# EMPLOYEE REFERRAL, SOCIAL PROXIMITY AND WORKER DISCIPLINE: THEORY AND SUGGESTIVE EVIDENCE FROM INDIA

UNU-WIDER

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# BACKGROUND

- Large literature on the roles of social networks in labour markets (see Iaonnides and Datcher Loury's (2004) early review).

- Until recently, development economists focused mainly on the supply side: networks as a source of information during job search (Iversen, Sen, Verschoor & Dubey 2009).

- Weak tie connections particularly valuable: expand the number of vacancies a job seeker receives information about (Granovetter 1973 & 1995).

- Wahba and Zenou (2005) suggest that network based vacancy information correlates with population density: particularly useful for illiterate and semi-literate workers at the bottom of the occupational ladder.

- A parallel: Oster and Millett Steinberg (2013): the impact of proximity to IT centres on the demand for schooling: *information about (higher skill) job opportunities*.

# MOTIVATION: NETWORK MECHANISMS & THEIR IMPLICATIONS

- Starting point - orthodox model of rural-urban migration:

  - Are labour markets level playing fields? If so, livelihoods diversification & social mobility through the non-farm, urbanization route can be promoted by providing vacancy information to job-seekers.

  - Or is job access 'filtered'? If so, are there access restrictions across the board or only in some labour markets or jobs? Think of family labour and effort in agricultural households/ the equivalent in small enterprises considering whether to expand or not (Banerji, Natarajan and Sen 2016).

  - Limited scope for contract enforcement (also hinted at by Munshi & Rosenzweig 2006): 86% of India's manufacturing workers were employed in 17 million small and informal enterprises: 14% working for 0.13 million formal enterprises (Kotwal, Ramaswami and Wadhwa 2011).
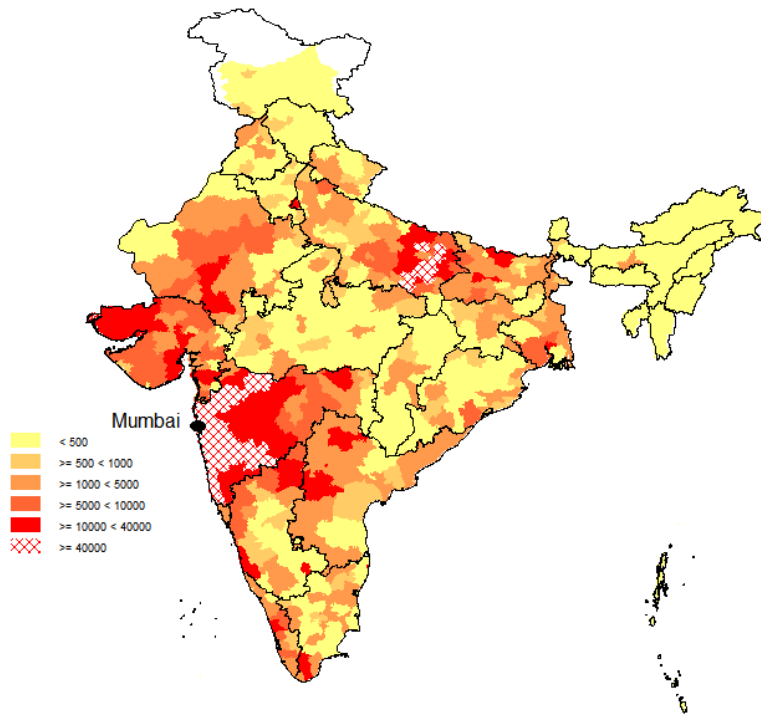
  - Implications for migration patterns?

# CHAIN MIGRATION (FROM TUMBE, VARIOUS)
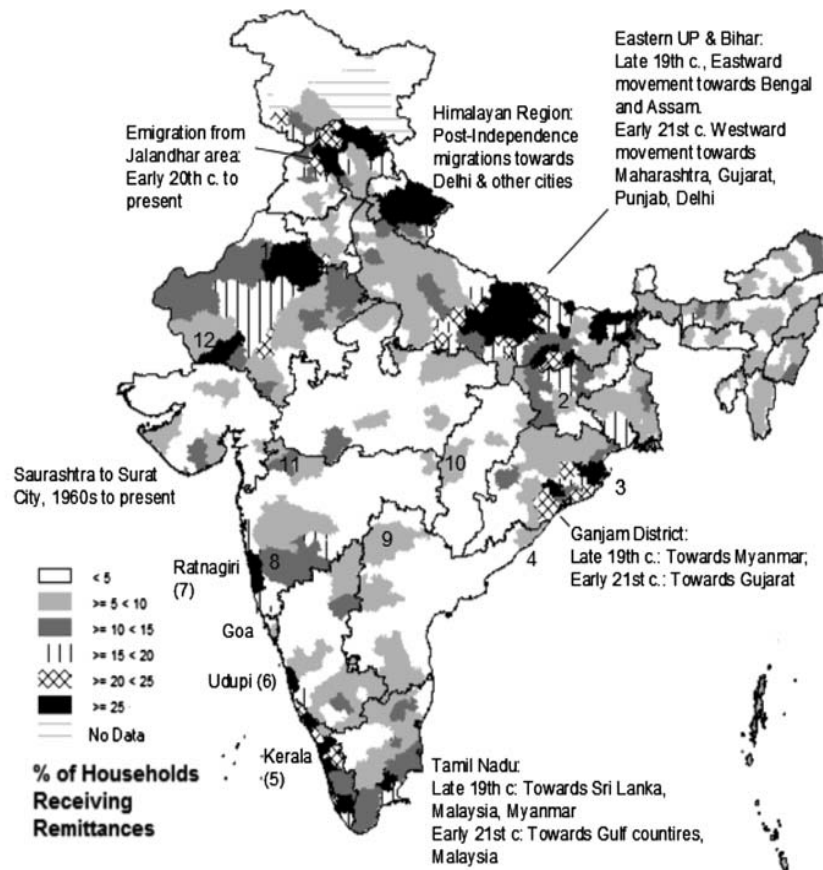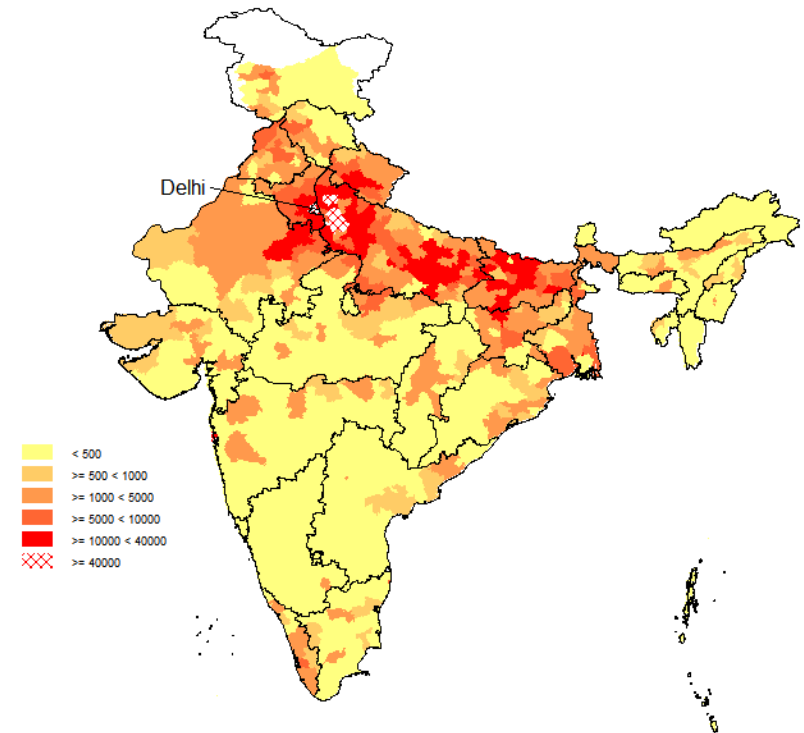
# CONTINUED

**Mumbai**

**Delhi**



For the Period 1992-2001. Source: Census 2001, Table D-13

# CHALLENGE

- As noted in earlier work (Iversen, Sen, Verschoor and Dubey 2009), there are many candidate explanations for chain migration.

# REFERRAL EVIDENCE: GENERAL

- Munshi and Rosenzweig (2006): 'referral' into 68 % of male, blue collar jobs in Mumbai: 44 % in white collar: how is referral defined? '*68 percent of the working-class men received help from a relative or member of the community in finding their first job*'.

- In the World Bank's 2006 Micro-Enterprise Survey for India (n=1500), between 40% and 65% of the most recent hires were recruited through the social network of **a workplace insider**.

- In Beaman and Magruder's (2012) sample from Kolkata, 45% of employees had helped a friend or relative find a job **with their current employer**.

- Heath (2018) studies referral into garment factories in Bangladesh and Fafchamps and Moradi (2015) study employee referrals in the Ghanaian army.

# WHY EMPLOYEE OR WORKPLACE REFERRAL? THEORIES/EXPLANATIONS

- Montgomery (1991): Screening explanation. Allows a firm to tap into the talent pool of the networks of talented staff members (assumes that these networks are assortatively matched).

- Kugler (2003): Moral hazard. Productive employee emulated by recruit he/she brings in.

- Simon and Warner (1991): Employee referral can improve recruit-workplace match.

- Bramoulle and Goyal (2016): Nepotism: favouring 'relatives' ('lemons') at the expense of others (potentially costly for firm).

- Sociality explanation (individuals enjoy working with relatives or friends: can also be costly for firms: or may provide Bandiera et al type social incentives).

# THEORETICAL CONTRIBUTION

- Efficiency wage model (Salop 1975; Shapiro and Stiglitz 1984).

- Firm recruits through market or employee referral.

- We link referral to the costs of worker opportunism to the recruiting firm (can vary by job type).

- Focus on referee stakes: endogenise referee incentives & social tie between referee & recruit.

- Analyse the referee's incentives to act according to employer's preferred scheme.

# A FEW KEY EXPRESSIONS

Efficiency wage:

$$w_s = \frac{\alpha c}{q}$$

Referral efficiency wage:

$$w_r(\rho) = w_s - \rho R.$$

Referee incentives: transfers from recruit family/network:

$$B(\rho) = v(\rho) + b(\rho)$$

Transfer from employer:   $T(\rho)$

# MAIN PREDICTIONS

- Strong social tie between referee and recruit.

- Within firm: employer will ask employee referee with high stake in recruit performance.

- Efficiency wages in jobs where c – the costs of worker opportunism - exceed a threshold.

- Contrast to other referral explanations: referral wage penalty – after controlling for worker ability.

- Labour turnover.

# NETWORKS IN MIGRATION: EMPIRICS

- Munshi (2003): IV-based identification of network effects the main focus: de facto network mechanism is guesswork (information or referral?).

- We use a more pragmatic approach:

- Holmstrom (1984) – an industrial anthropologist - provides a series of examples of how employers in India use referrals to tackle moral hazard, including from van der Veen (1979, 64-65): 'It is a generally accepted policy among managers to accept labourers on recommendation and as groups. The managers of the above-mentioned factories could tell me how everyone of their workers (from 12 to 35) had been introduced. They really prefer to utilize these personal relationships, because it gives them a much stronger grip on their labourers. 'When one man misbehaves, I hold the one who introduced him responsible, and that man will keep the mischiefmaker in check', said one manager.'

# HISTORICAL PARALLELS

- In Pollard's (1963) account of the early industrial revolution, workers unaccustomed to the discipline requirements on the factory floor had highly erratic attendance: 50% absenteeism on a given day was not unusual.

- 'Stable' workers coveted by employers: similar sentiments among Mumbai employers two centuries later (Holmstrom 1984).

- The average annual labour turnover in US manufacturing jobs in the 1920s was 100 percent: 200-400 percent turnover not uncommon (James 1960).

- For some of the jobs reported on below, about 30% of the new recruits had left within six months of joining their new workplace. Resonates with official turnover statistics in India (e.g. Annual Survey of Industries 2011-12) and seemingly attractive manufacturing jobs in Ethiopia (Blattman and Dercon 2018).

# OUR DATA-SET

- Small, in-depth data-set from Bijnor District, UP (North India). Unusually rich sociological literature (Jeffrey, Jeffery and Jeffery, numerous).

- Purposive village sample to capture religious, caste and other diversity.

- Own sampling frames: Random sample of HHs with a migrant.

- In-depth information on careers and entry into first migrant jobs: able to trace around 90 % of 316 migrants (small sample from two villages).

# DESCRIPTIVES

## Table 1. Migration pattern by social group

|  | Ansaris | Chamars | Others |
|---|---|---|---|
| Share of migrant sample | 48.4% (139) | 34.1% (98) | 17.4%(50) |
| Mean age at time of first migration | 16.0 (4.39) | 19.3 (6.01) | 19.5 (6.85) |
| Mean yrs of schooling at time of first migration | 3.4 (4.04) | 5.8 (3.64) | 7.4 (4.75) |
| Dominant first employment sector | Bakery (82.0%) | Construction & agriculture (31.6%) | "Skilled" private sector (40.0%) |

# YEAR OF FIRST MIGRATION



Year of first labor migration
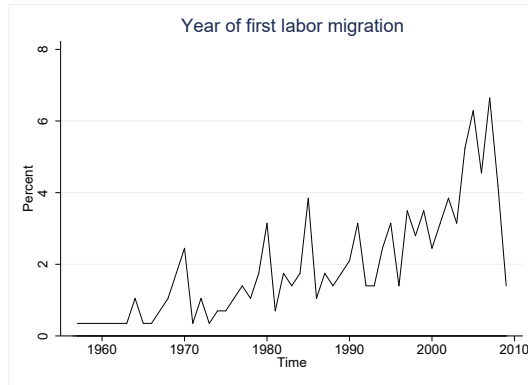
# REFERRAL & JOB SEARCH

Table 2.  Mode of job entry

|  | N | Share |
|---|---|---|
| Pre-arranged |  | 88.9% |
| Workplace referral | 167 | 58.2% |
| Indirect | 52 | 18.1% |
| Other | 36 | 12.6% |
|  |  |  |
| Not pre-arranged |  | 11.1 % |
| Workplace referral | 9 | 3.1% |
| Indirect | 5 | 1.7% |
| Other | 18 | 6.3% |

# SOCIAL TIE & WORKPLACE REFERRAL

| Relation to referee | N | Percentage | Cumulative |
|---|---|---|---|
| Member of the same household | 51 | 29.0% | 29.0% |
| Other relative | 87 | 49.4% | 78.4% |
| Village friend | 7 | 4.0% | 82.4% |
| Village acquaintance | 21 | 11.9% | 94.3% |
| Friend from elsewhere | 2 | 1.1% | 95.4% |
| Acquaintance from elsewhere | 6 | 3.5% | 98.9% |
| Other | 2 | 1.1% | 100% |

| Job category | |
|---|---|
| 1 | **Enterprise owners** |
| 2 | **Professionals**<br>Accountant (Bakery); Accountant Clerk; Assistant Agricultural Inspector; Assistant General Manager; Assistant Supervisor; Block Coordinator (UNICEF); College Teacher; Forest Department Supervisor; Medical Doctor; Newspaper Correspondent; Politician; Religious Teacher; Sales Clerk; Sales Manager; School Teacher; Tailor Master; Territory Manager (Pharma); Toll Clerk; University Student |
| 3 | **Skilled**<br>Builder; Barber; Beautician; Carpenter; Cook (restaurant); Electrician; Engine Mechanic; Iron Moulder; Iron Smith; Mason; Mistry (bakery); Motorbike Mechanic; Office Peon; Pottery Maker; Powerloom Mechanic; Radio/Television repairer; Shopkeeper (Petty); Tailor (machine operator); Weaver; Welder |
| 4 | **Skilled – less**<br>Bakery Product Maker or in-Charge; Battery Mechanic; Bicycle Repairer; Brush Maker; Cook (Domestic); Driver; Electric Meter Worker; Farmer; Furniture Polisher; Housekeeper (Hotel); Labour Contractor; Rickshaw Driver; Scaler (Forest Dept); Sewing Machine Operator (Basics); Shop Salesman; Sweets Maker; Waiter |
| 5 | **Vendors**<br>Bakery Vendor; Cobbler; Fruitseller; Juiceseller; Scrap Vendor; Snacks Vendor; Tent Stall Vendor; Vegetable Vendor |
| 6 | **Apprentice/Trainee**<br>Barber; Battery Mechanic; Beautician; Carpenter; Electrician; Iron Smith; Machine Operator; Mason; Motor Mechanic; Tailor; Toy Artist; Tractor Repairs; Weaver; Welder |
| 7 | **Semi-skilled**<br>Bakery (specialised simple tasks); Bus Conductor; Chaprasi (Messenger); Counter (Shoes Factory); Cutter Assistant (Factory); Driver Helper; Framechecker (Factory); Ironing (Dhobi); Maintenance Assistant; Packer; Shop Assistant; 'Soler' (of shoes); Table Worker |
| 8 | **Unskilled: hard manual, low status labour**<br>Machine Cleaner (Factory); Rickshaw Puller; Sweeper; Unskilled Factory Worker; Utensil Cleaner (Bakery) |
| 9 | **Manual labour;**<br>Agriculture, Construction, Loader; Tent Worker; White Washing; Wood Cutter |

# DISTRIBUTIONS OF REFEREE & FIRST MIGRANT JOBS
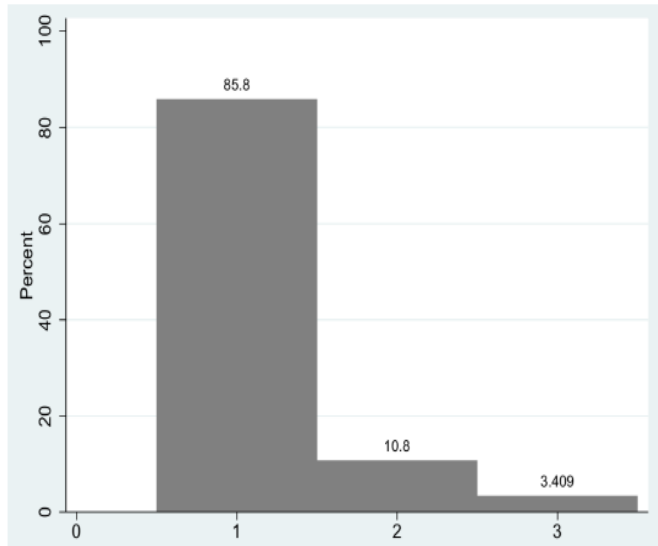


(a) Distribution of referee jobs
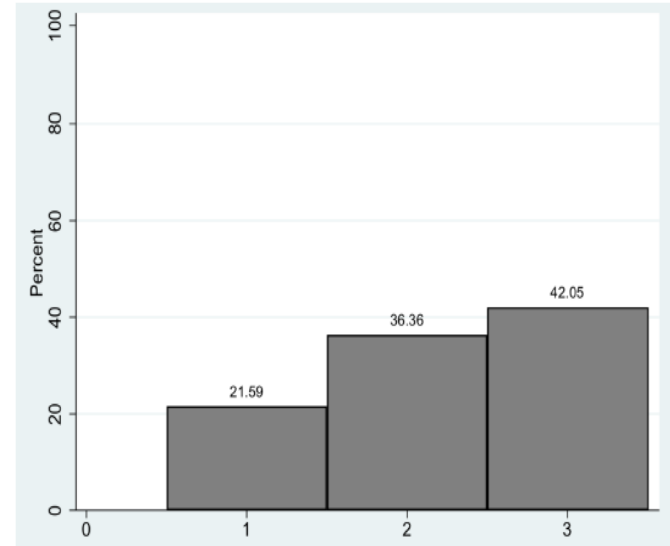
(b) Distribution of entry jobs

# CANDIDATE REFERRAL MECHANISMS/EXPLANATIONS

- Information explanation

- For firm looking to hire, spreading vacancy information through networks easy and inexpensive (weak ties; entry level referee jobs; no ability/wage predictions).

- Screening explanation (theory)

- Montgomery (1991) (weak ties; similar referee-recruit jobs; higher quality recruits; referral wage premium).

- Sociality explanation

- Preference for working together (strong ties; similar referee-recruit jobs; lower quality recruits (?); referral wage penalty).

- Matching explanation (theory)

  (No tie prediction; similar referee-recruit jobs; no ability prediction; referral wage premium).

# CONTINUED

- Nepotism (theory)

- Favoring relatives at expense of others (strong ties; no job prediction; lower quality recruits; referral wage penalty)

- Moral hazard (theory)

- Kugler (2003): (no tie prediction; referee-recruit in similar job; ability hint; referral wage premium): notable similarity to Montgomery (1991).

- Our: (strong ties; higher stake referee jobs; no ability difference; referral wage penalty).

# REFERRAL & (UNOBSERVED) WORKER ABILITY

|  | Workpl ref | Workpl ref | Workpl ref | Workpl ref |
|---|---|---|---|---|
| Raven type test score | 0.020 |  | 0.019 |  |
|  | (0.026) |  | (0.028) |  |
| Raven top 10% |  | 0.011 |  | 0.009 |
|  |  | (0.097) |  | (0.11) |
| Individual controls | no | no | yes | yes |
| Workplace controls | no | no | yes | yes |
| Destination dummies | no | no | yes | yes |
| R squared | 0.002 | 0.000 | 0.25 | 0.25 |
| Observations | 268 | 268 | 266 | 266 |

Note: OLS with robust SEs (in parentheses). ***,**,* significant at 1, 5 and 10 % level. Individual controls: age at migration; dummies for primary (class 1-5), secondary (class 6-10) and higher education (Above class 10). Other controls: bakery sector dummy, destination dummies.

# REAL (ENTRY) WAGE COMPARISON REFERRED & NON-REFERRED WORKERS; INFERRING A THRESHOLD

| Job type | N | Referred workers | Non-referred workers | Difference |
|---|---|---|---|---|
| Category 1 | 55 | 6.35 (32) | 6.35 (23) | 0.00 |
| Category 2 | 80 | 5.47 (52) | 5.56 (28) | -0.09 |
| Category 3 | 127 | 5.09 (70) | 5.75 (57) | -0.66*** |

# LABOR TURNOVER (CATEGORY 3 JOBS)

| | Referral | Non-Referral | Difference | Number of observations |
|---|---|---|---|---|
| **Fraction of workers leaving before 6 months in job** | 0.12 | 0.30 | -0.18** | N=126 |
| **Average months in first job** | 36.3 | 22.2 | 14.1** | N=124 |

| | Real entry wage | Short term turnover (Dummy valued 1 if workspell less than 6 months) | Duration of first workspell (months) |
|---|---|---|---|
| Referral | 0.084 | 0.14* | -5.70 |
| | (0.16) | (0.07) | (10.04) |
| Referral X category 3 job dummy | -0.43** | -0.30*** | 23.3* |
| | (0.21) | (0.11) | (11.85) |
| Category 3 job dummy | -0.0466 | 0.112 | -29.04*** |
| | (0.167) | (0.093) | (9.46) |
| Age at migration | 0.037*** | -0.014*** | 2.52*** |
| | (0.01) | (0.004) | (0.90) |
| Raven top 10 % | 0.50*** | -0.028 | -18.56** |
| | (0.15) | (0.08) | (9.29) |
| Primary | 0.084 | -0.002 | -6.46 |
| | (0.16) | (0.07) | (8.55) |
| Secondary | 0.057 | 0.087* | -19.42** |
| | (0.12) | (0.071) | (7.75) |
| Higher | 0.062 | 0.08 | -29.15** |
| | (0.227) | (0.14) | (11.96) |
| Ansari | -0.27** | -0.30*** | 10.15 |
| | (0.135) | (0.08) | (9.14) |
| Bakery | -0.104 | 0.13 | -3.82 |
| | 0.147 | 0.08 | 7.73 |
| Destination dummies | YES | YES | YES |
| $R^2$ | 0.31 | 0.19 | 0.24 |
| N | 259 | 258 | 258 |

# CONCLUSION

- Our theory is tailored for developing countries, since:

- (1) Low & unskilled, informal jobs dominate occupational structure.

- (2) Strong tie networks well placed to supply workers to these jobs (which anyone in principle can do).

- (3) Limited scope for contract enforcement (especially at the lower end).

- (4) Strenuous jobs with high turnover (see also Blattman & Dercon 2018).

# SUGGESTIVE EVIDENCE

- Using non-experimental data from real labour markets, we observe same workplace, strong tie and high stake referee referrals: the entry into first migrant jobs is strongly filtered.

- If indicative of how lower end labor markets work, the social mobility implications are important: dynamic inefficiency (e.g. Munshi and Rosenzweig 2006) with group predicaments strongly affected by good (positive shocks) or bad (negative shocks) luck.

- Coexistence of meritocratic (high skilled, modern) and 'other' labour markets.