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An Imbalanced Ecosystem

Start-ups in India

YVES-MARIE RAULT, SHAWN MATHEW

The rapid development of various institutions supporting company creation in India has the potential to generate economic growth, innovation, and economic development. However, this article shows that the start-up ecosystem has unevenly developed across cities and economic sectors, and has failed to empower the overall population, so far. Using a comprehensive database on start-ups retrieved from Tracxn, a business data and analytics company, the authors find that venture capital concentrates amongst graduates stemming from a handful of prestigious education institutes in India and abroad. The article analyses the role of entrepreneurship policies and argues for a shift of focus and resources towards the building of a more inclusive start-up ecosystem.

The term “start-up” has now become a vital part of the lexicon of policymakers globally. It is oft-used along with the terms like “jobs,” “innovation” and “growth.” Introduced in the 1970s by the business journalists in the United States (us), the term initially referred to “innovative and rapidly emerging” companies in the field of electronics and communication, created by youngsters in Boston’s Route 128 and the Silicon Valley. However, these start-ups have come a long way since then. Giants like Google, Apple, Facebook, Amazon, Microsoft, Netflix, Airbnb, Tesla, and Uber that dominate the internet today were once started by youngsters in college or out of their parents’ garages.

These success stories spilled out to India as well, where the instances of Azim Premji (Wipro) or N R Narayana Murthy (Infosys)—both of whom emerged from Bengaluru, “India’s Silicon Plateau,” in the 1980s—inspired many. The example set by these high-tech companies was steadily emulated by their counterparts in other metro cities of the country like Mumbai, Delhi, Chennai and Hyderabad. The phenomenal rise of Flipkart, Snapdeal, Ola, and Paytm, the famous Indian “unicorns,” along with a multitude of young companies, has set an example for millions of Indians, who have been conventionally looking for professional opportunities in one of the most saturated job markets in Asia (UNDP 2016).

Drawing on the general enthusiasm, local bodies, states, and the federal government, launched initiatives to facilitate the creation of start-ups in India. It was epitomised by the “Startup India” campaign launched in 2016 by the Ministry of Commerce and Industry, Government of India. The soft and hard infrastructures were set up post 2000 to assist early-stage companies and draw on the global “best practices.” In conjunction with the development of private venture capital, the public efforts towards a better “ease of doing business” shaped the Indian “start-up ecosystem.”

Since 1999, the Global Entrepreneurship Monitor (GEM) has been providing data on business creation around the world. Drawing on this material, several researchers have consistently shown that high levels of entrepreneurial activity generally have a positive impact on economic development, though it differs depending on the local specificities of the region or the state (Reynolds et al 2000; Audretsch et al 2006; Acs 2006; Acs et al 2014) For instance, business creation between 1999 and 2003 had a limited impact on India’s economic growth as compared to that of high per capita income countries (Stel et al 2005).

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Entrepreneurial regimes based on necessity are less conducive to growth (Acs 2006).

In the case of India, starting a business remains to a large extent a social necessity rather than a response to an economic opportunity, and the recent “startup wave,” too does not stem from the necessity to gain a livelihood: “the new generation start-ups are emerging neither as a means of livelihood nor in response to policy inducements. Rather, they are coming up largely (...) in response to perceived market opportunities” (Subrahmanya 2015). This technology/knowledge-driven entrepreneurship is part of a new regime of accumulation whose effects on the Indian economy have been understudied so far: “No official attempt to gather data on the number of new generation start-ups and their employment contribution has been made so far” (Subrahmanya 2015).

However, the research on the socioeconomics of the knowledge-intensive industries and services—popularly called, the “new economy”—from where the new generation start-ups derive, has remained scattered in India (Sengupta and Neogi 2009), and the policies aimed at promoting entrepreneurship and innovation have been based to a large extent on the empirical evidence from other economies. Barringer et al (2005) highlighted how a few start-ups actually evolve into mature firms and raise employment levels, while Wong et al (2005) infers that the impact on growth depends, to a large extent, on the type of activity developed by the new company. The new generation start-ups, knowledge-intensive rather than labour-intensive, might have a lesser impact on job creation in India. Moreover, empirical evidence from the impact of new technology ventures in the US has suggested that in certain conditions, they can have an adverse effect on employment levels (Mortensen and Pissarides 1998; Haltiwanger et al 2013).

Given these studies, it is therefore important to question the role of the start-up ecosystem in fostering economic development in the Indian context, particularly in terms of “inclusiveness.” In this article, we focus on the following questions: Who are the start-up founders? Whom do venture capitalists support? Which social groups do entrepreneurship policies benefit? One condition for entrepreneurship, to be conducive to economic development, is the empowerment of the population as a whole. Therefore, the problem of access to support structures for nascent companies deserves to be raised.

We have had first-hand experiences of the Indian start-up ecosystem through semi-directed interviews with company founders and participant observation in early stage start-up ventures, mostly in Ahmedabad (Gujarat). For this study, we also draw on data from *Tracxn* from 2005 to 2015, one of the most comprehensive databases on Indian start-ups and venture capital. One of the major objectives of this study is to discuss the public policies, particularly the “Startup India” action plan, and explain why its design misses the opportunity to assert the corrective action of the state in creating conditions for a more inclusive system.

What Is a Start-up?

Strictly speaking, a “start-up” is a newly born company, without previous history of operations (Carter et al 1996). However,

the media, and increasingly the economic literature, tend to use the term for early-stage ventures with a unique “selling proposition.” A founder of a pharmaceutical company in Ahmedabad in 2012 underscores this distinction:

I never considered myself as an entrepreneur. I manage a business, not a startup. Startup is for technology companies. Actually, I am more like a trader. It goes the same for many Gujaratis.

The distinction between new businesses and start-ups brings us back to a recurring debate in economics concerning the differentiation between a “small business owner” and an “entrepreneur” (Carland et al 1988). Drawing on the tradition of Cantillon, Mills, and Schumpeter, several scholars have established that entrepreneurship could be distinguished from a small business ownership by a venture strategy oriented towards innovation, at the core (Gans et al 2002).

However, innovation is not a sufficient condition to become a “high-growth” firm (Feaser and Willard 1990). The “gazelle” firms, young companies growing at a rapid pace (Birch 1979), are not necessarily innovative, but manage to build on a positive economic environment. Recent studies have however shown that high employment growth firms, often called “giraffes,” rather tend to be larger and more mature firms (Audretsch 2013). Some authors would thus prefer to use “high potential” (Autio et al 2003) to insist on the uncertainty of the economic activity.

Most start-up practitioners take a different view as compared to most economic literature. We find an instance on the “innovative” and “risk-taking” aspects in Ries’ (2011) definition of start-ups: “A human institution designed to create a new product or service under conditions of extreme uncertainty” One of the most quoted definitions of start-up—focusing on the “speed of growth”—is, however, given by Graham (2012):

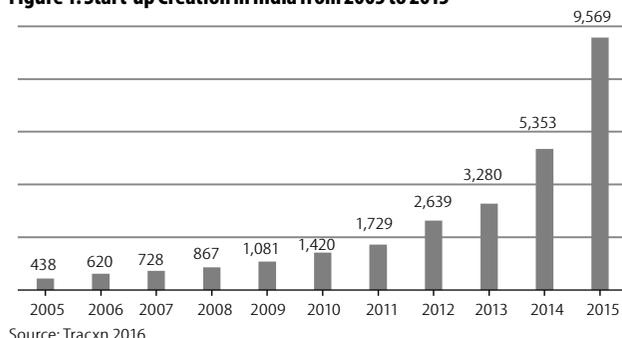
A startup is a company designed to grow fast. Being newly founded does not in itself make a company a startup. Nor is it necessary for a startup to work on technology, or take venture funding, or have some sort of “exit.” The only essential thing is growth. Everything else we associate with startups follows from growth.

An advisor to a major Indian pharmaceutical multinational company, in charge of sanctioning start-ups prior to corporate investment, defines it on similar lines: “My only criterion is 300% growth every month. It means that the company size triples every month.”

However, as per the Indian government, fast growth is not a criterion. A start-up is a knowledge/technical based small and young company:

Startup means an entity, incorporated or registered in India not prior to five years, with annual turnover not exceeding ₹25 crore in any preceding financial year, working towards innovation, development, deployment or commercialisation of new products, processes or services driven by technology or intellectual property. (DIPP 2016)

Thus, the common strand of these definitions is the “potential” that start-ups carry. In this article, we will approach startups as young organisations with a perceived high potential. In the absence of an actual definition of the “potential,” whether a company is a start-up is subjected to individual appreciation. This definition thus allows for flexibility, since its potential is assessed differently by venture capitalists, public authorities,

Figure 1: Start-up Creation in India from 2005 to 2015

and entrepreneurs themselves. A start-up, rather than an organisation with objective characteristics, is thus a concept co-constructed by actors of the start-up ecosystem, that is the market, public authorities, and the start-up founders.

The main source of information on this industry is collected by Tracxn that itself is a start-up founded in 2013. As per the Tracxn database, 27,724 start-ups were created in India between 2005 and 2015, with more than one-third of these being established in 2015 alone (Figure 1). The same year also marked record figure for venture capital investment, with \$9 billion invested across 1,005 deals (YourStory Reserach 2015).

Who Are the Start-up Founders?

The “start-up wave,” as several observers called the rapid emergence of multiple start-ups, should not make us forget that India already has had a long and rich entrepreneurial history (Tripathi 2004). Despite Max Weber’s conclusion that Hinduism as a religion does not encourage entrepreneurship, India has had its share of business communities (Mehta 1991), now supplemented by social groups without social background in industry or trade (Damodaran 2008). Historical patterns of entrepreneurship in India, extensively supported by economic capital and labour, are now increasingly challenged by entrepreneurs drawing upon technical skills. In the “new economy” or “post-capitalist society,” as Peter Drucker (1993) would put it, entrepreneurs are “knowledge workers,” with knowledge as their main capital. This is visible in the evolution of the start-up ecosystem, with 80% of the start-ups being in the field of information technologies that require a good knowledge of markets and command of new technical tools.

In a sample of 18,643 individuals who created a start-up from 2005 to 2015, almost all were found to be graduates (see Table 1). As per their information obtained from Tracxn database, we observed that 18% of them have obtained their degree from an Indian Institute of Technology (IIT), the most selective engineering colleges in India; 8% from an Indian Institute of Management (IIM), the most selective business schools in India; 9% from among the top 50 universities in the world as ranked by the Shanghai Academic Ranking of

Table 1: Academic Affiliation of Start-up Founders, 2005 to 2015

	Unfunded		Funded	
	No.	%	No.	%
IIT	3,138	19%	218	9%
IIM	1,315	8%	232	10%
Top50	1,019	6%	642	26%
IIT/IIM/top50	554	3%	144	6%
Other	10,192	63%	1,190	49%
Total	16,218	100%	2,426	100%

Source: Tracxn (2016).

World Universities 2016 (ARWU 2016); and 61% have studied in other institutes, mostly in India. For them we also find dominance of selective institutions like the Indian Institute of Science Bengaluru, or the Indian School of Business Hyderabad. As for the funding, we observed that graduates from elitist schools were more likely to get funded with 51% of the founders having accessed venture capital being graduates from the IITs, IIMs or the top 50 global schools.

It is also helpful to understand how the education institutes are often where entrepreneurs find partners to co-found their venture. Among the 50 major start-ups which have been co-founded (by a total of 162 individuals), 42 of them have been founded by co-founders who had studied in similar schools or worked in the same companies. According to Table 2, 30% of the 162 founders had studied in the same school as at least one of their co-founders.

This is the case with the three founders of BookMyShow, an online ticketing portal for movies and events, who obtained their MBA in 1997 from Sydhenam College in Mumbai. We also find that 25% of the founders have worked for the same companies. Sometimes they had already found a company together, as in the case of BigBasket, an online retail store for grocery shopping, which was launched by the ex-co-founders of Fab-mall, a chain of grocery supermarkets acquired by the Birla group. More often, start-up founders have worked in managing positions for multinational companies like the founders of Delhivery, a start-up providing logistics for Indian e-commerce companies created in Gurgaon, who were colleagues at Bain & Company, a major management consulting firm.

Venture capitalists in start-ups: There are also several cases of start-up entrepreneurs coming from the venture capital industry. The co-founders of Ezetap, a mobile-based payments service provider, previously worked for Prime Ventures, a venture capital and equity investment firm focused on European high-tech companies. The opposite happens sometimes for successful entrepreneurs who start investing in other start-ups like Kunal Bahl, who invested in several ventures including Tripoto, Tiny Owl, and Olacabs. He started Jasper Infotech in 2007 with a seed amount of \$60,000 before co-founding Snapdeal.com, a major online marketplace in India.

According to data by Inc42, an analytics platform for business-to-business activities, 27 of the 37 most active angel investors in India are found to be graduates from prestigious institutes in India or abroad (Table 3). These angel investors often came from the Silicon Valley

Table 2: Curriculum Similarities of Co-founders

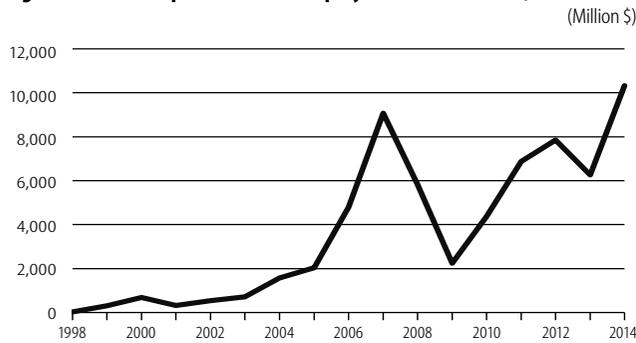
	No of Individuals	Share in Total (%)
School	48	30
Company	41	25
School/company	6	4
None	67	41
Total	162	100

Source: Tracxn (2016).

Table 3: Academic Institutes of Main Angel Investors

Institutes	No of Investors	Share of Investors (%)
IIT	6	16
IIM	3	8
Top50	13	35
IIT/IIM/top50	5	14
Other institutes	10	27
Total	37	100

Source: Inc42 (2015).

Figure 2: Venture Capital and Private Equity Investment in India, 1998–2014

Source: India Venture Capital and Private Equity Report, 2015.

towards the end of the 1990s and started investing in Indian IT companies, mostly located in Bengaluru (Saxenian 1999; Dossani and Kenney 2002). Even though most of the private capital gets invested in mature firms, the venture industry rapidly developed in India, leading to a substantial increase in risk capital investment in small and medium enterprises (SMEs) in the past decade.

The mentoring and consulting support venture capitalists provide has generally not been found to be very significant in helping a firm grow (Hellman and Puri 2002). Several studies, however, acknowledged the important role of venture capital (vc) in the development of young organisations (Davila et al 2003). In exchange for an equity stake, either in the early stages (seed money) or later (private equity), most start-ups go through a rigorous “due diligence” process from the “risk-investors” side. The “due diligence” is the process of investigation of a venture before the purchase of equities or investment. Even though the process differs between bankers, venture capitalists and business angels, the design of selection frameworks for start-up investment has taken an important role in the managerial literature, lately (Mason and Stark 2004). As a consequence, entrepreneurs in the initial stage are expected to do significant leg work before “pitching” their companies.

But this “objective” selection process is actually shaped by how investors envision a potentially successful company. Criteria such as the chief executive officer’s (CEO) public image matter since it has an impact on the stock value of a company (Schoar and Zuo 2016). Individuals with a high symbolic capital, notably through their diplomas, are thus more likely to attract investors and increase firm valuation, thereby benefiting all shareholders of the firm. Likewise, since venture capitalist funds with a good reputation will have a positive impact on start-up promotion, start-up founders often accept vcs propositions according to vc reputation rather than based on the potential support they can provide (Hsu 2004). The reputation of a company often originates in the funding itself, thus explaining the importance of publicising the deal in the media.

In some cases, the search for high valuation has produced unsustainable companies like *Housing.com*. Its aggressive marketing strategies failed to retain enough new customers. In May 2015, the resignation letter of the CEO, Rahul Yadav, an IIT alumni, sent to the company’s board of directors, highlighted contrasting visions in management and strategies (Mehta 2015).

Despite those marginal cases, the requirements for funding have generally resulted in alignment of the goals of venture capitalists and entrepreneurs. In view of a rapid exit, venture capitalists often consider the potential of a firm to “scale up” rapidly, in India and outside. In the case of Indian start-ups, it has often resulted in a race for customer acquisition and external funding without parallel improvements in product or an increase in the revenue stream. According to several bank analysts, most Indian start-ups have not yet proven their sustainability in the long run. In May 2016, an HSBC analyst reported that a start-up like Zomato should be worth about 50% less than what it was valued in its September 2015 funding round. The founder, Deepinder Goyal, responded vigorously in order to justify his company’s worth, saying that HSBC “doesn’t understand the space” (Goyal 2016).

Though venture capitalists are often perceived as “pioneers,” “groundbreakers,” “talent scouts,” “risk-takers,” they, on the contrary, share common investment practices directed by the market’s perception of a “high-potential” firm, encouraging “risk-capital” to concentrate in the hands of individuals with certain characteristics. Richard Florida, through the study of urban working populations in the US, calls this group of individuals the “creative class,” who contribute the most to economic growth in a globalised context. According to his theory, the “creative class” is composed of people with high degree of formal education whose work extensively relies on knowledge and creativity, and who are located in certain urban environments providing the sociocultural conditions for innovation and entrepreneurship (Florida 2003, 2006).

An Imbalanced Ecosystem

The Martin Prosperity Index used Florida’s “creative index” to assess the competitiveness of Indian cities and highlighted that Delhi, Bengaluru, Mumbai, Chennai, and Hyderabad were major hubs for fostering creativity and entrepreneurship. This concentration of resources in a handful of cities has been observed since the 1990s with rapid urbanisation, accelerating the agglomeration economies in industrial clusters and metropolitan regions (Cadène and Holmström 1998). The theory of the “creative class” has had a large impact on the practices of policymakers worldwide, with the idea that one part of the population, highly skilled and creative, had the potential to foster economic growth.

Bengaluru, in particular, is known for a large presence of multinational IT companies and a growing presence of “young technocrats” participating in its growth. Since the early 2000s, the city is a major receiver of foreign direct investments and has become a hub for venture capitalists. Between 2005 and 2015, 536 start-ups from Bengaluru shared an investment of \$10 billion.

The city-region of Delhi, including Noida and Gurgaon, has had an even more rapid increase in venture capital investment, with \$12.2 billion invested in 544 start-ups between 2005 and 2015. Mumbai comes third in that ranking with less than half of the funding than Delhi and Bengaluru. The ultra-concentration of venture capital in certain cities is thus very

visible, with 97% of the total funding done in six cities, and 86% in three cities (Delhi, Bengaluru, Mumbai).

Venture capital tends to concentrate in a few cities because start-ups are usually highly dependent on certain conditions and resources to sustain their operations (Romanelli and Schoonhoven 2001). The presence of such conditions and resources determines the chances for a firm to emerge (Gilbert et al 2006), and eventually have an important impact on their survival and growth (Folta et al 2006). As a consequence, the few Indian cities that can provide supporting infrastructures for start-ups increasingly concentrate finance and entrepreneurs (see Table 4).

As Subrahmanya (2015) rightly points out, the way start-ups have emerged is entirely new in Indian business history, with entrepreneurs stemming from various emerging institutions including “ICT industries, higher education institutions (HEIs), public sector units (PSUs), research and development laboratories, technology business incubators (TBIs) and accelerators, return migration of highly qualified and resourceful Indians (entrepreneurs as well as former employees of MNCs) in the form of ‘reverse brain drain.’”

These institutions, based out of the main Indian cities, mostly encourage entrepreneurship in urban areas. The government agencies, with their continuous support towards entrepreneurial structures, have contributed to this phenomenon of concentration. This is the case with the technology business incubators (TBI), hard structures, often attached to a university, which aim at providing entrepreneurs with resources (consulting, logistics, networks, funds). While India started three pilot TBIs in the late 1980s, till the end of the 20th century, a rather limited number of TBI were actually built (Tang et al 2013). The Technopreneur Promotion Programme (TEPP), launched by the Ministry of Science and Technology in 1998–99, was the first major initiative to promote technology-based start-ups, opening 34 outreach centres across the country to promote “individual innovators” (Subrahmanya 2015). Shortly after, in 2000, the Department of Science and Technology (DST) launched the TBI programme, and today 260 incubators are supported by various government schemes.¹ Being recommended, supported or endorsed by a supported incubator, is a condition for start-ups to be eligible for government funding support, as stipulated in the 2016 “Startup India” programme eligibility conditions (GoI 2016).

Behind the public support to incubators is the idea that the interactions between the industry, science (university) and the government—that is the triple-helix approach—are necessary to structure and support local systems of innovation. One of the effects of this approach was the increased concentration of entrepreneurs in certain locations where innovation systems have been set up. Amongst the 123 incubators recognised by

the Government of India, half of them are located across nine cities.² Bengaluru, Delhi, and Mumbai have more than 12 incubators each, amounting to a total of 37 incubators for those three cities. On the contrary, a city as populated as Lucknow in Uttar Pradesh (with three million inhabitants), does not have any supported incubators. Only 17 of the recognised incubators are “agnostic,” that is, without a focus on a specific sector. Most incubators have established priority areas for the start-up they host, with a definite bias towards new technologies. There are no complete data on the profiles of start-up founders joining incubators, but since they are often affiliated to top business or technology schools, we may assume that most of them are graduates with prestigious degrees, and thus with significant symbolic and knowledge capital.

The current pattern of incubators’ establishment follows a clustering strategy aimed at creating externalities between the different actors of the system. However, those policies are exclusive by nature and tend to reinforce the concentration of start-ups with similar founder profiles, in the same sectors of activity, and/or in the same cities. The Confederation of Indian Industries’ (CII) Start-up Conclave Panel in 2015 concluded on similar lines:

The ecosystem today is constrained to a small segment of startups with its focus on technology and ICT startups. About 80% of investment focuses on technology and of that, 80% is especially focused on mobile solutions, and most of that goes to enterprises based in cities like Bangalore and Mumbai. Likewise, for incubation and mentoring, the majority of support and advice goes to the enterprises within the technology sector. (CII 2016)

Since the 2000s, the Indian government has acted as a support to the start-up ecosystem rather than as a reviser of its inefficiencies. This convergence of government policies with market practices such as the creation of public venture capital funds has encouraged the concentration of entrepreneurship in cities, sectors, and social groups, with the underlying idea that they are carrying the dynamics of development.

Making an Inclusive Ecosystem

Since IT companies create a few jobs, it is reasonable to wonder about what those new start-ups bring to society in terms of improvement of general well-being. With only 21% of mobile phone users in India using a smartphone with internet access, the products and services proposed by start-ups particularly benefited the urban middle classes.³ Furthermore, the Kuznetsian idea that growth is always accompanied with a decrease in inequalities has been disproved by several economists, including Piketty (2014), who showed a historical increase of capital wealth and income inequality in most countries since the 18th century.

The government should, therefore, put more emphasis on supporting start-ups with the potential to bring about economic development rather than the potential for growth, whose social benefit is unknown. In order to benefit every population stratum, there is a need to build a more inclusive and accessible start-up ecosystem. The intervention of government agencies at various scales can correct the tendencies of private

Table 4: Citywise Start-up Funding in India, 2005–15

Cities	Investment (\$ billion)	Share in Total Investment (%)
Delhi	12.2	39
Bengaluru	10.0	32
Mumbai	4.7	15
Chennai	1.5	5
Hyderabad	1.2	4
Pune	0.6	2
Others (44)	0.9	3
Total	31.3	100

Source: Tracxn (2016).

capital to concentrate. Possible policies include the creation of specific funds for entrepreneurs in tier-2, tier-3 cities and the rural areas, accompanied with an active marketing of the schemes amongst underprivileged populations; the implementation of reservations in the start-up funds created by the government based on household incomes; and the development of

support structures (incubators, accelerators, Fab Labs) in tier-2 and tier-3 cities, and secondary education institutes.

As economist Anil K Gupta (2016) would put it, “minds in the margin are not marginal minds,” there is a large potential for innovation at the grassroots level. So far, this potential has been surprisingly untapped in India.

NOTES

- 1 List of incubators compiled by the MOCI retrieved from <http://www.startupindia.gov.in/>.
- 2 Same as note 1.
- 3 <https://www.statista.com/statistics/257048/smartphone-user-penetration-in-india/>.

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