



Mapping Religion, Space, and Economic Outcomes in Indian Cities

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Abstract

We deploy a socio-spatial approach and use a spatially representative survey that we conducted in Hyderabad and Mumbai to analyze the relation between city space and religion. After documenting the relative status of religious groups in urban India and different types of cities using secondary databases, we identify poor-ghettos and elite-enclaves in Hyderabad and Mumbai. In both cities, ghettos have a high proportion of Muslims, while enclaves are dominated by non-Muslim inhabitants. Ghettoization of Muslims is far more pronounced in Hyderabad than in Mumbai. A key finding on the relation between city space and religion is that compared to segregated neighborhoods, mixed (“grayer”) neighborhoods produce better economic outcomes like lower poverty. We argue that while Indian cities are becoming less integrated along religious lines over the last 3-4 decades, this process is far from complete, and needs to be reversed.

Keywords: Religion, Indian Cities, Segregation, Poverty, Economic Development

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The only alternative to coexistence is co-destruction.

- Jawaharlal Nehru.

1. Introduction

Many observers of India feel that the country is facing an unprecedented identity crisis today.¹ After repeated onslaughts from Hindu nationalism, the secular fabric of India seems to be on the verge of tearing apart. This is a moment for analysis of the deeper roots of this crisis and on ways in which India can move forward to ensure equity and religious tolerance. To enable such an analysis, it is necessary to have a coherent picture of the status of religious groups in India and the concrete conditions under which they live and co-exist. This paper attempts to contribute to such an understanding by focusing on urban India and by analyzing the intersection between space and religion in Indian cities.

Why focus on urban India? The rapid growth that India has been witnessing in recent decades has been driven by the urban process, even as urban areas are being transformed by growth.² A visible change that has occurred in the urban landscape is a sharp increase in inequality. In fact, urban inequality has been the main driver of overall Indian inequality (Vakulabharanam and Motiram 2019). However, several aspects of ‘horizontal inequality’

¹ Several prominent public intellectuals have expressed such views in the media and through petitions in the wake of the Citizenship Amendment Act (CAA) and the arrests of peaceful protestors and activists. See e.g., Ramachandra Guha (quoted in Povanna (2020)) and Mehta (2020).

² See Vakulabharanam and Motiram (2012), which presents relevant statistical details. On India’s growth, recent slowdown and the debate over revised method of estimation, see Nagaraj (2013; 2020) and the references therein.

(among groups) in urban India are underexplored.³ This is particularly the case for religious groups e.g., while the intersection between religion and class has been commented upon,⁴ relatively less attention has been given to interconnections between religion and space (particularly intra-city) due to the inadequacies of publicly available data (see Section 2). For instance, the National Sample Survey (NSS) databases on consumption expenditure and employment/unemployment lack information on intra-city spatial units. The decennial Census, a database used to understand intra-city units (like Census wards) presents information on religion only at the district level.

One of the contributions of this paper is to address the above gap. We do so using data from publicly available secondary statistical databases and a primary household survey that we designed and conducted in Hyderabad and Mumbai. This survey (described in Section 2) overcomes the abovementioned limitations of secondary statistical databases. We document (in Section 3) the status of religious groups in urban India by drawing on secondary databases. Broadly speaking, this analysis confirms the presence of considerable differences among religious groups, with Dalits (Scheduled Tribes (STs) and Scheduled Castes (SC)) and Muslims occupying a relatively poor status. Some lesser-known findings also emerge e.g., regarding years of education (available only recently) and wealth; similarities/differences *within* the urban sector (among metros, million-plus cities and smaller cities/towns). This can be understood as an analysis of large urban spaces/aggregations e.g., national or metropolitan. To analyze intra-city

³ On ‘vertical’ (interpersonal) and ‘horizontal’ inequalities and the importance of the latter, see Stewart (2002).

⁴ After the report of the committee chaired by Justice Rajendra Sachar (GOI 2006) was made public, concern has been expressed about the underrepresentation of Muslims in formal sector jobs.

space, we use the primary survey from Hyderabad and Mumbai, and deploy a ‘socio-spatial’ approach. In this approach, space is *produced* through socioeconomic processes, and space and social relations influence each other (Soja 1980). We divide Hyderabad and Mumbai (in Section 4) into spatial *zones* based on their historical evolution and document how the status of religious groups differs within and across these cities. We also identify *ghettos* and elite *enclaves*. Since the publication of the Sachar committee report and the seminal work of Gayer and Jaffrelot (2012), there has been considerable scholarly interest in the condition of Muslims in Indian cities. The Sachar committee highlighted higher urbanization among Muslims (GOI 2006, p. 35) and argued that they are being ghettoized.⁵ Studies from different cities (Gayer and Jaffrelot 2012; Susewind 2017) provide a more nuanced picture: while Muslims are in general marginalized, their relative condition differs across cities/types of cities. Our findings complement these e.g., we show that Muslims are ghettoized to a greater extent in Hyderabad as compared to Mumbai. But, we also provide more detailed intra-city pictures of Hyderabad and Mumbai e.g., Contractor’s (2012) insights are based on just one neighborhood (Shivaji Nagar) of Mumbai. More importantly, we statistically establish the economic benefits of spatial integration on religious lines.

In development discourse, certain goods (e.g., education) are valued both for their intrinsic worth and for instrumental purposes (Sen 1999). Analogously, religious spatial co-existence can make cities more vibrant and enrich human lived-experience. But, can it also lead to better economic/development outcomes? We establish that this is indeed the case. We term spatial co-existence of groups (religious or non-religious ones like classes) as *grayness*, and

⁵ “Fearing for their security, Muslims are increasingly resorting to living in ghettos across the country. This is more pronounced in communally sensitive towns and cities.” (GOI 2006, p. 14).

using an instrumental variable probit regression, show that households living in more mixed-religious neighborhoods are less likely to be poor. We provide some mechanisms (like dependent informality) through which integration translates into better outcomes and discuss policies (e.g., stricter anti-discrimination regulation, reversing segregation) that flow from our findings.

2. Data and Methodology

We rely on two sources of data: public secondary databases and a household survey that we conducted in Hyderabad and Mumbai. The databases that we use are: latest Periodic Labor Force Survey (PLFS2, 2018-19) for earnings and consumption, latest All-India Debt and Investment Survey (AIDIS, 2013) for wealth and 68th round (2011-12) of National Sample Survey for consumption (since the 2017-18 survey was not made public). By treating them as separate strata, AIDIS and 68th round provide reliable estimates for million-plus cities (larger than a million). Using these surveys, we separately analyze the urban sector, million-plus cities and four metros (Chennai, Delhi, Kolkata and Mumbai, which are million-plus). Unlike the above databases, the decennial Census contains some intra-city information e.g., population, literacy and work profile for Census wards. For Enumeration Blocks (EBs), only the population of SCs, STs and Others is available. However, there are three major limitations: religious composition is available only at the district level or higher (i.e., large aggregations), no data on Other Backward Classes (OBCs) and limited scope for household-level analysis.

To overcome the limitations of secondary databases, we designed and conducted a spatially representative household survey in Hyderabad and Mumbai during 2015-17. We followed a multi-stage stratified sampling design where the strata are subdistricts in Hyderabad and municipal wards in Mumbai. We selected 100 EBs and 1000 households in each city (10

households per EB) and administered a detailed schedule.⁶ We collected information on important variables like demographic characteristics, nature of work, educational attainment and income. Most importantly, information on religious and caste composition of intra-city spatial units (like census wards and EBs) is available. More details are provided in section 4.

Using secondary data, we consider the following religious groups: Hindus, Muslims, Christians and Other minorities (Sikhs, Jains, Buddhists, Zoroastrians and others). Using our survey, since other minorities occupy small shares in both cities, we consider: Hindus, Muslims and Others. It is inappropriate to ignore caste, so we divide Hindus into: Dalits (SC and ST), OBCs and Others (so-called upper castes), and Muslims into: so-called Lower Castes (Dalit and OBC) and Others.

In the interests of space, we will not go into debates on terminology (e.g., Peach 2009; Galonnier 2015; Susewind 2017) and use the terms *ghetto* and *enclave*. These will be defined below, but ghetto is a space marked by poverty where a marginalized group (e.g., Muslims or Dalits) has a sizeable presence and enclave is a relatively rich space.

Having described the sources of data and methodology, we now move to the analysis.

3. An Overview of the Status of Religious Groups from Secondary Data

In this section, using secondary databases, we summarize the relative status of religious groups in urban India on both monetary (income/earnings, consumption expenditure and wealth) and non-monetary (education) dimensions.

⁶ We were able to obtain data from 980 households (10 each in 98 EBs) in Mumbai and for 1000 households in Hyderabad. The survey data and relevant information will be made publicly available in due course of time.

We start with earnings (see table 1). For ease of exposition, we make inferences based on average earnings across all quarters.⁷ In urban areas, for both male and female regular-salaried workers, Other Hindus and Christians are at the top. For self-employed workers, Other Hindus and Other religious minorities have the highest average earnings. The performance of Christians and other religious minorities has to be seen in light of their small share (this is also valid for inferences below). Muslims (lower or upper caste) are at the bottom, except in the case of regular-salaried females, where Dalits fare the worst. For all groups and both types of workers, on the average, men receive higher incomes. The ranking among Hindu caste groups is as expected for both men and women: Dalit, OBC, and Other Hindus, in increasing order of average earnings. Lower caste Muslims perform worse on the average compared to their upper-caste counterparts, except for female self-employed workers. The rural patterns are somewhat different from urban ones e.g., the top two groups among self-employed female workers are Other Hindus and Christians in rural areas, whereas they are Other Hindus and Other religious minorities in urban areas.

Insert table 1 here

Moving to consumption expenditure, we present averages in table 2.⁸ Estimates from PLFS2 show that in urban areas, the worst performing group is Dalits, closely followed by lower-caste Muslims. The best performing group is Other religious groups with Other Hindus following behind. On the average, Other Hindus have a consumption expenditure of about one and half times as much as Dalits. The ranking of groups from the 68th round is different

⁷ The survey allows us to derive estimates for each of the four quarters of the year.

⁸ For 68th round, we present Uniform Recall Period (URP) estimates, but Mixed (MRP) and Modified Mixed Recall Period (MMRP) estimates reveal a similar picture.

compared to that from PLFS2. The best and worst performing groups are Other Hindus and lower caste Muslims, respectively. The former has an average consumption expenditure that is about twice as much as the latter. Disaggregating the urban, million-plus cities and metros display some differences from the urban sector. In particular, Christians and Other Hindus are at the top in million-plus cities and metros, respectively. Lower caste Muslims are however at the bottom in all urban spaces. The relative status of lower caste Muslims vis-à-vis Other Hindus is the worst in million-plus cities – the former consumes less than 40% (38.4%) of the latter – the corresponding figures for metros and the entire urban sector are about 44% and about 49%, respectively. With both PLFS2 and the 68th round, rural patterns are somewhat different from urban ones: lower caste Muslims fare better than their upper caste counterparts.

Insert table 2 here

Wealth can be conceptualized in terms of assets or net worth (assets-liabilities) (Jayadev et al. 2007). We use the latter and consider per-capita net worth: net worth of a household divided by its size. Estimates for the urban sector (table 3) indicate that Other religious minorities possess the highest average wealth, followed by Other Hindus. Lower caste Muslims are at the bottom of the hierarchy, just below Dalits. One noteworthy observation from urban disaggregation is that in metros, lower caste Muslims are wealthier than their upper caste counterparts. The rural wealth patterns are somewhat different from urban ones. In the rural sector, Dalits are the poorest. Lower caste Muslims fare better than upper caste Muslims, whereas Hindu groups fare as expected: Dalits, OBCs and Other Hindus in increasing order.

Insert table 3 here

PLFS2 contains data on years of education (unlike previous surveys on employment and unemployment situation) and educational attainment. Table 4 presents two measures of adult

education for various groups: (i) fraction with high school or higher education, and (ii) average years of education.⁹ For both indicators, Other Hindus are at the top (followed by Christians and Other religious minorities), whereas lower caste Muslims are at the bottom. The difference between the top and bottom groups is considerable: about 33 percentage points (educational attainment) and about four and half years of education. Upper caste Muslims fare marginally better than Dalits and considerably worse (by about 9 percentage points in educational attainment and about 1.3 years of education) than OBCs.¹⁰

Insert table 4 here

The above analysis can be broadly summarized as follows: (i) Upper caste Hindus, Christians and Other religious groups are at the top of the hierarchy in terms of both monetary and non-monetary indicators, (ii) Dalits and lower caste Muslims are at the bottom, and (iii) the relative status of Muslims is better in rural areas, as compared to the same in urban areas.¹¹ While we obtain a picture of national and larger spaces/aggregations from this section, we still lack an intra-city understanding. The next section presents this.

⁹ We consider an age threshold of 23 years since by this age, most people would have completed their education. Other reasonable thresholds yield similar results.

¹⁰ Religious groups fare differently in terms of their income, consumption or wealth, partly due to education. In particular, other minorities (like Christians and Parsis) perform relatively better due to their higher education.

¹¹ Explaining the rural-urban differences is beyond the scope of the paper, but two reasons are that Muslims do possess land in rural areas and are subject less to communal violence (which historically has been an urban phenomenon) and discrimination.

4. Religion, Space and their Interconnections in Hyderabad and Mumbai

In this section, we analyze the interaction between space and religion in Hyderabad and Mumbai and discuss similarities and differences between these cities. Based on history (Alam 1973; Mehrotra and Dwivedi 1995; Dossal 2010), we divide Hyderabad and Mumbai into zones and compare composition and status of religious groups in these zones. We then identify areas that contain ghettos and enclaves. We consider a spatial unit to contain a ghetto if its residents are highly overrepresented among the city's poor: bottom quartile (poorest 25%) of incomes. To categorize enclaves, we focus on the city's rich, again taking a relative perspective: top 5% of the income distribution. If a spatial unit is highly overrepresented among the top 5%, then we argue that it contains an enclave. Residents of a spatial unit are overrepresented among the poor/rich if their contribution to the city's poor/rich is higher than their contribution to the city's population. How much should overrepresentation be in order to classify it as high? We choose a threshold factor of 1.5 e.g., if a spatial unit contains 10% of the city's population and 20% of the city's poor/rich; its residents are highly overrepresented ($20/10=2 > 1.5$) among the poor/rich.¹²

4.1. Status of Religious Groups, Ghettos and Enclaves in Hyderabad

We divide Hyderabad into four zones, as shown in figure 1.¹³ Old-Walled city (as the name suggests) is the oldest part, where a physical wall was built to protect the center/core of the city (similar to other Indian 'walled cities'). Hyderabad originated in this area in the 16th century under the aegis of the Qutub Shahi dynasty. The zone that we refer to as 'Nizam's city' developed later, during 18th-19th centuries, under the rule of Nizam (who declared independence

¹² We tried other reasonable thresholds and our conclusions are broadly retained.

¹³ The division into such zones is consistent with the literature on 'cities of' or 'cities within' in India e.g., Cities of Delhi (<https://www.cprindia.org/projects/cities-delhi>).

from Mughal rule). Hyderabad was the capital of the Nizam kingdom, the largest princely state during the colonial period. As in other princely states, a British administrative representative was resident in the city, in the area that we christen as ‘British Resident city’. Earlier industrialization was undertaken in the second (Nizam’s city) and third (British Resident city) zones. The fourth zone, ‘Neoliberal city’, also witnessed industrialization earlier, but is marked by industries in newer sectors (e.g., Information Technology, Pharma and Finance).

Insert figure 1 here

Table 5 presents the religious composition of these zones. The first noteworthy observation is that religious profiles vary within the city i.e., across zones. Muslims have their highest and lowest shares in Old-Walled city (about 63%) and Neoliberal city (about 25%), respectively. Other minorities show the opposite pattern. To identify ghettos and enclaves, we need an appropriate spatial unit: neither too large nor too small and familiar in the city’s context. We use subdistricts, which are recognizable areas. Although subdistricts are large, given our survey-based/non-ethnographic analysis, our objective is not to pinpoint a ghetto/enclave, but to locate it in a geographical unit. Table 6 presents population shares and shares among the poor and rich. Figure 2 shows areas where ghettos and enclaves have been identified. Ghettos are present in Bahadurpura, Bandlaguda and Charminar (see column (4)), which are all in Old-Walled city and contain a high share of Muslims (e.g., Charminar: 91.3%). Other groups also reside in these subdistricts, so what we are articulating is *a presence of Muslim ghettos* in them. Educational levels are low here, particularly compared to the city average. The percentage of adults who have completed high school or higher levels is about: 22% (Bahadurpura), 22% (Bandlaguda), 18% (Charminar) and 34% (city). From column (5), *rich enclaves are present* in Ameerpet, Amberpet, Himayath Nagar, Khairatabad and Saidabad. All these enclaves have a

sizeable proportion of rich Hindus, whereas a high proportion of rich Muslims (1.72%) can be noted in Khairatabad. Given their small share in the population of Hyderabad, high shares of rich belonging to other minorities can be found in Ameerpet (1.72%) and Khairatabad (2.58%).

Insert table 5, table 6 and figure 2 here

4.2 Status of Religious Groups, Ghettos and Enclaves in Mumbai

Mumbai city had its origins in its southern part (in Mumbai district today) during the colonial period and was the capital of Bombay Presidency.¹⁴ Several factors (e.g., population pressure, state policies) resulted in the spread of the city towards the north and into the suburbs (in Mumbai Suburban district today). We divide the city into five zones, which are depicted in figure 3. British and Neoliberal city roughly corresponds to what people refer to as ‘South Bombay’ or ‘South Mumbai’. This zone has always had a substantial corporate and business presence. Old Industrial city I and Old Industrial city II (as the names indicate) were the sites of older industrialization, including textile mills. Western and Northern Neoliberal city are in the suburbs and arose and grew in more recent times through the settling of people and the emergence of infrastructure (e.g., airport, railway stations, highways), government services (e.g., courts, schools) and private establishments (e.g., hospitals, malls) to cater to their needs. An important development has been the emergence of Bandra Kurla Complex (BKC), which has resulted in a substantial and increasing corporate presence in the Western neoliberal zone. BKC is a mixed (residential and work/office) space that has been developed by Mumbai Metropolitan Regional Development Authority (MMRDA) as an alternative to South Mumbai. In the past two

¹⁴ The name of the city was changed from Bombay to Mumbai in 1995.

decades, the diamond bourse, several financial institutions (e.g., ICICI), consulates (e.g., UK) and other private establishments (e.g., Amazon) have located themselves in BKC.¹⁵

Insert figure 3 here

Table 7 presents religious composition for these zones. As in Hyderabad, zones vary in their religious profiles. Muslims have their highest share in British Neoliberal city (39.9%) and their lowest share in the Northern neoliberal zone (10.2%). To characterize ghettos and enclaves, we use municipal wards, which are recognizable, as the spatial unit. These ghettos and enclaves are depicted in figure 4. Ghettos exist in the following municipal wards (see column (4), table 8): C, M-East and P-South.¹⁶ The percentages of Muslims in these wards are high (e.g., 88.24% (C)) and we refer to these as Muslim ghettos. As expected, the educational levels are relatively low in these areas. The percentages of adults, who have completed high school or higher education are about: 33% (C), 34% (M-East) and 31% (P-South) and 45% (city). We refer to R-North (covering Dahisar West) as a Dalit ghetto, given its high share of Dalits. Enclaves are present (see column (5), table 8) in A, F-South, G-South, H-West, R-Central and T wards.¹⁷

Insert table 7, table 8 and figure 4 here

4.3. Comparisons between Hyderabad and Mumbai

Compared to Hyderabad, Mumbai has a much lower share of Muslims (about 20% vs. 44%) and higher share of other minorities (about 7% vs. 4.8%). There are other interesting

¹⁵ See Lewis (2018) and MMRDA (<https://mmrda.maharashtra.gov.in/bandra-kurla-complex-bkc->).

¹⁶ Some well-known poor neighborhoods are: Bhendi Bazaar (C) and Shivaji Nagar (M-East). P-South covers Goregaon West.

¹⁷ Examples of upscale areas are: Colaba (A), Worli (G-South) and Bandra West (H-West). F-South, R-Central and T wards cover the areas of Parel, Borivali West and Mulund West, respectively.

differences, both spatial and non-spatial. In Hyderabad, the zone with highest proportion of Muslims (Old-Walled city) also has the lowest share of other minorities. On the contrary, in Mumbai, the British Neoliberal Zone is the highest for both Muslims and other minorities. From figures 3 and 4, we can observe a spatial separation between Muslim ghettos and elite enclaves in Hyderabad, but not so in Mumbai (British Neoliberal zone contains both a ghetto and an enclave). Of course, subdistricts in Hyderabad and municipal wards in Mumbai are large, so this separation is not “clean” i.e., poor individuals (including poor Muslims) reside in the vicinity of enclaves in both cities. However, this pattern does say something about differences in spatial segregation between the two cities. The higher segregation of Hyderabad is also supported by quantitative measures: Duncan and Duncan dissimilarity indices for Hindu-Muslim segregation for Hyderabad and Mumbai are 0.67 and 0.52, respectively.¹⁸ Other differences between the condition of Muslims in Hyderabad and Mumbai are worth noting. A much larger proportion of Muslims live outside areas where we identified ghettos in Mumbai (about 90%), as compared to Hyderabad (roughly 50%). These differences may have to do with specific histories of Muslim communities (e.g., the flight of Muslim elites from Hyderabad after independence) and differential impacts of communal violence (e.g., Contractor (2012); Rao and Thaha (2012)).

There are important similarities between the cities. In both cities, Muslims are underrepresented among the rich and overrepresented among the poor (the extent being much higher in Hyderabad).¹⁹ Some areas become marked as ‘Muslim-dominated’ or ‘Muslim slums’,

¹⁸ These indices are calculated by treating Census wards as spatial units within the city. Susewind (2017) arrives at comparable estimates using electoral data.

¹⁹ In Hyderabad, the share of Muslims among the population and the poor are: 44.2% and 65.3%, respectively. The corresponding figures for Mumbai are: 20.3% and 29.0%.

and once this branding occurs, it influences social relations within these areas and relations with other parts of the city (an instance of space and social relations mutually constituting/reinforcing each other).

4.4. Impact of Spatial Integration

Having characterized ghettos and enclaves, we ask whether integration has any real effects by examining whether households living in more integrated neighborhoods have better development outcomes. We focus on income-poverty, probably the simplest and most widely used measure to assess development. However, we immediately confront the problem that India has not arrived at an official poverty line after the controversies that emerged during the United Progressive Alliance (UPA) administration (Subramanian 2013; Motiram and Vakulabharanam 2015). So, we use a standard relative poverty line: half the median per-capita income of the city.

Whether a household is poor or not, depends on its characteristics (e.g., class) and the characteristics of the neighborhood that it lives in. For example, if a household belongs to the informal sector, it is more likely to be poor. We hypothesize that if a household lives in a neighborhood that is more integrated, then it is less likely to be poor. There are several reasons why this could be true. First, in developing countries, informal and formal sectors feed on each other (Sanyal 2007). While the former subsidizes the latter (through cheap labor), the latter provides employment opportunities. Such ‘dependent informality’ could be stronger in more integrated neighborhoods. Second, more integrated neighborhoods could engender a higher level of consciousness that translates into collective action. Finally, more integrated neighborhoods could facilitate the provision of superior public goods. These mechanisms lead to lower poverty.

How can we measure spatial integration? Previously, we have argued that this can be done better by conceptualizing it as a combination of integration in terms of: income groups and

identity groups (including classes) and termed this as ‘grayness’. Since more than two groups could co-exist in a city, we use the inverse of the Gini index of segregation to capture the second component.²⁰ This component is defined as:

$$GC = 1 - \left[\frac{\sum_{g=1}^G p_g^c \sum_{m=1}^M \sum_{n=1}^N s^m s^n \left| \frac{p_g^m}{p_g^c} - \frac{p_g^n}{p_g^c} \right|}{2 \sum_{g=1}^G p_g^c (1 - p_g^c)} \right] \quad (1)$$

$N (\geq 2)$ and $G (\geq 2)$ are the number of spatial units and identity groups in the city, respectively. $p_g^c (0 < p_g^c < 1)$ and $p_g^m (0 < p_g^m < 1)$ are the shares of the population belonging to group $g (= 1, 2, \dots, G)$ that live in the city and in the spatial unit $m (= 1, 2, \dots, N)$, respectively. $s^n (0 < s^n < 1)$ denotes the share of the population living in spatial unit $n (= 1, 2, \dots, N)$.

Given that our outcome of interest (poverty) itself depends on income, we use this component (GC) as the measure of integration in the regression below. We consider two groups: Hindus and Non-Hindus. This would broadly amount to examining Hindus and Muslims (particularly in Hyderabad, where Muslims are by far the dominant minority group), thereby capturing the main communal cleavage in India, while incorporating all minorities.²¹ The extent of spatial integration in a neighborhood could be endogenous, so we need an instrument. From the literature on industrialization in Hyderabad and Mumbai (e.g., Alam 1973; Adarkar 2012), we can infer that early/older forms of industrialization brought together people from different communities and various parts of the country. In other words, older/earlier industrialization was positively correlated with integration. This is an underappreciated virtue of the strategy

²⁰ Gini allows more than two groups, unlike some other measures e.g., Duncan-Duncan dissimilarity index.

²¹ Since the share of non-Muslim minority groups is quite small in several spatial units in both cities, considering more than two groups would not be insightful.

envisaged by early planners and Indian nationalists (like Nehru). Industrial location was dictated by considerations like availability of land and geographical characteristics, ensuring exogeneity. Therefore, we use the following instrument: I (older industrialization) and 0 (otherwise), considering subdistricts in Hyderabad and municipal wards in Mumbai as spatial units (grouping smaller units together).

The model that we estimate is as follows:

$$P_i = \alpha_1 + \beta_1 X_i + \gamma_1 GC_i + u_i \quad (2)$$

$$GC_i = \alpha_2 + \beta_2 X_i + \gamma_2 Z_i + v_i \quad (3)$$

i indexes the household. P_i : 1 if i is poor and 0 if not. X_i : vector of i 's characteristics. GC_i : grayness of i 's neighborhood (subdistrict in Hyderabad and Municipal ward in Mumbai). Z_i : instrument described above. u_i, v_i : error terms. Table 9 presents results of an instrumental-variable probit estimation. The instrument has the expected (positive) sign, is statistically significant, and passes the test of validity. As we hypothesized, in both cities, the coefficients of integration/grayness have the expected (negative) sign and are statistically significant: households living in more integrated neighborhoods are less likely to be poor.²² The magnitudes are also large. Compare two non-elite (class dummy=0) households, A and B, living in neighborhoods with least and average (median) grayness, respectively.²³ A is less likely to be poor by about 18 (59) percentage points in Hyderabad (Mumbai).

Insert table 9 here

²² We conducted several robustness checks e.g., using Duncan-Duncan dissimilarity index instead of Gini and including other controls. Our main results go through. In the interests of space, we do not report these here.

²³ We can also examine marginal effects, which reveal a similar picture.

5. Discussion and Conclusions

In the discussion above, we have used secondary databases and a spatially representative household survey to document the relative status of various religious groups in urban India and in Hyderabad and Mumbai. Broadly speaking, we find that Dalits and Muslims occupy the bottom rungs of the urban economy. We identify ghettos and elite enclaves in Hyderabad and Mumbai and show that Muslims are underrepresented in enclaves. We also identify differences between Hyderabad and Mumbai e.g., Muslims are ghettoized to a greater extent in Hyderabad. The findings from Hyderabad suggest that Muslims in cities with high Muslim concentration, do not necessarily perform (relatively) well.²⁴ This should be cross-checked for other similar cities to see if over time, non-Muslim communities have taken over activities and spaces of economic dynamism. We can identify some mechanisms (from secondary literature and our experiences) through which ghettos and enclaves get established and reproduced. One is state policy e.g., M-East ward (Mumbai), where Muslims were settled (Contractor 2012). Another is communalism, sometimes with active involvement of the state. Repeated incidents of communal violence have forced communities to find security in numbers and come together in safe-spaces.²⁵ A third mechanism is market-discrimination e.g., real estate, banking and transport. Media reports (e.g., Koppikar 2015) have highlighted discrimination against Muslims in the housing market in Mumbai. In Hyderabad, Muslims living in areas with a high proportion of Muslims have found it

²⁴ Susewind's (2015) analysis of Lucknow is consistent with this finding.

²⁵ Active involvement in fomenting communal violence and/or negligence of the state has been highlighted by media reports and independent investigations e.g., Justice Sri Krishna commission, 1992-93 Bombay riots. Sachar committee and the references on Hyderabad and Mumbai that we cited above highlight safety concerns.

harder to participate in credit markets, even when they possess required documentation and are ‘credit-worthy’ (Rao and Thaha 2012). Transport infrastructure serving areas with high proportion of Muslims is relatively inferior. This includes private transport, which often operates through pre-conceived notions of safety.²⁶ Finally, there is also ‘self-segregation’ (the desire to stay with similar individuals), a detailed analysis of which is beyond the scope of this paper. This may be more relevant for upper-class/relatively better-off Muslims.²⁷

Ghettos and enclaves are *eyesores*, blots on the landscape that continuously remind us of harsh realities and stark inequalities that characterize urban India. But, we show that they are much more: residents of less-mixed/more-segregated neighborhoods are more likely to be poor. At a theoretical level, our analysis highlights the importance of space and the need to understand its interaction with other cleavages like class, caste and religion. It also suggests that we need more analyses of cities, both intensive and comparative.

Scholars (e.g., Varshney 2002) have found the answer to why some Indian cities have persistent communal riots whereas others do not in inter-communal (‘civic’) ties or organizations. Our finding on the benefits of spatial integration is consistent with this. Such ties would be stronger in more integrated neighborhoods and could contribute to better economic outcomes as well as harmony. Our analysis has several policy implications. Pro-active and effective policy may be needed in Indian cities to prevent discrimination based on religion in credit and housing markets. During the last two to three decades, Indian cities have witnessed the

²⁶ See Contractor (2012). Our real-estate and private transport (auto-rickshaws/taxis) experiences support these observations.

²⁷ See Galonnier (2015) on Aligarh and Susewind (2015) on social networks and waqf properties in Lucknow.

entrenchment of spatial inequalities through elite enclaves (like gated communities), slums and ghettos. Both state and civil society (Harriss 2000) have played a role in this phenomenon. This trend should be arrested, and if possible, reversed. An important step in this direction would be to reduce encroachment of urban commons and making them more accessible to the poor (many of whom are Dalits or Muslims). Given our findings on the benefits of spatial integration, doing so is not only equitable, but would also reduce poverty.

There is of course the question of political will. Our analysis was based on data that pertains to the first term of the present NDA government and the UPA government that preceded it. The second NDA term has seen more serious attacks on religious tolerance and the Indian constitution. If things continue in the present manner, the adverse findings that we have documented would only get worse.

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Tables and Figures

Table 1: Average Earnings (Rupees) in India, 2018-19

	Share (%)	Regular Salaried		Self Employed	
		Male	Female	Male	Female
Rural					
Dalit	30.35	13024.78	6935.18	8045.17	4000.52
OBC	37.16	12798.58	8916.67	9296.78	4305.22
Other Hindu	15.96	15355.57	11142.91	10615.55	4746.31
Hindu (Total)	83.47	13526.01	8762.91	9245.25	4293.84
Muslim (Lower Caste)	6.70	12012.47	9274.07	9811.80	3289.54
Muslim (Others)	4.60	13968.28	7351.88	9804.72	3451.70
Muslim (Total)	11.30	12999.15	8294.85	9808.66	3349.07
Christians	1.57	15995.77	9482.11	8925.08	5285.46
Others	2.08	13746.15	7689.44	13974.55	4751.46
Total		13553.84	8729.96	9415.82	4227.62
Urban					
Dalit	14.93	16328.22	11371.34	13254.87	5435.49
OBC	32.23	18683.85	13016.65	15046.75	5993.06
Other Hindu	29.45	22070.86	18643.10	20745.06	9002.50
Hindu (Total)	76.61	19718.93	14915.52	17096.73	6976.71
Muslim (Lower Caste)	9.47	13811.46	12054.76	13187.91	4645.09
Muslim (Others)	7.70	16983.48	12996.74	14935.37	4610.22
Muslim (Total)	17.17	15347.83	12519.96	14007.17	4627.19
Christians	3.05	22295.12	19294.33	17931.32	8711.06
Others	3.17	19698.41	15510.75	22273.49	9088.33
Total		19208.14	14848.69	16741.02	6616.83

Source: Authors' computations from unit-level data of Periodic Labor Force Survey.

Note: 1. For both males and females and for both types of workers, averages are over four quarters.

2. For urban areas, Totals include observations that are in the repeat visits file, but are missing in the household file i.e., individuals living in households for which religion/caste data is missing.

Table 2: Average Consumption Expenditure (Rupees) in India

	PLFS		68th		Round	
	Rural	Urban	Rural	Urban	Million-Plus	Metros
Dalit	6764.97	10640.38	1054.74	1823.13	2056.81	1979.94
OBC	7586.18	12026.21	1276.39	2145.32	2443.79	2559.94
Other Hindu	8886.61	16303.14	1583.90	3245.34	3673.15	4301.68
Hindu (Total)	7536.23	13400.48	1257.56	2504.39	3031.85	3516.76
Muslim (Lower Caste)	8001.97	10986.29	1244.31	1599.65	1409.41	1874.19
Muslim (Others)	7678.12	11837.33	1160.00	1870.22	2198.16	1993.86
Muslim (Total)	7870.16	11368.02	1205.37	1728.15	1851.76	1958.34
Christians	8669.48	13809.97	1827.83	2939.56	4088.99	3826.96
Others	10314.27	16921.62	1933.21	2915.24	3440.01	3907.22
Total	7682.39	13175.86	1278.94	2399.22	2873.78	3364.82

Source: Authors' computations from unit-level data of Periodic Labor Force Survey (PLFS, 2018-19) and NSS 68th round, 2011-12.

Note: For 68th round, these are Uniform Recall Period (URP) estimates.

Table 3: Average Net-Worth (Rupees) in India, 2012-13

	Rural	Urban	Million-Plus	Metros
Dalit	100448.16	197289.63	216178.80	231171.80
OBC	215857.25	420090.83	530297.80	852165.50
Other Hindu	360447.22	958324.64	1418811.00	2843397.00
Hindu (Total)	202072.39	585885.40	891103.8	1856305.00
Muslim (Lower Caste)	163198.76	192761.39	207762.50	452453.10
Muslim (Others)	139073.72	277209.51	321067.40	344867.10
Muslim (Total)	152146.43	229374.80	891103.80	368578.70
Christians	343362.90	777634.60	723126.30	1023265.00
Others	751374.38	1120880.00	1076345.00	2254936.00
Total	211117.54	545339.86	803765.80	1639195.00

Source: Authors' computations from unit-level data of NSS All-India Debt and Investment Survey, 2012-13.

Table 4: Education of Adults in Urban India, 2018-19

	% High School or higher	Average Years
Dalit	23.0%	6.98
OBC	32.8%	8.62
Other Hindu	50.5%	10.86
Hindu (Total)	38.3%	9.25
Muslim (Lower Caste)	17.4%	6.37
Muslim (Others)	23.9%	7.24
Muslim (Total)	20.4%	6.78
Christians	42.4%	10.05
Others	44.6%	10.05
Total	36.0%	8.93

Source: Authors' computations from unit-level data of Periodic Labor Force Survey.

Note: Estimates based on those 23 years or older.

Table 5: Zones and their Religious Composition, Hyderabad

	Old-Walled City	Nizam's City	British Resident City	Neoliberal City	Total
Dalit	8.57	9.88	17.13	12.09	11.26
OBC	18.65	30.1	39.21	27.12	27.26
Other Hindu	5.94	19.85	13.65	21.9	12.57
Hindu (Total)	33.16	59.83	69.99	61.11	51.09
Muslim (Lower Caste)	9.18	17.27	21.88	8.17	14.31
Muslim (Others)	54.2	17.91	4.07	16.99	29.85
Muslim (Total)	63.38	35.18	25.95	25.16	44.16
Others	3.47	4.99	4.07	13.73	4.75
Total	100	100	100	100	100

Source: Authors' computation from survey data.

Note: For the definition of these zones, see section 4.

Table 6: Ghettos and Enclaves in Hyderabad

Subdistrict	%Pop	%Poor	%Rich	(2)/(1)	(3)/(1)	% High School Or Higher
	(1)	(2)	(3)	(4)	(5)	(6)
Shaikpet	5.73	3.67	7.3	0.6	1.3	39.74%
Ameerpet	1.54	0	7.73	0.0	5.0	77.55%
Secunderabad	4.25	2.35	0	0.6	0.0	40.18%
Tirumalgiri	4.92	4.14	6.01	0.8	1.2	22.90%
Maredpalle	4.3	0.94	3.43	0.2	0.8	41.41%
Musheerabad	7.87	7.99	6.44	1.0	0.8	30.11%
Amberpet	3.21	0.94	9.44	0.3	2.9	51.32%
Himayath Nagar	1.16	0.19	6.44	0.2	5.6	67.65%
Nampally	5.7	6.2	3.86	1.1	0.7	33.59%
Khairatabad	6.44	0.09	11.59	0.0	1.8	50.00%
Asifnagar	12.43	6.67	17.17	0.5	1.4	33.54%
Golconda	4.94	3.38	3.86	0.7	0.8	31.40%
Bahadurpura	14.59	29.89	0	2.0	0.0	21.67%
Bandlaguda	7.79	13.25	1.72	1.7	0.2	21.93%
Charminar	6.82	13.91	0	2.0	0.0	17.73%
Saidabad	8.29	6.39	15.02	0.8	1.8	40.83%
Total	100	100	100			34.06%

Source: Authors' computations from survey data.

Note: 1. Those in the bottom quartile (25%) of the income distribution are considered as poor.

2. Those in the top 5% of the income distribution are considered as rich.

3. For education, estimates are for those older than 23 years.

Table 7: Zones and their Religious Composition, Mumbai

	British Neoliberal	Old Ind City I	Western Neoliberal	Northern Neoliberal	Old Ind City II	Total
Dalit	8.63	17.07	4.10	16.09	10.49	11.02
OBC	12.94	19.00	7.15	7.81	20.58	11.76
Other Hindu	28.68	43.32	51.96	61.05	47.57	50.05
Hindu (Total)	50.25	79.39	63.21	84.95	78.64	72.83
Muslim (Lower Caste)	3.30	2.25	9.42	1.41	2.72	4.39
Muslim (Others)	36.55	11.92	19.44	8.75	12.04	15.94
Muslim (Total)	39.85	14.17	28.86	10.16	14.76	20.33
Others	9.90	6.44	7.93	4.89	6.6	6.84
Total	100	100	100	100	100	100

Source: Authors' computation from survey data.

Note: For the definition of these zones, see section 4.

Table 8: Ghettos and Enclaves in Mumbai

Municipal Ward	% Pop	% Poor	% Rich	(2)/(1)	(3)/(1)	% High School Or Higher
	(1)	(2)	(3)	(4)	(5)	(6)
A	1.26	0	3.93	0.0	3.1	60.00%
B	1.47	0	1.12	0.0	0.8	62.96%
C	2.27	3.59	1.12	1.6	0.5	25.93%
D	2.89	2.95	2.25	1.0	0.8	73.21%
E	2.65	0	2.25	0.0	0.8	37.88%
F-North	3.34	2.18	1.69	0.7	0.5	28.95%
F-South	3.9	2.82	8.99	0.7	2.3	48.42%
G-North	4.63	5.13	5.06	1.1	1.1	33.66%
G-South	4.73	5.26	12.36	1.1	2.6	44.17%
H-East	6.58	3.34	9.55	0.5	1.5	45.70%
H-West	3.13	0	5.06	0.0	1.6	69.33%
K-East	6.55	8.6	2.81	1.3	0.4	35.95%
K-West	7.27	10.4	3.93	1.4	0.5	35.95%
L	7.14	5.39	2.25	0.8	0.3	47.89%
M-East	3.34	5.52	1.12	1.7	0.3	29.49%
M-West	3.77	3.08	1.12	0.8	0.3	31.82%
N	1.76	0.39	1.69	0.2	1.0	41.86%
P-North	7.75	9.5	8.43	1.2	1.1	47.16%
P-South	3.53	10.01	1.12	2.8	0.3	25.71%
R-Central	6.26	5.26	9.55	0.8	1.5	34.51%
R-North	3.8	5.91	4.49	1.6	1.2	43.42%
R-South	7.09	7.83	6.74	1.1	1.0	33.96%
S	2.99	1.67	0	0.6	0.0	34.25%
T	1.9	1.16	3.37	0.6	1.8	45.00%
Total	100	100	100			40.91%

Source: Authors' computations from survey data.

Note: 1. Those in the bottom quartile (25%) of the income distribution are considered as poor.

2. Those in the top 5% of the income distribution are considered as rich.

3. For education, estimates are for those older than 23 years.

Table 9: Instrumental Variable Probit Analysis

(Dependent Variable: 1 if Household is poor and 0 if not)

	Hyderabad	Mumbai
Grayness	-2.550* (0.473)	-3.313* (0.932)
Class Dummy	-0.952* (0.200)	-0.705 (0.309)
Constant	0.173 (0.228)	1.628** (0.816)
Instrument	0.168* (0.015)	0.034* (0.014)
Chi ² (Prob> Chi ²)	7.11 (0.008)	6.79 (0.009)

Source: Authors' computations from survey data.

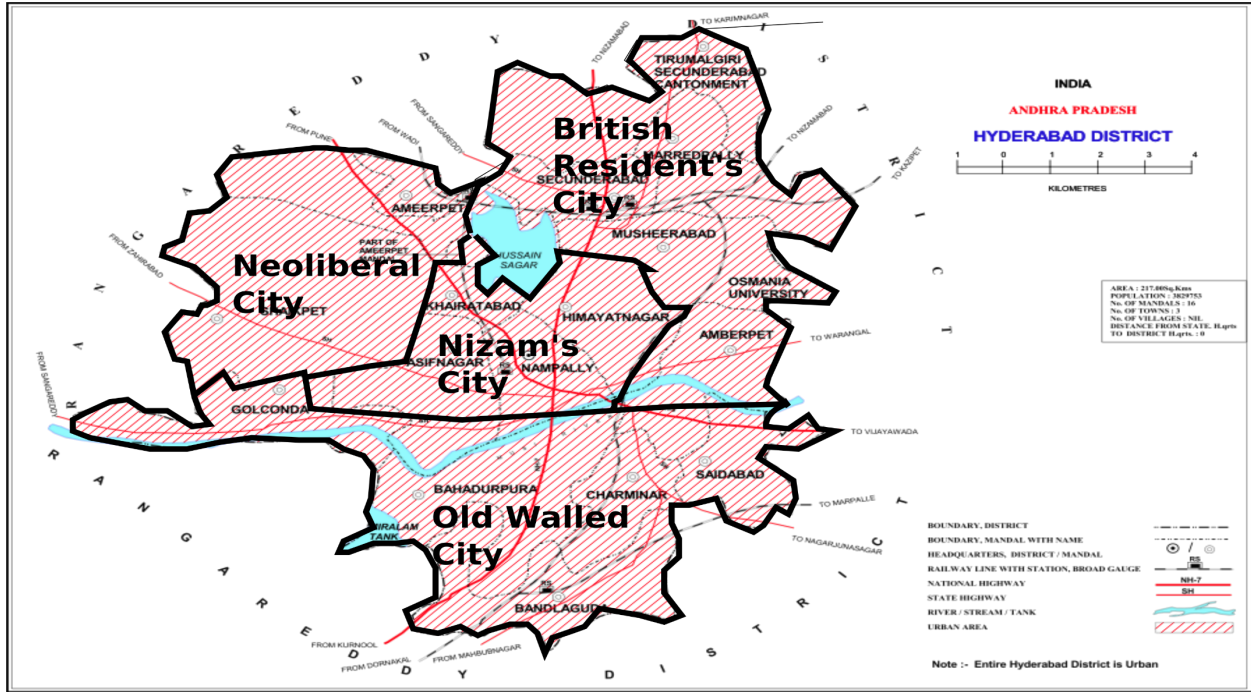
Notes: 1. Standard errors in parentheses. * and ** denote that the coefficient is statistically significant at 99% and 95% confidence level, respectively.

2. Grayness is computed with household as the unit and with two groups: Hindus and Others.

The subdistrict or municipal ward is treated as the neighborhood and the census ward as the unit within the neighborhood.

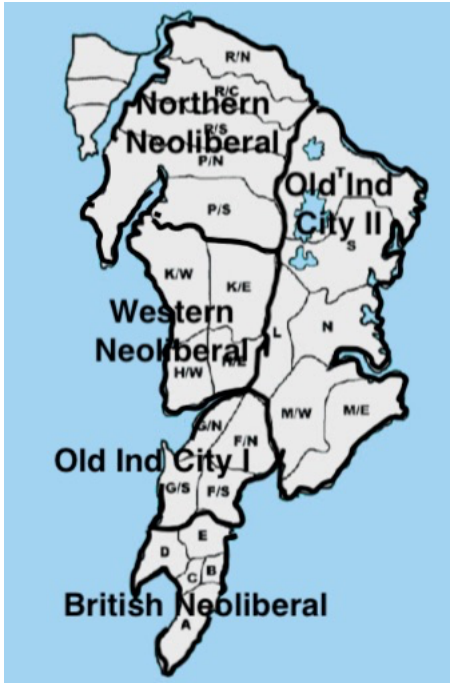
3. Class dummy: 1 if elite, professional or retired; 0 otherwise.

Figure 1: Zones in Hyderabad



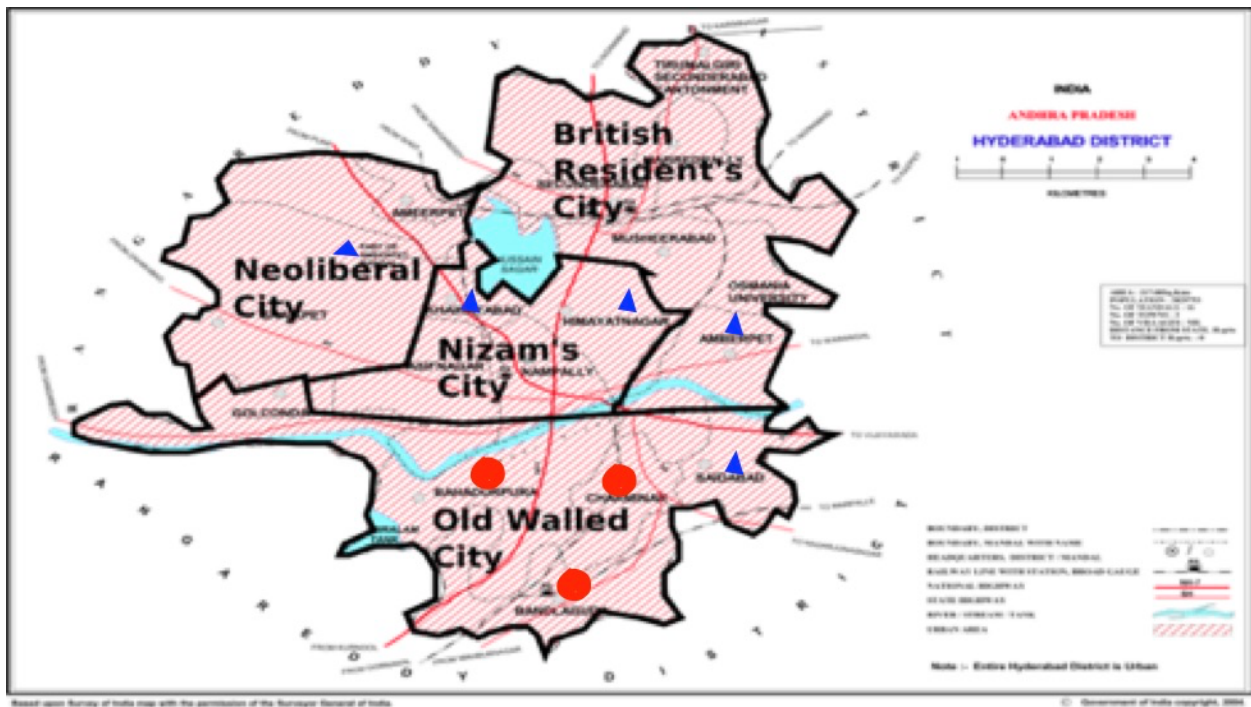
Source: District Census Handbook, Census of India 2011. We overlaid the zones on the map.

Figure 2: Zones in Mumbai



Source: Municipal Corporation of Greater Mumbai. We overlaid the zones on the map.

Figure 3: Ghettos and Enclaves in Hyderabad



Note: Ghettos are represented by circles and enclaves by triangles.

Figure 4: Ghettos and Enclaves in Mumbai



Note: Ghettos are represented by circles and enclaves by triangles.