

# **What can we learn from Start-Ups in India?**

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Prosperity, Equality and Sustainability Conference

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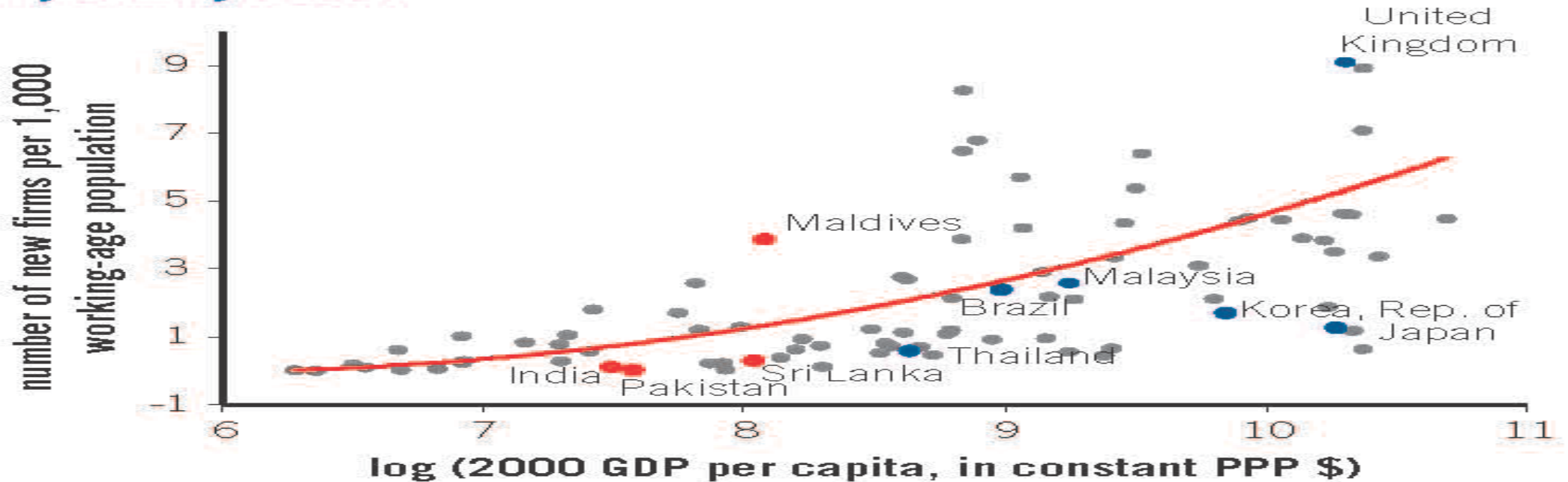
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# An Outline

- There is increasing anxiety about the pace and pattern of growth and job that has attracted the attention of policy makers in India. Start ups and Make in India are a response to this concern.
- How does one quantify Start Ups? How does India compare on Start Ups with the rest of the world?
- Do new and young firms or large and established firms create jobs in India?
- Why do Start-Ups and new enterprises locate in some cities and not in others?
- How much do we know about the drivers of Start Ups?
- What can India teach us about Start Ups?

India does not perform so well on Start Ups when compared with the rest of the world.

**Figure 1. New Business Registration Density and GDP per Capita, by Country (2008)**



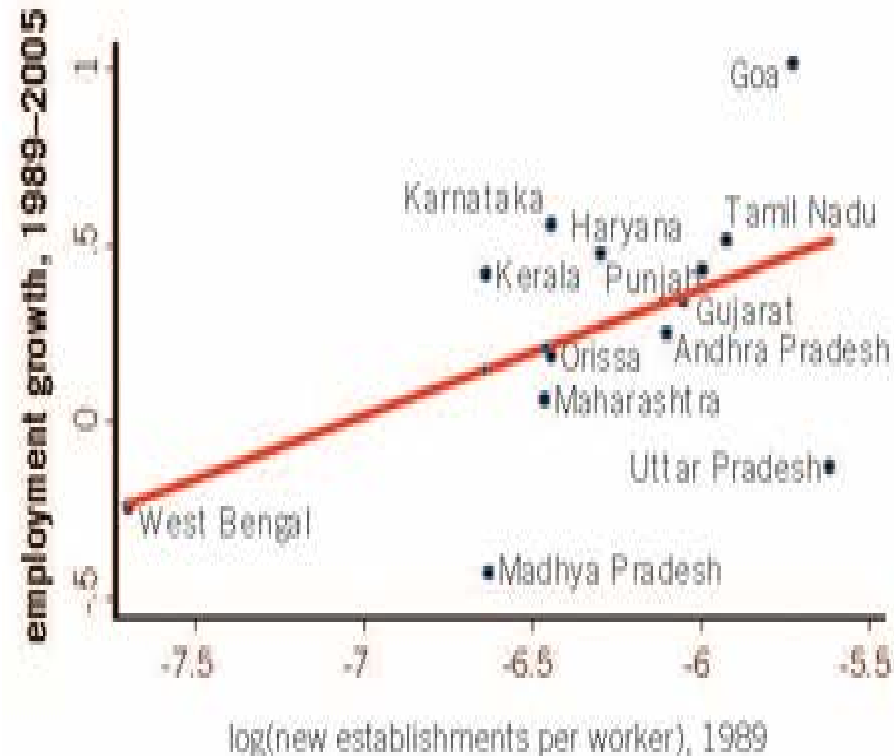
*Source:* World Bank Group Entrepreneurship Snapshots 2010; World Development Indicators 2010.

*Note:* Countries designated at offshore tax-shelters excluded. Fitted line depicts regression of density on 2000 log(GDP/cap) and its square term. Eighty-nine countries with available data shown.

# There is a strong and upward link between Start-Ups and job growth in India, similar to that found in the United States.

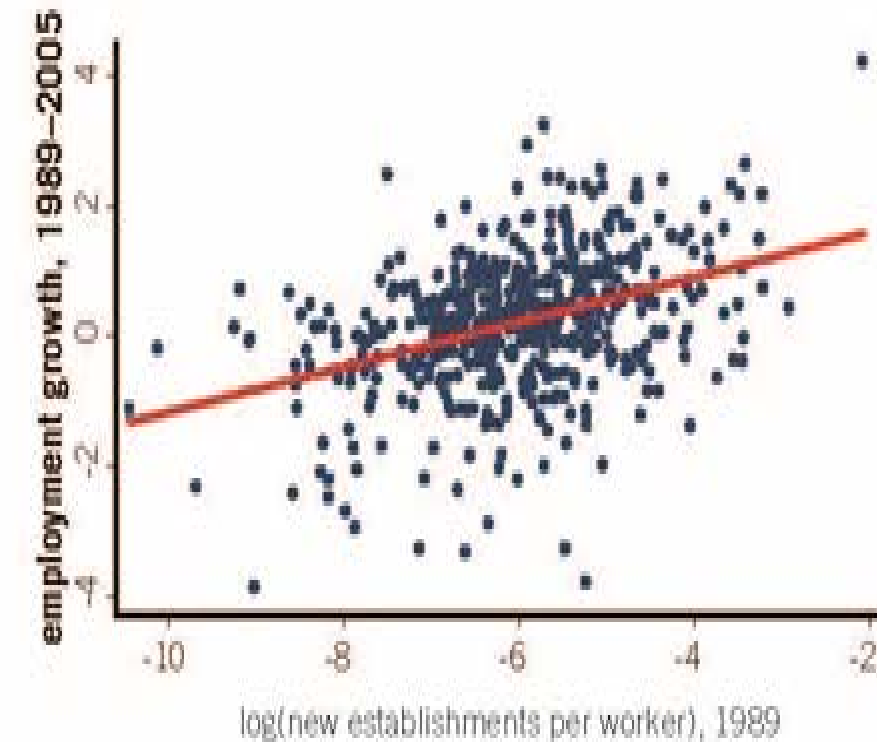
This relationship does not overly depend upon any one particular State in India.

Figure 2. Entrepreneurship and Growth in Indian Manufacturing



Source: India Annual Survey of Industries, 1989-2005.

Figure 3. Entrepreneurship and Growth in Indian Manufacturing



Source: India Annual Survey of Industries, 1989-2005.  
Note: Plotted points represent state-industry clusters.

# Where are the drivers of Start Up in India?

- The answers could lie at the intersection of six important themes in the current development discourse: entrepreneurship, jobs, trade, transport, urbanization, gender and informality. How these intersections have evolved is still not well understood.
- Do trade, transport and market access to inputs impact creation of new enterprises differently in the informal and formal sectors? Do their effects operate differently across manufacturing and service enterprises? Is manufacturing moving out of cities?
- Does the “trade and urbanization gradient” operate separately for the creation of female owned enterprises and male owned enterprises?
- Do linkages between formal and informal enterprises generate more or less employment under different trade and urbanization gradients? How do they impact agglomeration economies in labor pooling and input/output relationships?

# Why do Start-Ups locate in some cities and not in other cities in India?

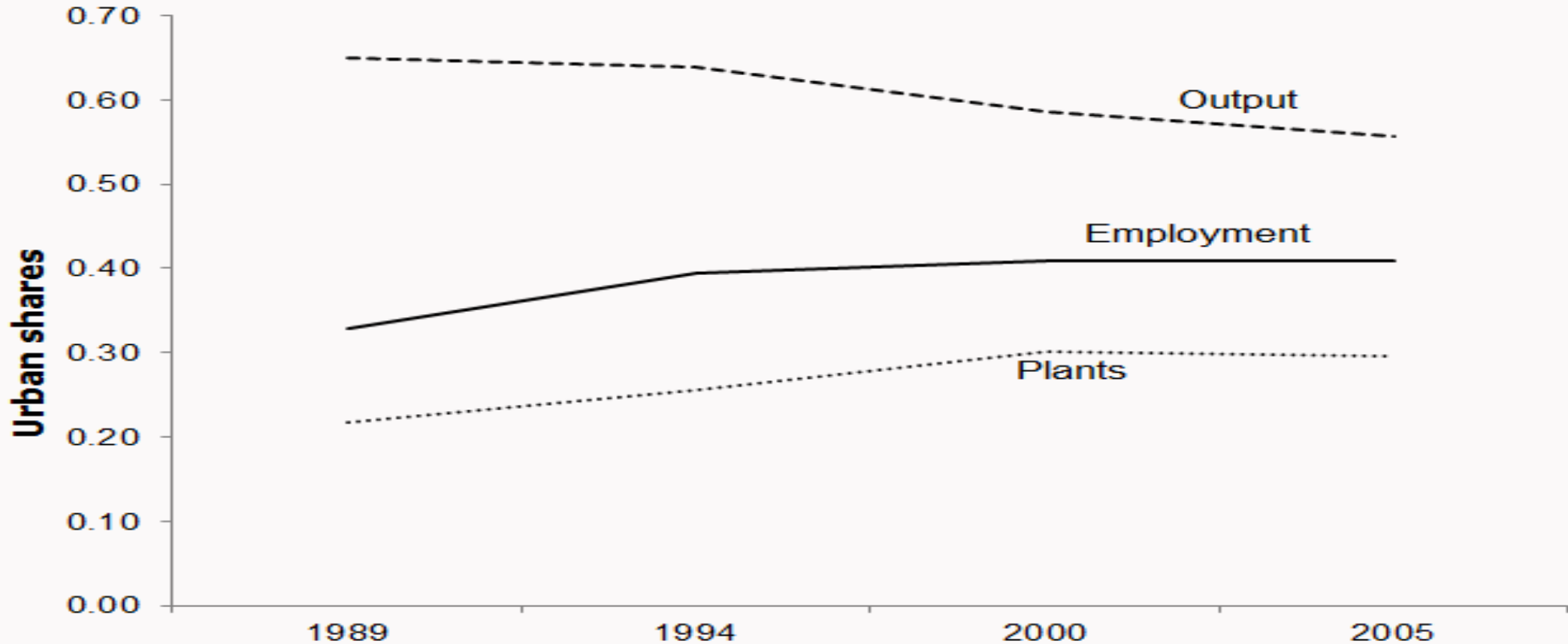
- Which regional traits encourage more Start Ups? Is it differential returns to entrepreneurship? Do entrepreneurs respond to differences in local infrastructure, education, population density, connectivity, demographics, agglomeration economies or demons of density?
- The two most consistent factors that predict overall entrepreneurship are local education levels and the quality of local physical infrastructure in a district. These patterns are true for manufacturing and services. The quality of physical infrastructure and workforce education are the strongest predictors of entry, with factor market distortions in land, labor and capital also playing a major role.
- There are well-understood limits to the pace with which countries can accumulate physical capital, but the limitations on the speed with which the gap in knowledge can be closed are less clear. Because of the strong link between education and entrepreneurship, policy makers should remove any constraints that restrict the growth in the quality and quantity of local colleges and educational institutions. Along with education, physical infrastructure is also essential to supporting a modern economy. Goods and services cannot be produced and delivered without roads, electricity, and telecommunication. And moving people is as important, if not more important, as moving goods. Investing more on roads, bridges and schools is an essential part of President Obama's American Jobs Act.

# Highway to Success.

- Many business leaders and policy makers report inadequate infrastructure as a critical obstacle to sustained growth that must be resolved. Unfortunately, the literature on the economic impacts of transportation networks in India and how it impacts entrepreneurship is still small relative to its policy importance. But we know that industrial decentralization in the Republic of Korea is attributable to massive transport and communications infrastructure investments. Transport infrastructure aided the decentralization of industrial production and population in Chinese cities. Transportation investments increased city population in the United States.
- India carried out a natural experiment through the Golden Quadrilateral (GQ) Highway Project. The GQ project improved the connection of four major cities in India: Delhi, Mumbai, Chennai, and Kolkata. Using plant level data, we find that the GQ upgrades facilitated a more natural sorting of land- and building-intensive industries from the nodal districts into periphery locations. This general urban-rural or core-periphery pattern is evident in many countries and is associated with efficient sorting of industry placement. Transport connectivity encouraged decentralization by making intermediate cities more attractive to manufacturing entrants. For instance, moderate-density districts— like Surat in Gujarat or Srikakulam in Andhra Pradesh—that border the GQ highway registered a more than 100 percent increase in new output and new establishment counts after the GQ upgrades. Transport connectivity enabled manufacturing establishments to efficiently locate in intermediate cities.
- Transport has particular importance in India because of government control over land and building rights, leading some observers to state that India has transitioned from its “license Raj” to a “rents Raj.” Given India’s distorted land markets, the heightened connectivity brought about by the GQ upgrades was particularly important for efficient sorting of industry across spatial locations. It also aided efficient sorting of industries and plants *within* districts.

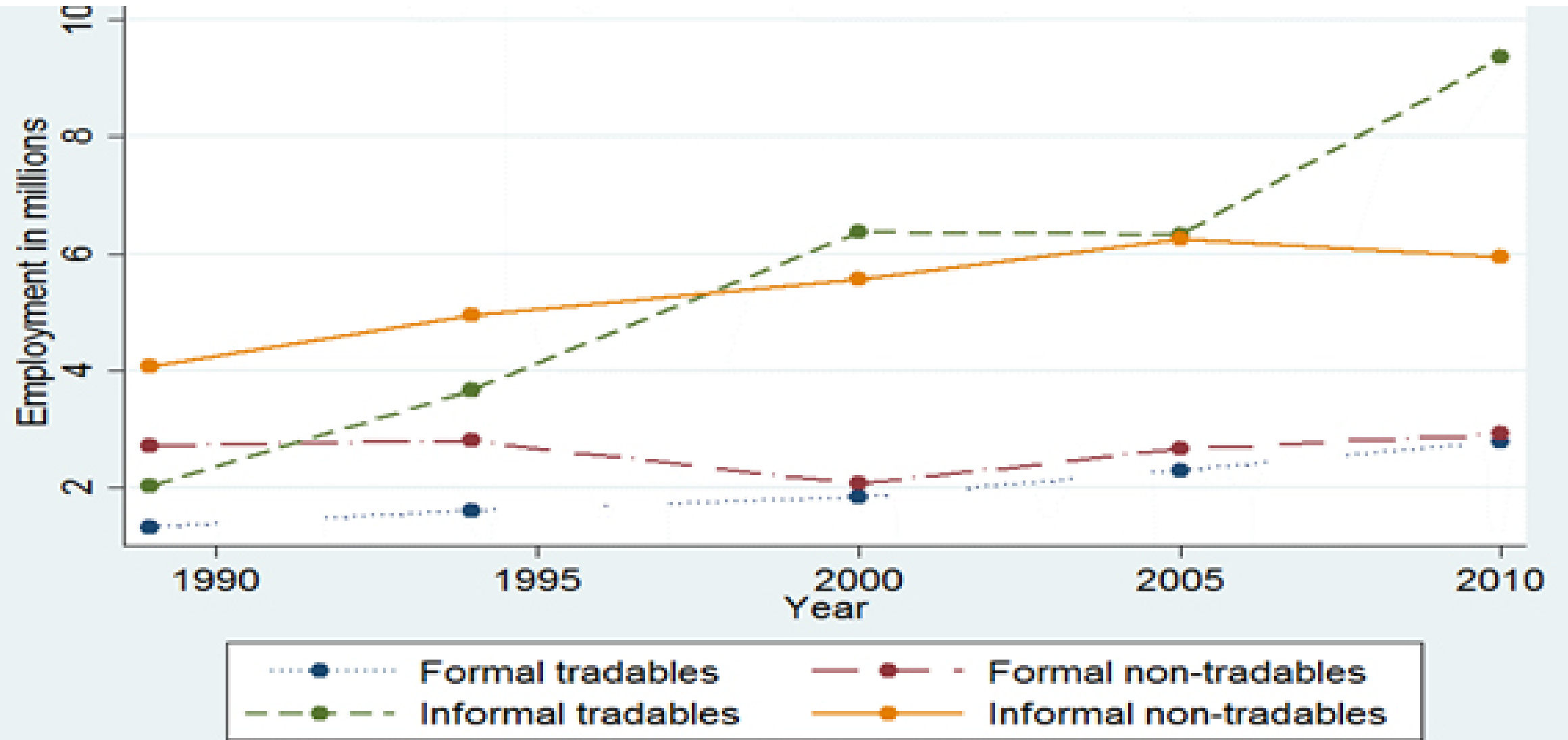
# Are Start Ups in India moving out of cities?

India's cities are growing at a growing rate – despite the slowdown in the pace of industrialization. But beneath the overall trend, many companies are moving out of the city. Plants in the formal sector are moving away from urban into rural locations, while the informal sector is moving from rural to urban locations





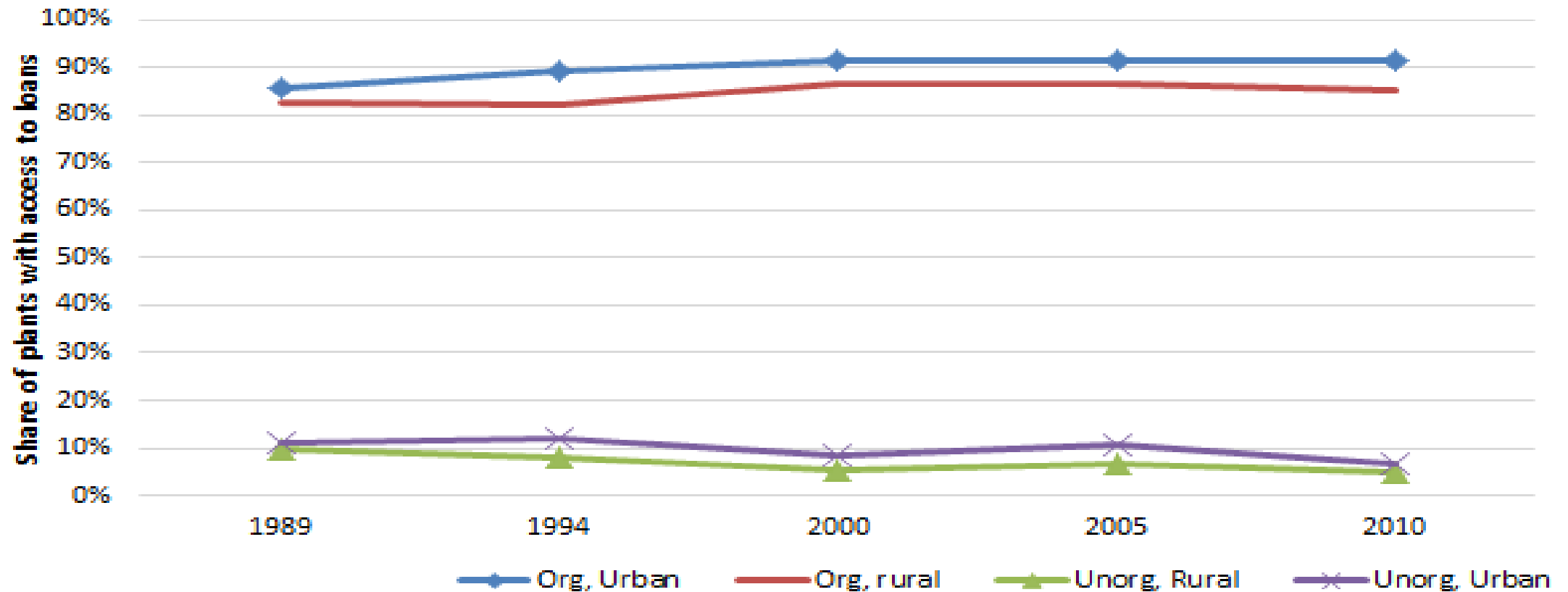
# Trade and Start Ups



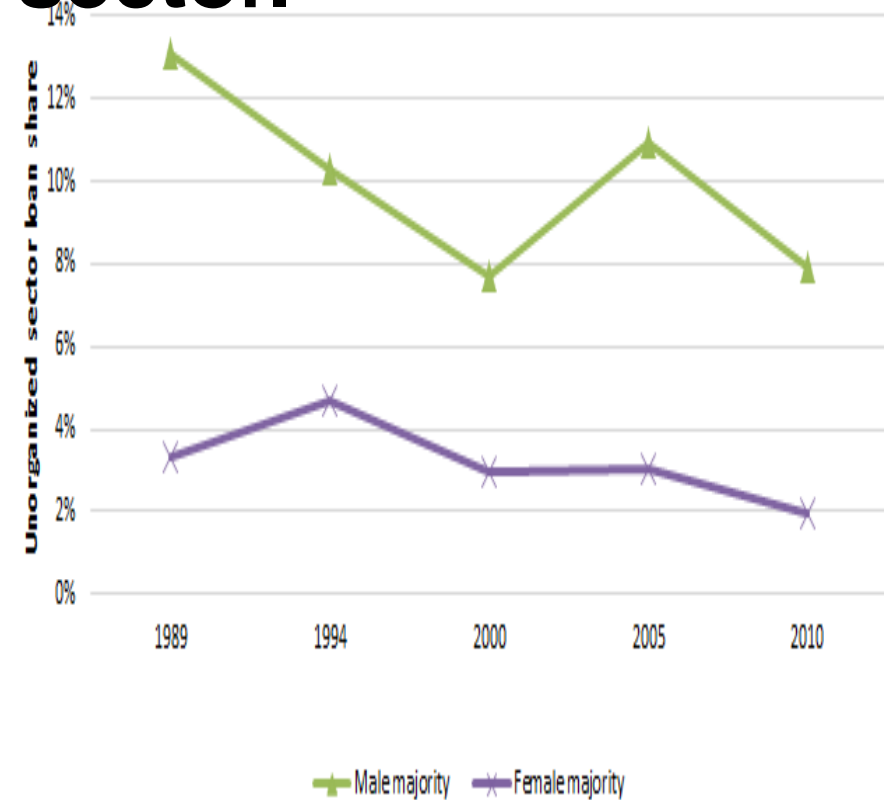
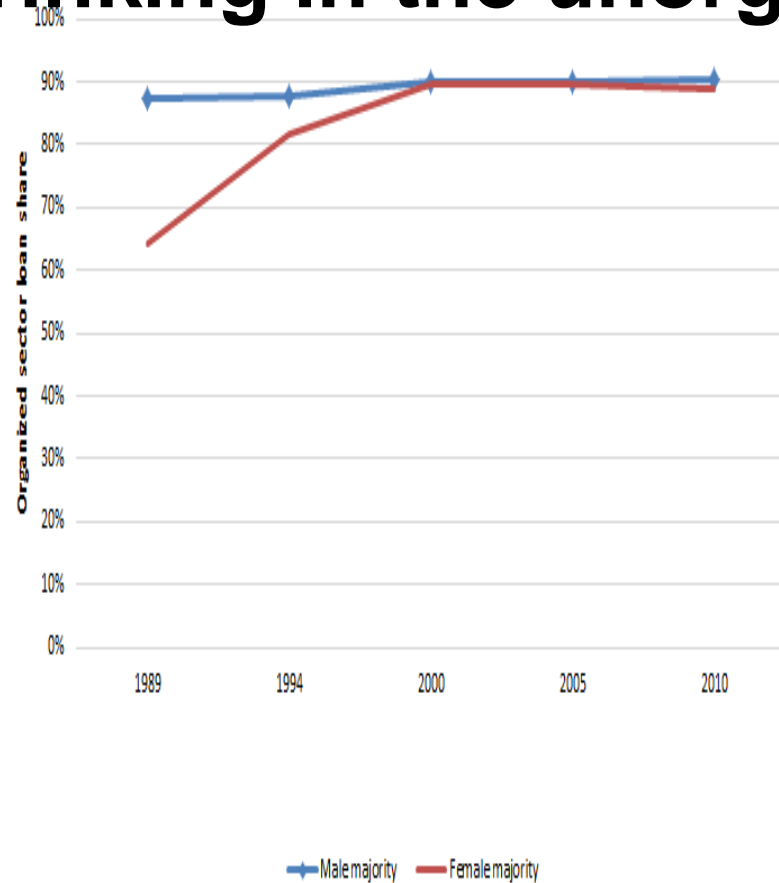
# Exit Policy, Factor Market Distortions and Start Ups

- A central challenge for developing countries is to promote growth by reducing the misallocation of factors of production—labor, capital and land. Which factor market is more distorted in India? Is labor or land a bigger constraint to start ups?
- In recently completed work, we have made a number of advances looking at the misallocation of land, labor and capital. Land allocation in India is barely better than random at best, and probably worse than random
- Land and buildings misallocation appears to be at the root of much of the misallocation of output and it accounts for a large share of the observed differences in labor productivity, measured as output per worker. More precisely, across districts, a one standard deviation in the misallocation of land and buildings accounts for about 20% difference in output per worker.
- If land is misallocated in India, can that have repercussions on the capital allocation through financial markets?

# Huge gap in access to Loans by organized and unorganized firms and regions in India



**Gap between the access shares of loans to Female and Male Start Ups is closing in the organized sector in India. This gap is not shrinking in the unorganized sector.**



# Promoting gender equality in Start Ups

- A central driver of economic growth is the increased role of women. This comes in many forms: increased female labor force participation, reduced discrimination and wage differentials that encourage greater effort, and improved advancement practices that promote talented women into leadership and managerial roles. Indeed, empowering half of the potential workforce will have significant economic benefits that goes beyond promoting just gender equality.
- Which industries have attracted more women? Within the manufacturing sector, female ownership shares are highest and typically exceed 50 percent in industries related to chemicals and chemical products, tobacco products, and paper and paper products. At the opposite end, female ownership shares are 2 percent or less in industries related to computers, motor vehicles, fabricated metal products, and machinery and equipment. In the service sector, female ownership rates in major cities tend to be higher than overall state averages. Among service industries, female ownership shares exceed 30 percent in industries related to sanitation and education. Industries related to research and development, water transport, and land transport have the lowest female ownership rates, at 1 percent or less. The states with the highest female service sector ownership rates are Kerala, Tamil Nadu, and Andhra Pradesh, with average female ownership shares exceeding 12 percent. The lowest female ownership rates are in Rajasthan, Bihar, Orissa, and Uttar Pradesh, each with 6 percent or less.
- What drives the gender balance of new enterprises? Empirical results suggest that a district/industry with more incumbent female employment has a greater female entry share. Among district-level traits, a higher female-to-male ratio, an age profile emphasizing working-age population, and better quality infrastructure appear important.
- The relationship between infrastructure and female entry share is perhaps the most relevant for policy makers. While basic infrastructure services like electricity are essential for all businesses, new entrants and the informal sector can be particularly dependent upon local infrastructure (established firms are better able to provision their own electricity if necessary). Inadequate infrastructure also affects women more than men, because women are often responsible for a larger share of, and often more time consuming, household activities. Interestingly, empirical findings suggest that access to major cities does not influence the gender balance of entrepreneurship, but infrastructure access within a district does. In particular, transport infrastructure and paved roads within villages play an important role. Travel in India can be restrictive and unpredictable, and women face greater constraints in geographic mobility imposed by safety concerns and social norms. In addition, better electricity and water access may reduce the burden of women in providing essential household inputs for their families, and allow for more time to be directed toward entrepreneurial activities.