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Spatial Dimensions of Muslim Well-Being in India: A comparative study of Indian districts

The Sachar Commission Report of 2006 on Social, Economic and Educational Status of the Muslim Community of India generated widespread awareness of the socioeconomic disparity and exclusion of religious minorities, especially Muslims, in India. The theoretical framework of the Report was predicated on Indian's constitutional promise of equality of opportunity for citizens of secular democracy. One of the biggest gains of the Sachar Commission was its reconstruction of the Muslim community as 'development subjects' in the state rather than primarily as a religious community. An important finding of the Sachar Commission was that there is a clear and significant inverse correlation between the proportion of the Muslim population and the availability of educational, communication, health and physical infrastructures in villages. The concentration of Muslims in villages and States lacking these basic facilities was a major cause and contributor to their socioeconomic and educational deprivations. This paper will seek to deepen this analysis further by focusing on all Indian districts in all states. It uses the Human Development Index (HDI) to investigate the relative general wellbeing of Muslims. The findings show that the HDI of Muslims tends to be associated with their proportion in the population. The Muslim HDI decreases as their proportion in the district population increases. But this relationship does not hold in 21 districts in which the proportion of Muslim population is over 50 percent. However, the general relationship between the percentage of Muslim population and the overall wellbeing of the Muslim community is fairly universal. Considering all districts, on average, Muslims consistently live with lower socioeconomic standards than other groups (we ca not really say that in all districts Muslims

are worse off – there are a number of districts where Muslims are better off than Hindus, although in those districts Muslims tend to be a very small minority). Specifically, HDI values for Muslims tend to be much worse than Hindu General (Upper Caste Hindus), somewhat worse than Hindu Other Backward Class (OBC), better than Hindu Scheduled Castes/Scheduled Tribes (SCs/STs), and worse than those for other minorities. When the overall wellbeing increases, Muslims experience a smaller increase in their Human Development Index values as compared to all other groups, including Hindu SCs/STs. Conversely, when the well-being (HDI) declines Muslims experience a larger decline in their well-being than any other group. The paper will offer a comprehensive analysis, discussion and policy implications of these findings.

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Introduction

India has made big strides in improving living conditions of its large and diverse population. This is reflected in increasing per capita incomes, which have increased fourfold over the past 20 years, delivering all the attendant benefits that come with it. Ideally the benefits of economic development should remove intergroup inequalities and ameliorate social obstacles in the country. However, the evidence shows that the benefits of India's economic and social developments have not been evenly and equally distributed. In particular, a number of studies have shown that Indian Muslims have not been equal beneficiaries of the country's development. It has been argued that most Indian Muslims are worse-off because they have not benefited due to discrimination and the absence of any affirmative action to counter it. Their status in India in the mid-twentieth century was not much different from that of the Dalits, which led to the constitutionally mandated affirmative action in their favour. Consequently over the past sixty years, Indian Muslims have suffered from downward mobility and faced economic deprivations,

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social exclusion and political under representation (Hassan and Hassan 2013; Basant and Shariff 2010).

It was this realization that led to the establishment of the Prime Minister's High Level Committee, popularly known as the Sachar Commission. It was constituted to investigate if Indian Muslims faced a greater level of relative deprivation in different spheres and what corrective steps could be taken to ameliorate this situation. One of the biggest achievements of the Sachar Commission was its reconstruction of the Muslim community as 'developmental subjects' in the state rather than primarily as a religious community. The Sachar Commission Report issued in 2006 marked a decisive shift from the politics of identity to the politics of development because it demonstrated that the problems of the Muslims necessitated going beyond identity politics and the customary allegiances to secularism and pluralism (Social, Economic and Educational Status of the Muslim Community of India 2006).

Some Indicators of Relative Muslim Disadvantage

The Sachar Commission Report (Social, Economic and Educational Status of the Muslim Community of India 2006), as well as the National Household Surveys data, provide critical evidence of relative Muslim deprivation in a number of key social, economic and spatial indicators. A summary of some of them is given in Table 1 below. The evidence shows that Indian Muslims are doing only slightly better that Hindu STs/SCs and worse than upper caste Hindus, Hindu OBCs and all other minorities. Another indicator of relative exclusion of Muslims is that their share in the public sector employment is significantly lower than their proportion in the population. In 12 states - West Bengal, Kerala, Uttar Pradesh, Bihar, Assam, Jharkhand, Karnataka, Delhi, Maharashtra, AP, Gujarat and Tamil Nadu - Muslims comprise 15.4 percent of the population but their share in state employment is only 6.3 percent.

Table 1. Some Indicators of Relative Muslim Disadvantage

	Hindu-UC	**Hindu-OBC**	**Hindu-SCs/STs**	**Muslims**	**Others**
Literacy (%)	80.5	63.4	42.7	59.9	75.2
Participation in Higher Ed., Ages 17-23 (2009-10)	20.9	10.2	5.3 (SCs) 4.3 (STs)	4.8 (Gen) 5.4 (OBC)	35.6 (Christ. Gen)
Monthly per capita household expenses (Rs.)	1125 (all Hindus)	-	-	980	1549 (Christ)
Household size	4.4 (all Hindus)	-	-	4.9	4.7 (Sikh) 3.9 (Christ)
Households below poverty line (%)	10	21.3	33.6	31.1	-

Source: Sachar Commission 2006; National Sample Survey Office (NSSO) 2013.. OBC (Muslim Backward Classes) Muslim Gen (All other Muslims)

An important finding of the Sachar Report was that spatial factors played an important role in exacerbating relative disadvantage by determining access to social and economic pubic goods such as schools, health facilities and quality of roads, among others. In general, all poor households had poor access to public amenities. Specifically, the Commission found that public amenities such as schools, transport, medical facilities and roads were relatively worse in village settlements with high Muslim concentration (Sachar Commission Report Chapter 7).

Spatial Dimensions of Religious Inequalities

In particular the Commission's findings were very revealing in relation to the rural areas. Villages with large Muslim populations were located in states and areas with poor physical and social infrastructures. Consequently, Muslim households and areas of high Muslim concentrations were poorly served by amenities compared to other religious communities. This impedes the access of Muslims to key amenities including schools, hospitals, transport and communication which exacerbated their deprivations.

The Sachar Commission found that there was a clear and significant inverse association between the proportion of the Muslim populations and availability of educational infrastructure in small

villages. About a third of small villages with high concentrations of Muslims did not have any educational facilities. There was a general scarcity of medical facilities in larger villages. About 40% of these large villages with substantial Muslim population did not have any medical facilities at all. While the housing conditions of Muslims were on par with the overall average, they were worse off than Hindu General and at about the level of Hindu OBCs. Muslim households had better toilet and water supply facilities but lacked in other modern amenities such as fuel and electricity. In general, Muslim households were concentrated in locations with poor infrastructural facilities. These findings are displayed in Figure 1 below (Sachar Commission Report 2006 Chapter 7).

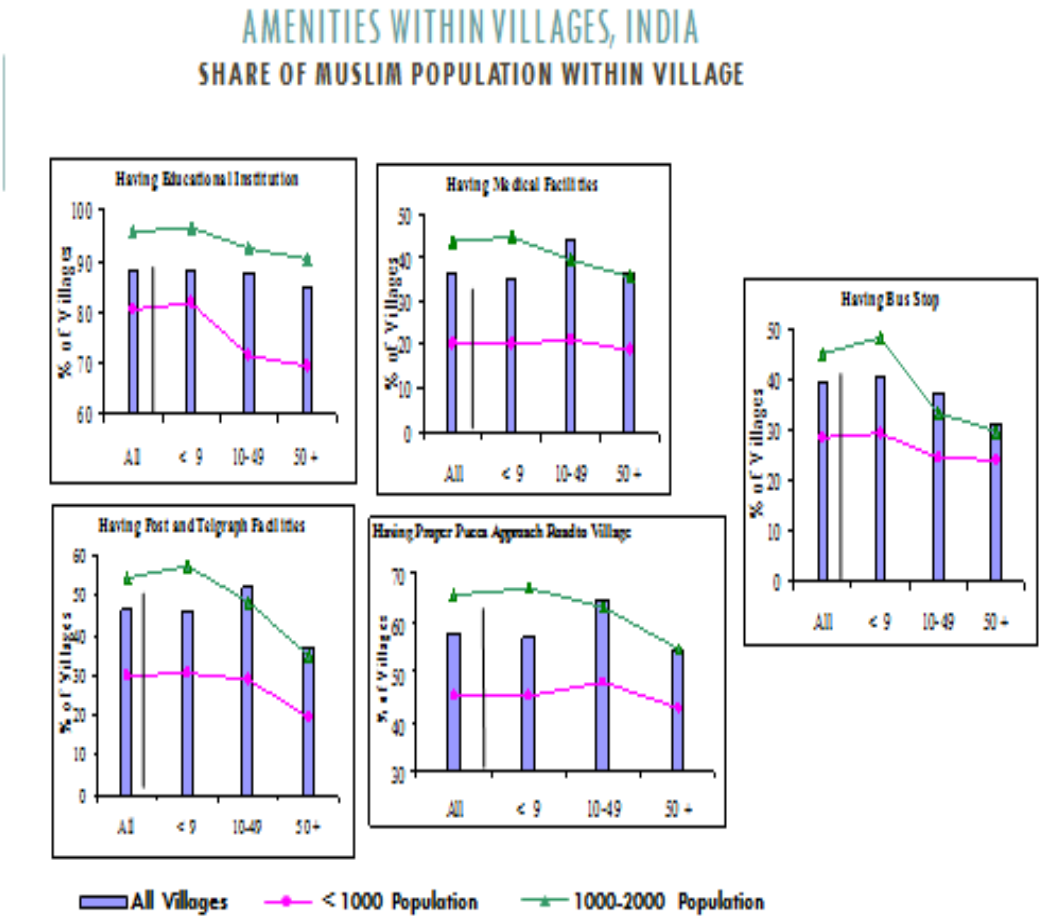

Figure 1. Access to Infrastructure and Facilities and Percent Muslim Population

Source: Sachar Commission 2006:142.

District Development Diversity Index (DDDIx)

In this paper we seek to deepen the Sachar Commission's findings about the Indian villages by focusing on Indian districts in all states. Most Indian development studies focus on the states because of the availability of state-wide data which can be used as indicators of various measures of social and economic development. Fortunately, because of the work done by the US-India Policy Institute (USIPI) in Washington D.C. and the Centre for Research and Debates in Development Policy (CRDDP) in New Delhi, we can access district level data on development variables.

There are 640 districts in India. The USIPI and CRDDP have extracted a number of socio-economic and human development indicators from multiple nationally representative sample surveys, for 599 districts of India. They have computed the 'levels of development' and 'equity of access to development' for each district. The composite index, called the District Development and Diversity Index (DDDIx) consists of four dimensions – economic, material-wellbeing, educations and health dimensions of life for each of the major socio-religious communities (SRCs) for each of the 599 districts. The DDDIx is modelled after The Human Development Reports published annually by United Nations Development Programme since 1990. It includes a larger set of variables comprehensively highlighting four dimensions - economic, material wellbeing, education and health - unlike the three dimensions of HDI constructed by the UNDP. The index uses 17 of the 27 development and livelihood measuring variables extracted from government-supported national sample surveys. The results are available in the form of annotated maps, graphs and figures for easy comprehension and use (Shariff 2015).

Data Sources

One crucial question that arises in this context is whether the social database in India is adequate for the preparation of the Human Development Profile at the district level, similar to what is done in the UNDP reports. Relevant data are available from sources like the Census, NSSO (National Sample Survey Office), NCERT (National Council of Educational Research and Training), DLHS (District Level Household and Family Survey) and the NFHS (National Family Health Survey). These offer fairly dependable information that could be used to prepare the

Human Development Index and that can address a broad range of national concerns. However, there are some limitations of the existing data sources. Firstly, all sources do not have uniform concept coverage or a framework. Secondly, the indicators on which different sources collect information are different. Thirdly, the time period and the periodicity of data collection are different for different sources. The major objective of the DDDIx is to capture the progress in human development across various socio-religious communities (The study restricted analysis of Hindu SC/ST, Hindu OBC, Hindu General, and Muslims. Christians, Sikhs, Jains, Parsis and Buddhists have been merged into the category "Other minorities"). Four indices are constructed – the Health Index, the Education Index, the Economic Index and the Material Wellbeing Index.

The data related to economic development, material wellbeing and education of different socio-religious groups has been taken from the latest (68th round of) National Sample Survey Organisation (NSSO) conducted during 2011-12.The data related to health have been extracted from the DLHS- survey conducted during 2007-08, which is the latest available data in this regard. The list of the variables used to construct each of the four indexes is listed in Table 2 below. (For a detailed discussion and methodological information about the construction of the four indexes see Shariff 2015).

Table 2. Components of District Development Indices

Selected Variables for the Development Index			
Economic Index	*Educational Index*	*Health Index*	*Material Wellbeing Index*
Monthly per capita expenditure	7+ Female literacy	Women 15-49 yrs 18 yrs at marriage	Average of asset index score at HH level
People above poverty line	18+ Adult literacy	Women 15-49 yrs postnatal care within 48 hours	HHs using LPG as primary source of cooking
HHs having regular salary income	15+ % Matric pass	Fully immunized last 2 (age 12-23 months)	HHs using electricity as primary source of lighting
	HH Education Expenditure	Women 15-49 yrs using Contraception	
		Women 15-49 yrs aware of HIV/AIDS	

Religious Diversity and Development: A Study of Indian Districts

The main research question we explore in the following analysis is: How does the size of the Muslim population in a district affect the overall well-being of the Muslim community? It is reasonable to expect that as the Muslim population increases, the minority gains more political and social power. The increase in power will result in a greater influence in how social redistribution is structured in the district. It is therefore realistic to expect that, as the percentage of the Muslim population increases, so does the overall well-being of Muslims.

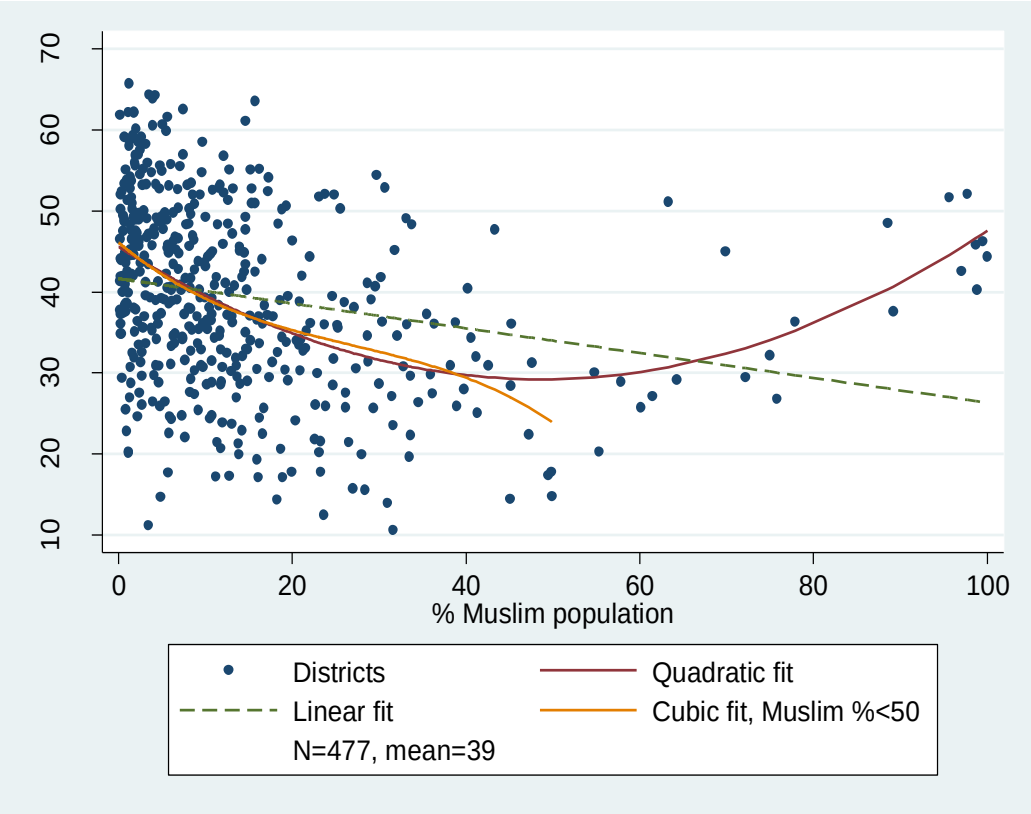

Figure 2. Scatter plot of percent Muslim population and Overall social index for Muslims

Note: Districts with zero Muslim population are not included.

In general, there is a weak negative linear association between the percentage of the Muslim population and the level of the overall index for Muslims. Examination of the scatter plot of the total index for Muslims and the percentage of the Muslim population reveals that there are visually two trajectories that can be identified in the plot (Figure 2). Firstly, as the Muslim population increases, there is a counter-intuitive decrease in the overall value of the social index

of Muslims. That is, when the minority increases in size, their average well-being decreases in absolute terms.

This decrease continues until the percentage of the Muslim population reaches approximately 50%. At that point, the trajectory changes to become a positive association between the percentage of the Muslim population and the overall index for Muslims. The trajectory ends with a cluster of seven districts that have above 90% Muslim populations. These districts also have above average index values.

Table 3 summarizes the regression output for all districts with any Muslim population - those with less than 50%, and those that have greater than 50%, Muslim population. Based on Figure 2 and Table 3, it is apparent that there is a decrease and an increase in the association between the size of the Muslim population and their well-being. Therefore a U-shaped quadratic model will fit the data better than a linear model.

Table 3. Regression of Overall index (Muslims) on % Muslim population.

% Muslim population	# of districts	b	SE	R^2	Mean index	Index Range	Interpretation per 10% increase in Muslim population
0.04-100	477	).15	0.09	0.057	39.4	11-66	Non-significant
0.04-49.9	456	-0.42**	0.06	0.162	39.5	11-66	Decrease in overall index by 4.2 or by 7.6% of the index range
50-100	21	0.42***	0.09	0.51	37.7	20-52	Increase in overall index by 4.2 or by 13.2% of the index range

*Note: In order to directly correspond to Figure 2 the models in this table do not include a control for urbanization. Districts with zero Muslim population are not included. The smallest percentage of Muslim population in a district is 0.047%. Models include adjustment for state-level clustering, ** p<.01, *** p<.001.*

It is worth noting that in the districts with more than 50% Muslim population, the percentage of Muslims explains an astonishing 51% of the variance in the social index variable. However, these numbers must be treated with caution because a control for urbanization was not included

in the models at this stage. Table 3 confirms that the change in the percentage of the Muslim population is associated with different changes in the overall social index based on the relative value of the percentage of the Muslim population.

The relationship between the percentage of the Muslim population and the overall social index for Muslims is potentially more complex than an overall U-shaped curve. Table 4 shows that as the percentage of Muslims approaches 50%, the size of the effect changes from negative to non-significant and then, back to negative.

Table 4. Regression of Overall index (Muslims) on % Muslim population and Urbanization for different intervals of % Muslims.

	Muslim %<15	15<Muslim %<35	35<Muslim %<50	Muslim %>50
% Muslim	-0.734***	-0.129	-0.901**	0.370**
	(0.144)	(0.168)	(0.212)	(0.0826)
Urbanization	0.257***	0.343***	0.235*	0.151***
	(0.0450)	(0.0504)	(0.126)	(0.0236)
Constant	39.79***	28.07***	64.37***	6.409
	(1.822)	(4.683)	(8.751)	(8.084)
N	328	106	22	21
R^2	0.283	0.498	0.361	0.571
F	19.50	29.57	9.691	25.47

*Standard errors in parentheses, * p<0.1, ** p<0.01, *** p<0.001*

This dynamic of the effect – negative, non-significant, negative – in the districts with less than 50% Muslim population suggests that a more complex curve, such as cubic relationship, may be more appropriate to fit the data. It is important to note that the three intervals in the range 0-50% in Table 4 above were created for illustration purposes only. In reality, the percentage of the Muslim population is a continuous variable and other intervals may as well be employed.

Figure 2 shows a part of the cubic fit curve for the interval 0-50% of the Muslim population. The cubic curve closely follows the quadratic curve and begins to diverge only after the Muslim population reaches about 40%, with the main difference between 40% and 50%. While this

difference may not appear substantial, it is worth exploring the cubic relationship in addition to the quadratic in regression modelling. In practical terms, this cubic curve means that as the size of the Muslim minority approaches 50%, there appears to be an exponential decrease in the well-being of Muslims.

Overall, Figure 2 and Table 4 show that there is a stark contrast between the districts with less than 50% of the Muslim population, where the general direction of the relationship is negative, and the districts with more than 50% Muslims, where the general direction of the relationship is positive. One explanation that can be offered is that when the Muslim minority population increases, the intensity of the competition for the control of economic, political, and social resources also intensifies. As a result, the very struggle in which the minority group engages places it at a further disadvantage. When the minority group is small, the majority population may not perceive it as a threat. However, when the minority constitutes a larger share of the population, with more visible demands for equitable redistribution, the majority population will engage in greater action to protect its interests and further disenfranchise the minority, which may now be seen as a threat. The extent of this disadvantage increases until the minority becomes the majority population, at which point it begins to exert greater influence over the control of the resources. As the Muslim population size increases further, the social redistribution of the resources changes to be more favourable to Muslims (however, not at the expense of other groups as further analysis will demonstrate).

A basic regression of any social index variable on the percentage of the Muslim population likely suffers from omitted variable bias. To control for the level of development in a district, we included a measure of urbanization (percentage population living in urban areas). Urbanization can also serve as a proxy for different relevant variables that can influence the average socioeconomic index values (for example, the ease of access to schools and hospitals, the level of infrastructure, the extent of industry presence and class structure), which reduces the omitted variable bias.

The structure of the data is multi-level – the district observations are clustered within the states. All districts in the states will share some similar state-level characteristics such as legislative framework, budgets, political system, social services, educational structures and appropriations, among other features. Under such conditions, the errors need to be corrected for the within-state correlation to reduce the likelihood of false significant results. All models are therefore estimated

with a correction for the state-level clustering. This correction also produces the standard errors that are robust against heteroskedasticity.

Table 5 shows the regression output from a complete specification of the regression model: yi=bo+b1x1+b2x2+b3x12+b4x13+e, where bo is intercept, x1 is percent Muslim population, x2 is percent urban population, and e is the error. The models employ a correction for the clustering of the standard errors of the district within states.

Table 5. Regression of Overall index (Muslims) on % Muslim population and urbanization.

	(1)	(2)	(3)	(4)
% Muslims	-0.153	-0.121	-0.653***	-0.900***
	(0.0932)	(0.0906)	(0.0921)	(0.177)
% Urban		0.266***	0.269***	0.278***
		(0.0447)	(0.0407)	(0.0415)
% Muslims^2			0.00710***	0.0162**
			(0.00104)	(0.00500)
% Muslims^3				-0.00007*
				(0.00003)
Constant	41.65***	34.69***	38.63***	39.47***
	(2.188)	(2.602)	(2.035)	(1.790)
N	477	477	477	477
R^2	0.057	0.278	0.403	0.410
F	2.705	18.20	34.48	22.56

*Note: Standard errors in parentheses, * p<0.05, ** p<0.01, *** p<0.001.*

The results are consistent with the expectations based on Figure 2: the average well-being of the Muslim population in a district depends on the percentage of Muslims in the district. Furthermore, this relationship has an evident U-shape – the quadratic coefficient is consistently positive. There is a potential for a more complex relationship, which is indicated by a significant cubed coefficient of the percentage of the Muslim population, however this relationship is not universal across the entire range of values of percentage of the Muslim population.

Because of their small values, cubed coefficients serve as mediators for the dominant quadratic curve. The quadratic effect at the maximum value of 100% of the Muslim population adds 162 points for the index scale, while the cubic effect subtracts 70 points. Therefore, cubed effect mitigates the rate of the increase, but does not reverse the positive trend of the U-shaped curve within the limits of the realistic values.

It is important to note that within the range of 0-100 percent of the Muslim population, the combined effect (linear, quadratic, and cubed) of the percentage of Muslims is negative except above 93%. This means that, on average, any size of the Muslim populations, except those above 93%, results in lower index value for Muslims as compared to the districts with no Muslim population. The fully saturated model (4) in Table 5 produces a combined effect of positive 2 (-90+162-70) at the maximum value of percent Muslim population.

Figure 3 presents scatter plots of percentage of the Muslim population on the x-axis and the ratios of the overall indexes of Muslim/All SRC on the y-axis. The scatter plot in Figure 2 has a reference line at y=1, indicating that when the ratio equals to 1, there is no difference in the index values of the two groups represented in the ratio. The values above 1 indicate that the Muslim population has a higher value of the overall index. Conversely, the values below 1 indicate that the Muslim population has the value of the overall social index lower than the other group in the ratio. It is important to note, however, that the distance from 1 is not an equal indicator of the true difference in the index values. For example, a value of 0.5 indicates that the index value for the Muslim population in the district is twice smaller than the value for the other group. However, the equidistant value of 1.5 will indicate that the Muslim population has only 50% higher index value. A correct opposite value to 0.5 would be 2. Although this feature of the ratio would make it somewhat less convenient to visually compare the distances, the volumes above and below 1 will provide a straightforward way to analyse the scatter plots.

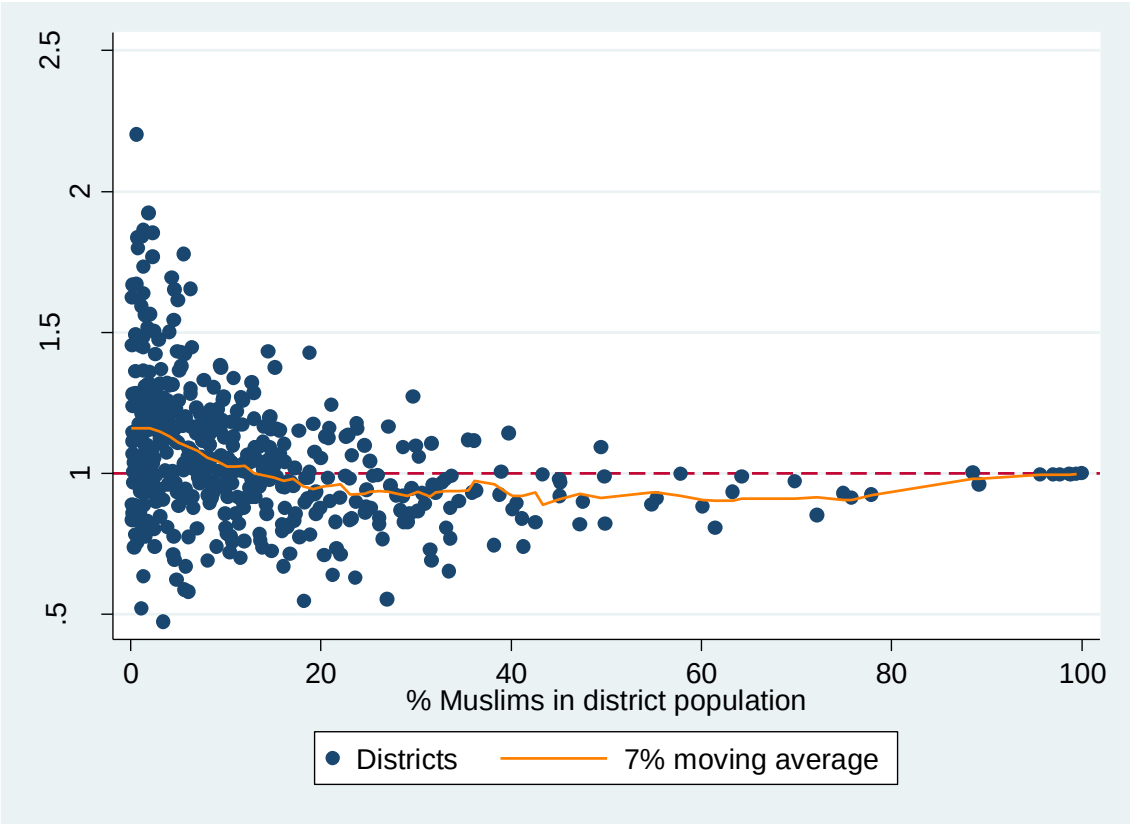

Figure 3.Scatter plot of % Muslim population and Muslim/All SRCs overall index ratio

As expected, when we approach 100% on the x-axis, the values of the index tend to converge on 1 in Figure 3 because both the numerator and denominator in the ratio denote increasingly the same population. However, the values above 1 decline very rapidly while the increase in the values below 1 is much more gradual. This indicates that as the percentage of the Muslim population increases, the relative value of the index for the Muslim population reduces. We can clearly see that after about 20% on the x-axis, the great majority of the ratios in the districts lie below 1. After about 50%, there are no ratios higher than 1 at all. Although the values converge on 1, they do not exceed the equal ratio. This means that in the districts with more than 50% Muslim population (and even 40% with a couple of exceptions), Muslims consistently live with lower socioeconomic standards than other groups. This is also supported by the 7 percent moving average (averaging the ratio values for the current percentage of the Muslim population and three percent above- and below this current percentage) that drops below 1 at about 13% Muslims and does not reach the equality line of 1 until about 100%. Simply put, when the Muslim population reaches about 13% in a district, the well-being of the Muslims falls below average in the district. This average remains consistently lower by approximately 10% until the overall Muslim

population reaches 90% at which point the average well-being of Muslims catches up to the other groups.

Figure 4 represents a scatter plot between the overall index values of Hindu General (x-axis) and Muslims (y-axis). Overall, as we would expect, there is a general positive medium-strong relationship (r=0.57 or r=0.76 conditional on state-level intercepts). However, the "good news" ends here.

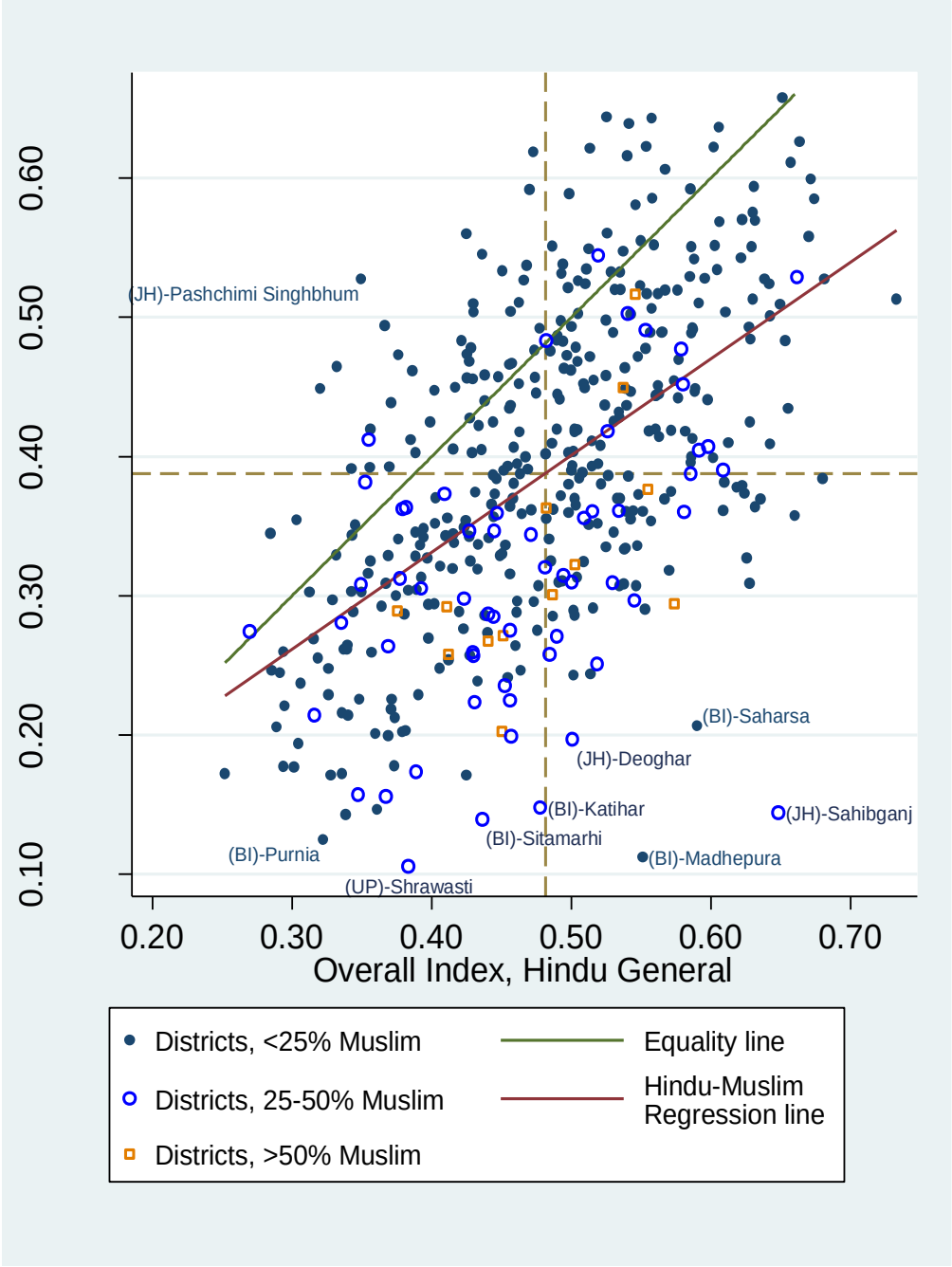

Figure 4. Scatter plot of the overall index of Hindu general and Muslim populations.

Several things point to a systematic difference between the indexes of Muslims and Hindu general populations. Under conditions of relative equality between two social groups, we would expect a random (and not too large) variation around the 45° line. Such an "equality line" would mean that if the overall well-being in a district improves, then for each 1 point gained in the index value by one group the other group gains an equal 1 point on average. Conversely, if well-being in a district deteriorates, then both groups would lose equal number of points if their relationship is demarcated by the equality line with the slope = 1. The number of districts above the line would be roughly the same as below the line indicating some general and non-systematic variation in the index values. However, this is by far not the case in Figure 4.

There are relatively very few observations above the equality line – the great majority of the observations are much below this line. The regression line clearly diverges from the equality line ($b=0.69$, $p<0.001$). The slopes for the two lines ($b=0.69$ regression line and $b=1$ for the equality line) are significantly different: $F=40.08$, $p<0.001$ or $F=18.93$, $p<0.001$ if adjusted for the state-level clustering in the errors. The 95% confidence interval for the slope of the regression line is $0.55<b<0.84$. This regression coefficient indicates that, on average, for a one-point increase in the overall index value for Hindu General, the index for the Muslims increases for 0.69 or anywhere between 0.55 and 0.84. At the average value of 0.69, the increase of the index in the Hindu General population is 45% greater than that of the Muslim population (1-0.69=0.31, 0.31/0.69*100=45%).

As the percentage of the Muslim population increases, there is some evidence of increasing inequality between the two index values. Out of the 59 districts with 25-50% of the Muslim population marked by circles on the scatter plot, only 3 (5.2%) are above the equality line while 53 (91.4%) are below the line (two districts are right at the line). Similarly, 13 districts (22.4%) are above the regression line while three times as many, 39 (67.2%), are below the regression line (6 districts are within close proximity to the regression line). For the districts with above 50% of the Muslim population, none are above the equality line, only two (13.3%) are above the regression line, while 11 (84.6%) are below the regression line.

There are more districts with the extremely low Muslim/Hindu General index ratios than with the extremely high ratios. For instance, there are 8 districts where the index for the Hindu General population exceeds the index value of the Muslim population by a factor of 2.5. It is important to note that only one state – Bihar – has five out of eight districts with the most extreme inequality in the index values. Additionally, in 5 out of 8 of these districts, Muslim minorities have large

populations between 25% and 50%. Appendix A1 lists the districts where the overall index ratio between the Hindu General population and the Muslims is above 1.5, that is in those 35 districts the average overall well-being of the Hindu General population is at least 50% better than that of the Muslims. Out of those 35, there are 12 districts (marked in bold and italicized) with an alarming difference in the overall well-being of more than 2 between the Hindu General and the Muslim populations. This list is particularly worrisome because these 12 districts have an average of 39% Muslim population. Such dramatic disparity in the well-being is not sustainable and may result in social explosion.

In contrast, there is only one district where the value of the index for the Muslim population exceeds the value for the Hindu General population by slightly more than 1.5 and in that district, Pashchimi Singhbhum, there are only 1.4% Muslims. Yet, in comparison, there are 113 districts where the overall index for the Hindu General population exceeds that of the Muslims by a factor of 1.5 or more. The magnitude of this difference indicates that there is a systematic difference in the well-being that favours the Hindu General populations as compared to Muslim populations. The names of the 9 districts with the extreme values are marked on the scatter plot in Figure 4.

To summarize, there are several main findings:

1) There is a U-shaped relationship between the percentage of the Muslim population and the index values (both for Muslims or overall index values). As the percentage of the Muslim population increases, there is a decrease that follows by an increase in the value of the index.

2) This U-shaped relationship is statistically significant and is net of the effect of urbanization and state-level effects.

3) As the percentage of Muslim population increases, the overall index for Muslims begins to increase after about 50% of the Muslim population. However, other ethnic groups do not experience a decline in the value of their indexes. That is, when the Muslims reach the majority population, they do not seem to take over and reshape the social benefit redistribution in their favour and to the disadvantage of other groups. While the Muslims are catching up, they do not take over.

4) Overall, Muslims are faring somewhat worse than the average. Particularly, the index values of the Muslims are much worse than those of the Hindu General populations.

5) When the overall well-being increases, the Muslims experience a smaller increase in the index values as compared to other groups, particularly as compared to the Hindu General populations. Conversely, as the well-being declines, the Muslims experience a larger decline in their well-being than any other group.

6) There appear to be only a few States, namely Bihar and Jharkhand, which contain most of the districts with the extremely high differences in the well-being (inequality) between the Hindu General population and the Muslims. Overwhelmingly, more Hindu General groups exceed in the values of indexes of the Muslims, both in the magnitude and in the number of districts.

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Appendix A1. List of districts with the overall index ratio of above 1.5 between Hindu General and Muslims (percent Muslim population>25%).

State	District	Index Ratio, Hindu General /Muslims	% Muslim population
Assam	(AS)-Barpeta	1.95	72.2
Assam	(AS)-Darrang	1.71	38.2
Assam	(AS)-Dhubri	1.65	75.8
Assam	(AS)-Goalpara	1.62	42.5
Assam	(AS)-Hailakandi	1.62	54.7
Assam	(AS)-Karimganj	1.56	74.9
Assam	(AS)-Lakhimpur	1.57	28.8
Assam	***(AS)-Marigaon***	***2.07***	***41.3***
Assam	(AS)-Nagaon	1.66	61.4
Bihar	***(BI)-Katihar***	***3.24***	***49.9***
Bihar	***(BI)-Kishanganj***	***2.22***	***55.3***
Bihar	***(BI)-Sitamarhi***	***3.13***	***31.0***
Jharkhand	***(JH)-Deoghar***	***2.54***	***33.5***
Jharkhand	(JH)-Godda	1.93	33.6
Jharkhand	(JH)-Latehar	1.67	29.3
Jharkhand	(JH)-Pakaur	1.92	31.6
Jharkhand	***(JH)-Sahibganj***	***4.50***	***45.1***
Rajasthan	(RJ)-Bharatpur	1.88	26.2
Rajasthan	***(RJ)-Jaisalmer***	***2.21***	***26.9***
Uttar Pradesh	(UT)-Hardwar	1.61	33.2
Uttarakhand	***(UP)-Bahraich***	***2.24***	***49.5***
Uttarakhand	***(UP)-Balrampur***	***2.35***	***28.4***
Uttarakhand	***(UP)-Barabanki***	***2.29***	***28.0***
Uttarakhand	(UP)-Meerut	1.56	29.1
Uttarakhand	(UP)-Moradabad	1.56	45.1
Uttarakhand	(UP)-Muzaffarnagar	1.84	33.6
Uttarakhand	(UP)-Rampur	1.66	39.0
Uttarakhand	(UP)-Saharanpur	1.50	41.2
Uttarakhand	***(UP)-Shrawasti***	***3.63***	***31.6***

Uttarakhand	(UP)-Siddharthnagar	1.53	30.0
Uttarakhand	(UP)-Varanasi	1.51	26.0
West Bengal	(WB)-Koch Bihar	1.66	26.1
West Bengal	(WB)-Murshidabad	1.60	60.2
West Bengal	(WB)-Nadia	1.81	31.5
West Bengal	***(WB)-Uttar Dinajpur***	***2.03***	***47.2***