

Ethnic diversity and firm performance: Evidence from India

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Abstract

We examine if the financial performance of firms in India depends on the level of ethnic diversity in the state or district in which they operate. Thus, using data on 1,199 listed firms in the materials, industrial and information technology sectors in India, we examine the impact of ethnic diversity on various measures of firm financial performance. Based on indices of fractionalization calculated for 15 states and 74 districts in which these firms operate, we find evidence of negative effects of ethnic diversity on firm performance. These results are robust to endogeneity and alternative ways of measuring diversity.

Keywords: ethnic diversity, fractionalization, polarization, firm performance, India

1. Introduction

Issues of firm performance remain important and have been at the fore-front of academic discussions for several decades. Consequently, the literature on the determinants of firm performance and profitability continues to grow. This literature is inter-disciplinary and cuts across disciplines such as finance, economics, and management, among others. Within the economics literature, studies have explored several determinants including firm-specific factors, industry-specific factors and macroeconomic factors, although various economic theories underpin the study of these factors. For instance, economic theory in the area of industrial organization (IO) provides a useful theoretical framework that explains how market structure affects firm strategy, performance, and profits (Hansen & Wernerfelt, 1989). This theory emphasises how market factors determine firm performance and is a key basis for which several studies into the determinants of firm performance are conducted. A key argument in this area suggests that industry structure is a major determinant of firm performance, hence the structure-conduct-performance (SCP) model which demonstrates a relationship between market structure and firm performance (Evanoff & Fortier, 1988; Hannan, 1991).

Another strand of literature, in the tradition of Bain (1956), examines industry characteristics that affect performance and focuses on the effects of variables such as capital intensity, advertisement, growth, research and development, and industry concentration among others (Hou & Robinson, 2006; Klette & Johansen, 2000; Lepak et al., 2003; Zhao & Zou, 2002). Similarly, relating firms to their competitors, and how that affects performance, existing studies have also explored the effect of relative market share on firm performance (Anderson et al., 1994; Pelham & Wilson, 1995). An important strand of research within this stream examines the role of firm size in explaining firm performance (Hall & Weiss, 1967; Lawrence et al., 2006).

Overall, an important inference from the various strands of the literature suggests that no one factor can be singled out as the main determinant or driver of firm performance but rather various factors play unique roles. However, despite the large body of literature that examines the determinants of firm performance, not much is known about the role of ethnic diversity in influencing firm performance. Awaworyi Churchill et al. (2017) and Awaworyi Churchill (2018) provide some evidence in the context of manufacturing firms in China and listed firms across Africa, respectively. Navon (2010) conducts a related study using a matched employer-employee dataset of Israeli manufacturing firms. However, this study focuses on the role of human capital spillovers in firm productivity. Similarly, Parrotta et al. (2014) also use an employer-employee matched dataset from Denmark to examine the role skill, demographic and ethnic diversity on total factor productivity at the firm level, and provide mixed evidence on the effects of diversity. A related strand of literature also uses various datasets to examine the impact of age, education and gender diversity in the workplace on firm performance (see, Garnero et al. (2016) for a review).

In this study, we contribute to the literature by examining the impact of ethnic diversity on 1199 firms in India. Specifically, our study seeks to answer the questions: do ethnic differences present implications for the performance of firms in India? Are firms affected by the level of diversity in the states or districts in which they operate? Given the unavailability of matched employer-employee datasets for India, we work with the assumption that firm-level diversity is a reflection of, or is influenced by, the level of diversity in the states and districts in which firms operate. Thus,

consistent with Awaworyi Churchill et al. (2017), we examine if firms are less or more likely to be productive if they operate in locations (i.e., states or districts) with higher levels of ethnic diversity?

We examine the hypothesis that differences in ethnic diversity across Indian States and districts can explain differences in the performance of firms. We focus on firms in the materials, industrial and information technology sectors as determined by the Global Industry Classification Standard. Firms in these categories are mostly into technology and manufacturing, and are important for India given that they represent the fastest growing industries that contribute significantly to economic development in India (Arnold et al., 2016; Dangayach & Deshmukh, 2005; Szirmai & Verspagen, 2015). India also makes for an important case and focusing on it bridges important gaps in the literature. For instance, despite being one of the largest and important economies, relatively little is known about the performance of Indian firms (Majumdar & Bhattacharjee, 2010). Further, India is characterised by high levels of diversity, and thus it is worthwhile to understand the implications of this diversity.

Our study therefore relates to two streams of studies within the existing literature, and ties together discussions from both the literature on the determinants of firm performance, and the literature on the effects of ethnic diversity. Our paper relates to existing studies on the determinants of firm performance as it provides a new perspective on understanding the factors that influence firm performance in India. Furthermore, our study also relates to the growing literature on the effects of ethnic diversity by contributing to our understanding on how ethnic diversity affects firm performance. With regards to our contribution to the ethnic diversity literature, our study is timely as it responds to calls for studies that examine the impact of ethnic diversity within-countries rather than across countries (Gisselquist et al., 2016). Our results suggest that ethnic diversity negatively influences firm financial performance. Specifically, across our different estimation types, we find negative effects of ethnic diversity on firm performance indicators such as return on assets, net turnover and firm revenues.

The remainder of the study is structured as follows. The next section discusses the data while Section 3 presents the empirical methods. Section 4 presents the results and Section 5 concludes.

2. Data

Firm-level data are drawn from Compustat hosted by the University of Pennsylvania's Wharton Research Data Services. Compustat is a financial and statistical database which contains market information on several listed companies throughout the world. Our measures of firm financial performance are consistent with the literature and include return on assets, net sales/turnover, and total revenue (Awaworyi Churchill et al., 2017; McGahan, 1999).

Our indices of diversity are calculated based on the 2001 Indian census data. We generate two measures of diversity, namely a fractionalization index, which is basically a Herfindahl index measuring concentration across ethnic groups (Alesina et al., 2003) and a polarization index, which highlights the dimension of conflict in diversity (Montalvo and Reynal-Querol, 2005). Specifically, fractionalization is generated using the Herfindahl formula as follows:

$$FRAC_i = 1 - \sum_{j=1}^J n_{ij}^2$$

where $FRAC$ is the index of fractionalization and n_{ij} is the population share of ethnic group j in state/district i . The above index denotes the probability that two randomly selected individuals in a given state/district belong to different ethnic groups.

Ethnic polarization indices are generated using the Montalvo and Reynal-Querol (2005) approach as follows:

$$POL = 1 - \sum_{j=1}^J \left(\frac{0.5 - n_{ij}}{0.5} \right)^2 \cdot n_{ij}$$

where POL is the index of polarization and measures the distance of any distribution of ethnic, linguistic and religious groups from the situation that leads to the maximum conflict and n_{ij} is as defined previously.

Based on the 2001 census we compute the indices of ethnic diversity using ethnic group classifications that are based on a distribution of population speaking six categories of languages in India, namely Indo-European, Dravidian, Austro-Asiatic, Tibeto-Burmese, Semito-Hamitic and an “others” category.¹ The “others” category here captures people speaking languages not grouped as part of the first five language categories. For robustness, we also use indices of linguistic diversity which are based on a categorization of 123 languages in India as well as indices of religious diversity which are based on seven religious groups in India namely, Hindu, Christian, Muslim, Sikh, Buddhist, Jain and other religions. Data on the distribution of population at the state and district levels by main languages spoken and religious affiliation is obtained at the online Census of India repository.²

Overall, our study is based on indices of diversity for a cross-section of 15 states and 74 districts in India, as well as 1199 listed firms in the materials, industrial and information technology sectors.³ Given the cross-sectional nature of our indices of diversity, consistent with the literature (Alesina & Zhuravskaya, 2011; Awaworyi Churchill et al., 2017; Easterly & Levine, 1997), we take the decadal average of firm level variables from 2001 to 2010.

3. Empirical Model and Approach

We specify a cross-sectional model similar to Awaworyi Churchill et al. (2017) and Alesina and Zhuravskaya (2011), among others. The model takes the form;

$$FP_{ji} = \alpha + \beta D_i + \sigma I_i + \delta' X_{ji} + \varepsilon_{ji} \quad (1)$$

FP_{ji} represents firm financial performance for firm j located in state or district i . D represents the index of ethnic diversity. I represents income proxied by net state domestic product per capita or

¹ http://www.censusindia.gov.in/Census_Data_2001/Census_Data_Online/Language/statement9.aspx

² This information can be retrieved at http://www.censusindia.gov.in/DigitalLibrary/Archive_home.aspx

³ Table A1 and A2 in the appendix provides the list of states and districts, respectively.

net district domestic income per capita while X represents firm-level covariates including invested capital and assets which serve as a control for firm size.⁴ ε is the heteroskedastic error term.

Our base line regressions are ordinary least squares (OLS) regressions with robust standard errors that account for heteroskedasticity. However, we also run two-staged least squares (2SLS) regressions to address endogeneity. Endogeneity is likely to be a problem if unobserved variables are correlated with our measures of firm performance and ethnic diversity. We use the lagged variable of fractionalization as instrument. Specifically, we use indices of fractionalization based on the 1991 census as instruments. Such lagged values of diversity have been used in the existing literature to address endogeneity (Glennester et al., 2013). However, with some persistence in our outcome variables, endogeneity can remain an issue even with the lagged values as instruments, especially if the census does not date back far enough. Accordingly, data from an even older census would make for a stronger instrument however we do not have census information beyond 1991. Thus, to complement our external instruments and to ensure that our results do not suffer from weak instruments bias, we supplement the traditional 2SLS regressions with the Lewbel (2012) 2SLS approach. The Lewbel (2012) 2SLS approach deals with endogeneity using heteroskedasticity based instruments, and is often used in the literature when external instruments are either weak or unavailable (Awaworyi Churchill & Mishra, 2017; Mishra & Smyth, 2015).

The relevant model could be expressed as follows:

$$FP = X'\beta_1 + EY_1 + \xi_1 \quad \xi_1 = \alpha_1 U + V_1 \quad (2)$$

$$E = X'\beta_2 + \xi_2 \quad \xi_2 = \alpha_2 U + V_2 \quad (3)$$

Let FP be firm financial performance and E be the measure of ethnic diversity. U denotes unobserved characteristics, which affects both firm financial performance and ethnic diversity. V_1 and V_2 are idiosyncratic errors. The Lewbel (2012) approach uses the heteroskedasticity in the data to estimate the 2SLS regression and involves taking a vector Z of observed exogenous variables and utilizing $[Z-E(Z)]\xi_2$ as an instrument, provided that:

$$E(X\xi_1)=0, E(X\xi_2), cov(Z, \xi_1, \xi_2) = 0 \quad (4)$$

and there is some heteroskedasticity in ξ_j . The vector Z could be a subset of X or equal to X . As ξ_2 is a population parameter, and it cannot be directly observed, we use its sample estimate $\hat{\xi}_2$, obtained from the first stage regression and consequently use the vector $[Z-E(Z)]\hat{\xi}_2$ as instruments. This approach is often used in the literature in the absence of external instruments or as robustness checks on findings from 2SLS regressions using external instruments (Awaworyi Churchill & Mishra, 2017; Awaworyi Churchill & Smyth, 2017).

4. Results

Table 2 reports OLS results for the effects of ethnic fractionalization on firm financial performance. Columns 1 to 3 present evidence at the state-level while Columns 4 to 6 present evidence at the

⁴ Income at the state level is from the Reserve Bank of India while district level income is drawn from the from the Planning Commission of India's [website](#). Firm size control variables are from the Compustat database.

district-levels. Further, Columns 1 and 4 present evidence for effects on return on assets, Columns 2 and 5 for effects on net turnover, and Columns 3 and 6 for effects on revenue.

Overall, results suggest a negative association between ethnic fractionalization and firm performance although not consistent across columns. Taking into account state-level evidence, only the effects of fractionalization on return on assets is statistically significant. Here, a standard deviation increase in fractionalization is associated with a decline of 0.091 standard deviations in return on assets. At the district level, we find evidence of statistically significant negative effects on net turnover and revenue only. Specifically, a standard deviation increase in ethnic fractionalization is associated with declines of 0.057 and 0.065 standard deviations in net turnover and revenue, respectively.

Table 3 presents results that address endogeneity. Panel 1 presents results based on 2SLS regressions which use lag of fractionalization as an external instrument. Panel 2 presents results for Lewbel 2SLS regressions which combine lag of fractionalization with internally generated instruments while Panel 3 presents Lewbel 2SLS results for internally generated instruments only. Across all panels, the first stage F-statistics shows that the F tests satisfy the Stock and Yogo (2005) criteria as they are above 10. Further, in panels 2 and 3, where we have multiple instruments, we fail to reject the null hypothesis for the overidentifying restriction tests given the p-values. This suggests that the internally generated instruments used in the first-stage regressions are not overidentified.

Results across all panels of Table 3 support the conclusion of a negative effect of fractionalization on firm performance. From Panel 1, only the effects of fractionalization on return on assets are significant. Here, a standard deviation increase in fractionalization is associated with declines of 0.025 and 0.035 standard deviations in return on assets at the state and district-levels, respectively. Results from Panel 2 which are based on both external and internally generated instruments show more consistent effects across the columns. At the state-level, we find that a standard deviation increase in fractionalization is associated with declines of 0.027 and 0.026 standard deviations in return on assets and net turnover, respectively. Similarly, at the district-level, a standard deviation increase in fractionalization is associated with declines of 0.041, 0.034 and 0.023 standard deviations in return on assets, net turnover and revenue, respectively. Findings from Panel 3 are also consistent with statistical significance observed for effects on return on assets and revenue at both the state and district levels. Thus, overall, both OLS and 2SLS results suggest a negative effect of fractionalization on firm financial performance, however, comparing standardized coefficients across both set of results, 2SLS results appear to be relatively smaller in magnitude suggesting an upward bias in OLS results.

Lastly, we examine the robustness of our results to alternative ways of measuring diversity. These results are reported in Table 4. In Panel 1, we examine effects of ethnic polarization. Polarization is also a known measure of diversity but as opposed to fractionalization, polarization is argued to be effective in capturing conflicts (Esteban et al., 1994). In panels 2 and 3, we examine the effects of linguistic fractionalization and religious fractionalization. This allows us to examine diversity along the lines of linguistic and religious differences given the higher correlation between these dimensions and ethnicity as argued in the existing literature (Awaworyi Churchill, 2017b). Overall, results reported across all three panels of Table 4 confirm the existing conclusion of a negative effect on firm performance in India, albeit with varying effect sizes.

5. Conclusion and policy implications

Diversity could be an important ingredient for performance when diversity of skill, cultural values and perspectives, emanating from individual differences could promote innovation relevant for firm growth. On the contrary, diversity could negatively influence social capital, an important ingredient for firm performance. This study thus places firm financial performance in India the context of the levels of diversity in the states and districts in which firms operate. In doing this, we examine the direct effects of ethnic diversity on the performance of 1199 firms in the materials, industrial and information technology sectors. We examine firm performance along the financial dimension and thus focus on return on assets, net sales/turnover, and total revenue as outcomes. Based on indices of fractionalization calculated for 15 states and 74 districts in which these firms operate, we find evidence of negative effects of ethnic diversity on firm financial performance.

These results could be explained by the prevalence of intense ethnic competition between firms, discrimination in employee selection within Indian firms, and the inability to manage diversity (Cooke and Saini, 2010). For instance, Cooke and Saini (2010), suggest that Indian firms face difficulties managing the diversity in their workforce which is a reflection of the level of diversity in Indian communities. Based on evidence drawn from 24 Indian firms of different ownership structures, the authors revealed significant differences in opinion on what diversity means and how it can be managed to harness the positive effects. As discussed in section 2, diversity could lead to either positive or negative effects depending on the channels through which it operates. Accordingly, the appropriate management of diversity is required to ensure that the positive effects of diversity are achieved. Firm, district and state level policies aimed at appropriately managing diversity are relevant to ensure that the positive effects of diversity are realised.

Further, some studies on organizational behaviour of Indian firms have shown that Indian employees tend to display a mixed set of values and characteristics adapted from both Western and Indian cultures (Birasnav & Rangnekar, 2009; Rai, 2013; Sinha & Kanungo, 1997), and this represents a clash that is introduced as a result of competing ethnic values, which may not be beneficial to firm performance. While the appropriate management of such competing cultures and values could be beneficial for firm performance, the rapid transition has influenced the ability of firms to manage such complex ethnic differences. It is therefore important to take cognisance of these issues while developing appropriate strategies. Particularly, it is important to take into account the rapid transition of Indian firms from local to global firms with significant influence from western cultures. This suggestion is in line with arguments presented in Budhwar and Debrah (2008) which suggest that organizations operating with influence from the global stage are likely to face more challenges in managing their workforce given the potential role of cross-cultural differences and the associated diversity.

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Table 1. Description and Summary of Variables

Variable	Description	Mean	SD
<i>State-level variables</i>			
Fractionalization 1	Index of Ethnic Fractionalization for States	0.185	0.096
Fractionalization 2	Index of Ethnic Fractionalization for Districts	0.133	0.139
Polarization 1	Index of Ethnic Polarization for States	0.165	0.182
Polarization 2	Index of Ethnic Polarization for Districts	0.265	0.277
Linguistic 1	Index of Linguistic Fractionalization for States	0.291	0.159
Linguistic 2	Index of Linguistic Fractionalization for Districts	0.527	0.232
Religious 1	Index of Religious Fractionalization for States	0.252	0.126
Religious 2	Index of Religious Fractionalization for Districts	0.399	0.138
Return on assets	Log of ratio of net turnover or sales to assets	0.371	0.323
Net turnover	Log of net turnover/sales	5.391	1.908
Revenues	Log of total revenue	6.946	2.124
Income 1	Net state domestic income per capita	10.064	0.551
Income 2	Net district domestic income per capita	9.736	0.532
Invested capital	Log of invested capital	5.441	1.847
Assets	Log of total assets	7.262	1.800

Notes: Variables logged except for indices of diversity.

Table 2. Effects of ethnic fractionalization (OLS regressions)

VARIABLES	State-level regressions			District-level regressions		
	(1) ROA	(2) Net turnover	(3) Revenue	(4) ROA	(5) Net turnover	(6) Revenue
Fractionalization	-2.035* (1.088) [-0.091]	-1.773 (1.262) [-0.076]	1.219 (1.222) [0.059]	-0.394 (0.337) [-0.026]	-0.904** (0.392) [-0.057]	-0.917** (0.424) [-0.065]
Income	0.658 (0.599) [0.098]	1.168* (0.677) [0.167]	-0.766 (0.648) [-0.124]	0.070 (0.348) [0.010]	1.196*** (0.407) [0.171]	-1.073** (0.440) [-0.174]
Invested capital	0.097*** (0.031) [0.092]	0.052* (0.027) [0.045]	0.260*** (0.028) [0.264]	0.098*** (0.031) [0.092]	0.053* (0.027) [0.045]	0.259*** (0.028) [0.263]
Assets	0.925*** (0.034) [0.827]	1.066*** (0.030) [0.874]	0.705*** (0.028) [0.679]	0.925*** (0.034) [0.826]	1.066*** (0.030) [0.874]	0.706*** (0.028) [0.681]
Constant	-6.210 (5.414)	-13.601** (6.060)	5.649 (5.783)	-0.994 (3.096)	-13.750*** (3.594)	8.248** (3.860)
State dummies	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,199	1,151	1,198	1,199	1,151	1,198
R-squared	0.833	0.840	0.834	0.833	0.840	0.834

Robust standard errors in parentheses

Standardized coefficients in brackets

*** p<0.01, ** p<0.05, * p<0.1

Table 3. Effects of ethnic fractionalization (2SLS regressions)

VARIABLES	State-level regressions			District-level regressions		
	(1) ROA	(2) Net turnover	(3) Revenue	(4) ROA	(5) Net turnover	(6) Revenue
Panel 1 – External instrument						
Fractionalization	-0.735** (0.355) [-0.025]	-0.037 (0.341) [-0.001]	-0.189 (0.346) [-0.007]	-0.548** (0.259) [-0.035]	-0.028 (0.256) [-0.002]	-0.141 (0.258) [-0.010]
Observations	1,136	1,090	1,135	1,136	1,090	1,135
R-squared	0.831	0.838	0.833	0.831	0.838	0.833
F-statistics (first stage)	268.34	314.00	427.58	216.76	204.70	216.90
Panel 2 – Lewbel with external and internal instruments						
Fractionalization	-0.802** (0.356) [-0.027]	-0.421** (0.175) [-0.026]	-0.335 (0.337) [-0.012]	-0.655*** (0.215) [-0.041]	-0.562*** (0.175) [-0.034]	-0.327* (0.198) [-0.023]
Observations	1,136	1,090	1,135	1,136	1,090	1,135
R-squared	0.831	0.838	0.833	0.831	0.838	0.833
F-statistics (first stage)	465.07	865.12	267.95	603.19	505.68	542.04
J p-value	0.0618	0.7460	0.0556	0.2174	0.7403	0.0791
Panel 3 – Lewbel with internal instruments						
Fractionalization	-0.562** (0.284) [-0.025]	0.257 (0.254) [0.011]	-0.798*** (0.286) [-0.039]	-0.711*** (0.212) [-0.047]	0.197 (0.196) [0.012]	-0.467** (0.200) [-0.033]
Observations	1,199	1,151	1,198	1,199	1,151	1,198
R-squared	0.831	0.839	0.832	0.832	0.838	0.831
F-statistics (first stage)	137.56	114.72	130.12	149.77	88.35	135.83
J p-value	0.1884	0.4157	0.6052	0.3056	0.5741	0.1226

All regressions control for industry and state dummies

Robust standard errors in parentheses

Standardized coefficients in brackets

*** p<0.01, ** p<0.05, * p<0.1

Table 4. Further analysis

VARIABLES	State-level regressions			District-level regressions		
	(1) ROA	(2) Net turnover	(3) Revenue	(4) ROA	(5) Net turnover	(6) Revenue
Panel 1 – Effects of ethnic polarization						
Polarization	-1.023*	-0.891	0.612	-0.635***	-0.453**	-0.455**
	(0.547)	(0.634)	(0.614)	(0.156)	(0.197)	(0.213)
	[-0.087]	[-0.072]	[0.056]	[-0.063]	[-0.057]	[-0.065]
Observations	1,199	1,151	1,198	1,199	1,151	1,198
R-squared	0.833	0.840	0.834	0.833	0.840	0.834
Panel 2 – Effects of linguistic fractionalization						
Fractionalization	-4.311*	-3.755	2.582	-0.289*	-0.625***	-0.054
	(2.306)	(2.674)	(2.588)	(0.154)	(0.159)	(0.161)
	[-0.224]	[-0.187]	[0.145]	[-0.034]	[-0.070]	[-0.007]
Observations	1,199	1,151	1,198	1,199	1,151	1,198
R-squared	0.833	0.840	0.834	0.833	0.841	0.834
Panel 3 – Effects of religious fractionalization						
Fractionalization	-2.397*	-0.781**	1.436	-0.257	-0.700***	-0.077
	(1.282)	(0.315)	(1.439)	(0.201)	(0.226)	(0.209)
	[-0.121]	[-0.117]	[0.078]	[-0.017]	[-0.045]	[-0.006]
Observations	1,199	1,151	1,198	1,199	1,151	1,198
R-squared	0.833	0.840	0.834	0.833	0.841	0.834

All regressions control for industry and state dummies

Robust standard errors in parentheses

Standardized coefficients in brackets

*** p<0.01, ** p<0.05, * p<0.1

Appendix A1 – List of States Included in Analysis

Andhra Pradesh	Kerala
Assam	Madhya Pradesh
Bihar	Maharashtra
Chandigarh	Punjab
Haryana	Tamil Nadu
Himachal Pradesh	Uttar Pradesh
Jharkhand	West Bengal
Karnataka	

Appendix A2 – List of Districts Included in Analysis

Agra	Indore	Nanded
Allahabad	Jabalpur	Nashik
Aurangabad	Jalandhar	North Cachar Hills
Bangalore	Jalgaon	Palamu
Bardhaman	Jalpaiguri	Patiala
Belgaum	Jaunpur	Patna
Bhandara	Kancheepuram	Pune
Bhopal	Kanpur Nagar	Purbi Singhbhum
Chandigarh	Karnal	Rewari
Chandrapur	Karur	Rohtak
Chennai	Kolhapur	Salem
Coimbatore	Kolkata	Satna
Dewas	Koppal	Solan
Dhar	Krishna	Sonipat
Dharmapuri	Kurnool	Sultanpur
East Nimar	Lucknow	Thane
Ernakulam	Ludhiana	Thoothukkudi
Erode	Madurai	Ujjain
Faridabad	Medak	Varanasi
Gautam Buddha Nagar	Medinipur	Virudhunagar
Ghaziabad	Moga	Visakhapatnam
Guntur	Mumbai	Wardha
Gurgaon	Mumbai (Suburban)	West Godavari
Hisar	Mysore	Yamunanagar
Hyderabad	Nagpur	