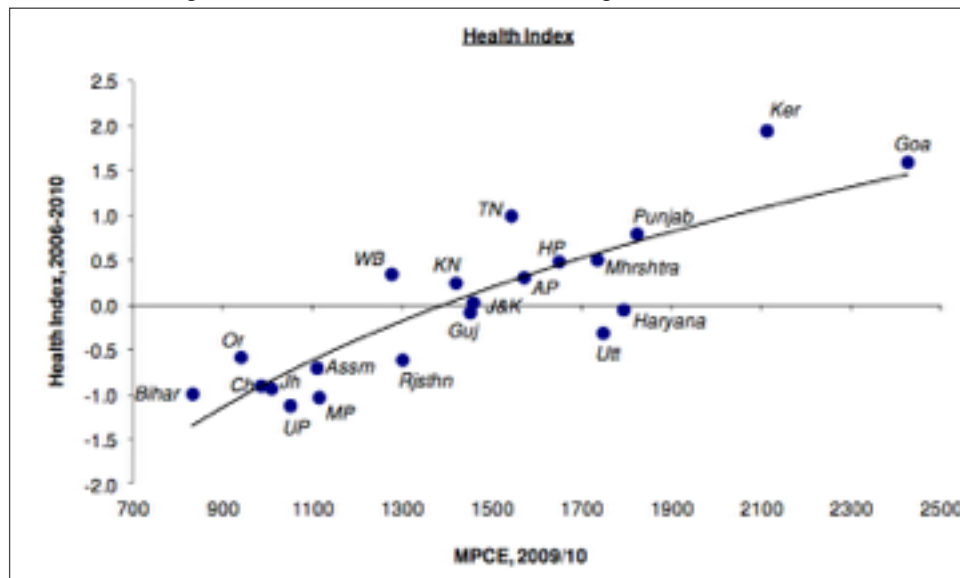
Since the data used to construct an idea of the negative levels of the health quality of the society in the selected states are related to a very limited period of time and to a singular index, it is more convenient to have also a broader view on an identification of health which accounts several other variables. For this reason, the research carried out by P. Bahandari furnishes the advantage of dealing with numerous further determinants (like Life expectancy at birth, Total Fertility Rate, Access

<sup>30</sup> M. Farahani, S.V. Subramanian, and D. Canning, *Effects of State-level Public Spending on Health on the mortality Probability in India*, Health Econ. 2010 Nov; 19(11): 1361–1376.

<sup>31</sup> Ibid.

to improved Sanitation, Institutional Delivery, etc.)<sup>32</sup> all traceable in the years between 2006 and 2010. In this case, thanks to a relation between these data and the levels of the monthly per capita consumption (MPCE from NSSO 2009/10) in each Indian State, as Figure 2. demonstrates, the BIMARU are still “sick”, remaining on the bottom ranks.

Figure 2. Health Performances among the Indian States



Source: P. Bhandari, *Refining State Level Comparisons in India*, Planning Commission, GOV India 2012

Once again an economical measurement has been used to explain the outcomes of a general indicator of the health quality of the population, understanding the analyzed aspect of Human Development as closely derived from determinate monetary situations. Concluding the brief argumentation on the principal causes of the low performances in the health indicators of the BIMARU states, it is important to understand the possible role played by a form of economic policy employed by the states to sufficiently support the social sector considered, but it is also necessary to remember on which effective economic capabilities the average population may afford and have access to the health system. Further important studies on the societal divisions would also highlight that the possibilities of obtaining certain primary resources differ from rural to urban areas, in the various districts and according to the social status of the individual considered. As it results, the suggestions here furnished to comprehend the connections between motives and accurate outcomes of a form of societal developmental process, that is the health sector, need to be further investigated in every single specific case, through observations on peculiar indexes and contexts (like year, state and district) of stipulation, in order to disclose an authentic research.

A last consideration on the extended investigation provided by P. Bhandari on the associations between various indicators of Human Development, as health, education and infrastructure, has also captured the attention on a relevant aspect: “the rank correlation between each of the three indices and monthly per capita consumption expenditure (MPCE; source: NSSO, 2009/10) is also high, ranging between 80% and 87%. While these are simple associations and not causal relations, they suggest that higher growth and income are associated with better health, education and infrastructure status.”<sup>33</sup>Indeed, collocating the debate also towards another fundamental social sector, education,

<sup>32</sup> Pranjul Bhandari, *Refining State Level Comparisons in India*, Planning Commission, Government of India, Working Paper Series, 2012, p. 9

<sup>33</sup> Ibid., p. 6

certain influential similarities will be discovered in the characteristics taken as example, since they both represent the primary areas of study, related to aspects of demography and in great connection with the formation of the Human Development Index.

## 4.2 Education

In the current subsection it appears proper to explore a singular facet of the conditioning role applicable to the education system of a state on its Human Development outcomes. As regards this relevant element and its clear affinity with the functions implied by the demography of a state, several diverse data could be taken into account to construct a wide and balanced argumentation: nevertheless, since the issue would request a long individual study on the various factors active for a definition of *education* as measure of Human Development, a particular characteristic concerning the levels of literacy in the BIMARU states, according to the results of the most recent Census of India (2011), supports the assumptions previously exhibited in the study. In fact, once again all four states display general lower degrees of literacy among the population in relation to the All India grade: moreover, considering the principal difference, which can be recognized in the composition of the data, a serious contrast emerges from the observation of the rates concerning the gender literacy. The evident scarce levels of instruction, in both combined and typified dimensions, might be extensively explained through a socio-cultural as well as a political study: in this case, it is opportune to concentrate on a more concrete circumstance, which exemplifies a possible solution for the understanding of the matter presented.

Table 4. Literacy Rate Percentage in the BIMARU states in 2011

|                       | Literacy Rate Percentage 2011 | Male  | Female |
|-----------------------|-------------------------------|-------|--------|
| <b>Bihar</b>          | 63.82                         | 73.39 | 53.33  |
| <b>Madhya Pradesh</b> | 70.6                          | 80.5  | 60.0   |
| <b>Rajasthan</b>      | 67.06                         | 80.51 | 52.66  |
| <b>UP</b>             | 69.72                         | 79.24 | 59.26  |
| <b>All India</b>      | 74.04                         | 82.14 | 65.46  |

Source: Census of India - PROVISIONAL POPULATION TOTALS 2011, Figures at a glance, India & States

The overview offered through the numbers presented in Table 4. permits to affirm that, although the four state actors manifest unsatisfying results in all the measurements considered, the gap to reach a national average appears to be always deeper especially in the case of the literacy rates among the female part of the population, while the literacy levels marked from the male citizenry differ only of a few points (with an exception of the lowest attainments in the case of Bihar) if compared to the All India rate.

Trying to interpret the negative achievements of the BIMARU states in the literacy rates, it is necessary to have an explanatory view on the fundamental elements and causes which should normally sustain and promote the effective incidents on education, seen as a basic form of the developmental processes. For this reason, as suggested by K. Chaudhuri and S. Ray, a consideration on the determinants of the Educational Indicators highlights two “major economic factors”<sup>34</sup>, which

<sup>34</sup> K. Chaudhuri and S. Ray, Growth and Human Development, A Comparison between Selected States, pp. 313-360 in Ray, Shovan; *Backwaters of Development, Six Deprived States of India*, Oxford University Press, New Delhi, 2010, p. 341

include the per capita income and the expenditures undertaken by the government in the field. In order to fulfill the current analysis from the perspective on the BIMARU states, it seems more opportune to discover the specific measures applied by the governments as fundamental public actors in the economical promotion of education. Table 5. reports a few indexes published by the Ministry of Human Resource Development on the relationship between various aspects of the economic availabilities and allocations of the different Indian states. Since the calculations here exposed have been made on the GSDP figures pertaining to the year 2010-11, it can be argued that, as for the preceding data, they represent a very modern situation.

Table 5. Total State Budget Expenditure in Education & Training (Revenue Account), 2010-11 (Rupees in Thousands)

|                       | 1. Total State Budget | 2. Total Expenditures on Education & Training | Percentage of Col 2 to Col 1 |
|-----------------------|-----------------------|---|------------------------------|
| <b>Bihar</b>          | 382159200.00          | 86924853.00                                   | 22.75                        |
| <b>Madhya Pradesh</b> | 450115900.00          | 78038356.00                                   | 17.34                        |
| <b>Rajasthan</b>      | 448733400.00          | 106377692.00                                  | 23.71                        |
| <b>UP</b>             | 1076756100.00         | 213813062.00                                  | 5.64                         |
| <b>All India</b>      | 9322965558.00         | 2069000092.00                                 | 22.19                        |

Source: Analysis of Budgeted Expenditure on Education 201-2011 to 2012-2013, Government of India, Ministry of Human Resource Development (Department of Higher Education) Planning and Monitoring Unit, New Delhi, 2014

In this case the results show huge differences between the states, with Bihar and Rajasthan surprisingly doing even better than the national average: if, on one side, these states demonstrate to take advantage of a big percentage of the Total State Budget to sustain the expenditures on “Education and Training”, on the other side Madhya Pradesh and especially Uttar Pradesh reveal insufficient capabilities of managing the economic states’ possibilities towards actual educational spendings and, therefore towards a potential form of development.

Despite the higher percentages of governmental public spending in the field of education and training for both Bihar and Rajasthan, the data still do not explain the negative literacy rates of the states as shown in Table 4. The reason of this doubtful unclear connection could be disclosed only when analyzing all the various factors that interact in the definition of the specific measurement utilized and observing the qualitative aspects of the cases. In order to get a simple comprehension of the matter it must be recognized that “the macro-economic management of the economy at the Centre and in the States, in general, and that of public expenditure, in particular, also highlights the deficiencies in governance practices resulting from the inertia in the relevant institutions and their practices to keep pace with the changing contexts.”<sup>35</sup> Indeed, if on one side the quantitative results furnish a relevant perspective on the matter regarding the effective resources devoted to a possible improvement of the educational systems (for example through the implementation of infrastructures and other important public facilities), the qualitative analysis of the different peculiar forms of governance employed by the states will certainly help understanding the relationship with the vain expectations of negative literacy rates above reported.

In fact, another useful view on the different functions appointed to the national and states governments in the education sector, reminds us of the distinct traits of the Indian federation in the

<sup>35</sup> Governance For Human Development, in *National Human Development Report 2001*, Planning Commission, Government of India, YOJANA BHAWAN, SANSAD MARG, New Delhi, Aril 4, 2014, p. 121



contentious field of policy-making. On one hand, some scholars affirm that, if “the Constitution of India assigns states with a predominant role in providing social services and co-equal role with the central government in providing physical infrastructure”, then as logical result, “sustaining high growth rate over long periods and ensuring a stable economy requires significant argumentation of public spending by the states on developmental heads”<sup>36</sup>. Applying the concept to the social sector considered, the preponderant responsibility is advocated to the measures decided on the states side, but, on the other hand, a contrasting idea might highlight the always “hidden” power of the national government. Indeed, according to the evidences demonstrated by Anit N. Mukherjee and S. Sikdar on the governmental spendings for education, since Indian states appear not to have increased their expenditures in the area, they “are becoming increasingly more reliant on the union government to augment their resource base for education. Consequently, education policy is increasingly being determined at the national, rather than the state level, as was originally envisaged in the Constitution”<sup>37</sup>. Therefore, also from this last point of view, the discussion remains opened to further examinations on the governmental levels where the specific policies are adopted.

## 5. Conclusion

Thanks to the examination of different important definitions and remarks, the study on the BIMARU states and on the concepts related to their performances in the socio-economic developmental processes has traced different relevant findings. The initial section on the basic characteristics of the four states have demonstrated their similarities according to generalized exemplary indicators: despite the diverse periods of time considered, both the per capita GSDP and HDI results have been lower than the Indian national averages, therefore the four states have been described as “sick”.

The second part of the analysis, instead, has highlighted how the different definitions of Development produced and used according to various historical periods have also influenced and changed the meanings of determinate outcomes and indicators considered, opening the debate to disparate interpretations, which need to be individually explained and contextualized to be valid. The simple redefinitions of the notions on Development have also emphasized two prominent forms of the process, accountable as a possibility of economic advancement or as societal improvement. This second aspect has been further delineated in the shape of a Human Developmental Index, with particular attention in respect of the different performances allocated to the national and state levels.

In fact, in the later section, the fundamental point of the research has illustrated the principal implications on the HDI in the BIMARU states in association to some peculiarities of their demographics: the correlations between the considerable similar numbers and characteristics of the populations in the states and their specific outcomes in the indexes selected as models of two social sectors, health and education, have demonstrate a further interesting result. In fact, if on one side the concluding concept has evaluated the peculiar areas of Human Development, which are in close relations with determinants of the demographics of the states, on the other side, by positioning the debate in the Indian context, the findings have recalled into cause functions of economic growth

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<sup>36</sup> Panagariya, Arvind; Chakraborty, Pinaky and Govinda Rao, M.; *State Level Reforms, Growth and Development in Indian States*, Oxford University Press, New York, 2014, p. 100-101

<sup>37</sup> Anit N. Mukherjee and Satadru Sikdar, Public Expenditure on Education in India by the Union Government and Roadmap for the Future, pp. 17-29 in *India Infrastructure Report 2012, Private Sector in Education*, IDFC FOUNDATION, Routledge (2013), p. 23

(represented by the public expenditures of the governments) as possible origins of the consequential negative outcomes in the HDI.

Moreover, a consideration on both the state and the national governments has briefly introduced the idea, that investigations on the policy-making process may actually offer other specified solutions on the issues presented. Indeed, "if the policy-maker wants to achieve greater improvement in these indicators, special efforts and expenditures would be necessary. In this case the two developmental strategies (economic growth and Human Development) may become complementary rather than competing."<sup>38</sup> The final broad reflection attempts to stimulate the curiosity towards determinate matters of what can be portrayed as the governance of the Indian nation and of its states: since the related presuppositions have been only generally presented in this work, they deserve a deeper investigation through a more focused selection of areas of study, indicators and periods of time, always considering the relevant roles played by the different variables used.

For an inspiring conclusion, which suggests to examine some further interesting questions in other possible future analysis, it seems appropriate to use the hopeful words of the PM Narendra Modi, who, in line with the last concern reported in the study, confirms that "States have the most important role in India's progress. India can move ahead only on the strong shoulders of the states and not from Delhi alone. If we walk together shoulder to shoulder then results will automatically come."<sup>39</sup>

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<sup>38</sup> Ravindra H. Dholakia, *Regional Disparity in Economic and Human Development in India*, Economic and Political Weekly, Vol. 38, No. 39 (Sep. 27 - Oct. 3, 2003), p. 4170

<sup>39</sup> *Centre, states must work together for India's progress: PM Modi*, The Indian Express, New Delhi, December 4, 2015

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