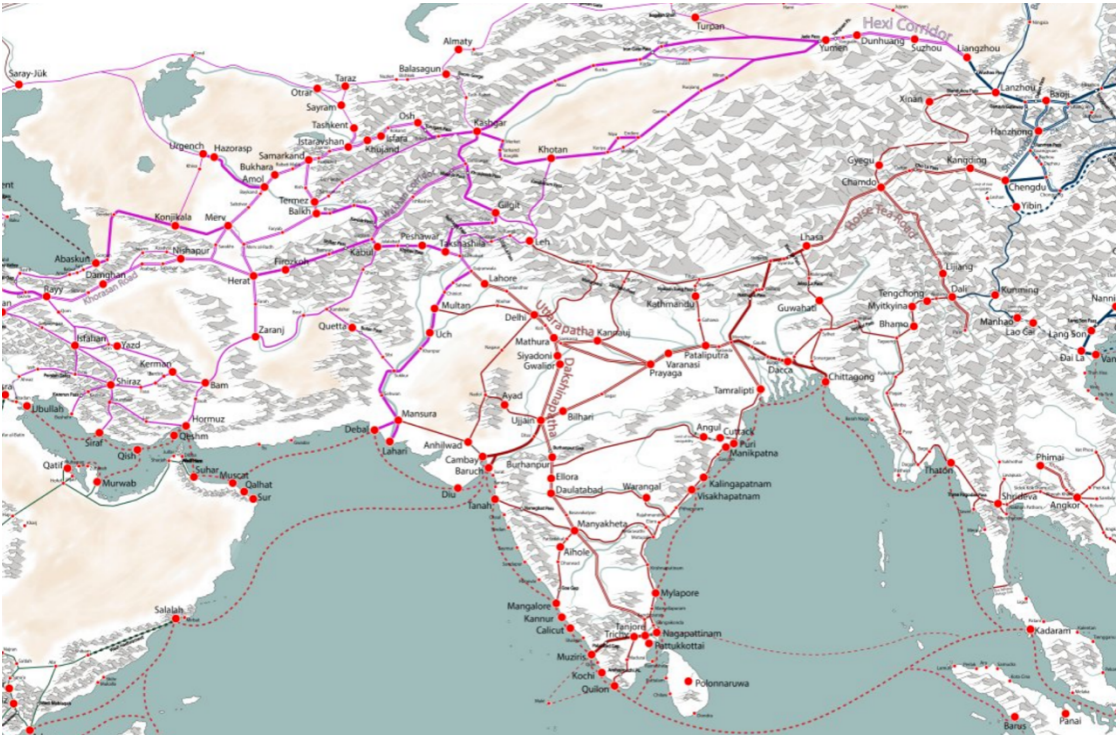
EVOLUTION OF BUSINESS AND MARKETS

How free and inclusive societies emerge?



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Lectures in the memory of Prof. Dwijendra Tripathi at
Indian Institute of Management Bangalore

This series of lectures is organized into three themes. In the first chapter we will discuss how businesses have evolved. In the second chapter we will discuss how modern impersonal markets have emerged. Finally, in the third chapter we will delve into how institutions, technology and culture shapes business and markets. Eventually we look at the specific policies that can help regional governments boost growth in the developing Northern region of India.

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Introduction
Science of Prosperity

The fruits of prosperity are immense. With prosperity, people enjoy greater freedom to choose - better amenities, more comfortable living, convenient communication and transportation, and better avenues for education. More importantly, prosperity helps people and their loved ones lead healthier and longer lives, as they have the ability to afford better health care, even in times of emergency. Finally, prosperity allows people to explore finer aspects of life more fully, like arts and sciences, and such exploration further propels progress.

Of course, such prosperity cannot be just measured in aggregate numbers, or even in terms of an average per-capita income. In aggregate terms, India is the fifth largest economy in the world, but 28% of its population (around 350 million people) is still multidimensionally poor. Astonishingly, the world's largest economy – United States – despite its high per capita income, is a difficult place to live for millions of its poor citizens, because of expensive health care and high living expenses. A country like Qatar is rich with non-existent levels of poverty, but in the country women enjoy very few rights in comparison to men. In the developing world, cities like New Delhi are more prosperous than

the hinterland, yet, with pollution and chaotic planning, quality of life in such cities may feel worse.

Mere prosperity is not enough. It is broad based and sustainable prosperity, that unshackles everyone off the chains of scarcity, that truly improves the quality of life. In these lectures, we will study the ingredients that go into creating the institutions – markets and businesses – that generate such inclusive prosperity. We will ask questions such as –

- Do we live in exceptionally "modern" times of exponential economic growth?
- How was business done in the past and are modern businesses different?
- What has been the role of networks and hierarchies in business, and who do they help?
- What is the role of contract-based arm's length markets in modern economic systems?
- How have some societies achieved the conditions needed for exponential and inclusive growth?
- How do such economies sustain, and evade destabilizing forces such as cronyism?
- What is the role of public institutions, culture and technology in achieving such progress?

These are critical questions helping us understand the science of prosperity, and we shall base our answers on lessons we have learnt from history. We will also discuss how we can apply this science of prosperity, in sparking

rapid growth in India's poor Hindi heartland, the region I come from.

It is also useful here to discuss the context of these lectures. During and immediately after the colonial period, scholars were often driven by essentialist histography, that assumed humans from different cultures or races (or caste) had different essential traits. For example, they stereotyped the Indian economic mind and Indian economic and business history. Sociologists such as Max Weber, argued that the Indian mind was intrinsically fatalist, due to India's culture and religion, and this fatalism hindered any drive for progress. Weber also argued that the success of Europe, especially northwestern Europe was the result of a unique ethic, the Protestant ethic, which motivated the region to become hardworking and industrious.

In the era of essentialist histography, where differences in the progress of different societies was attributed to differences in intrinsic preferences of individuals, Indian historians like Prof. Dwijendra Tripathi were pioneers in challenging this essentialism. Prof. Tripathi challenged these "*folktales*" and favored a historical inquiry that looked into "*the material environment*". Challenging these cultural and religious explanations of Indian entrepreneurship Tripathi (1971) wrote: *"[A climate of enterprise] can be explained more in terms of the material environment than in terms of religious and cultural factors.*

Environmental changes in a society may force reinterpretations and readaptations of religious and cultural beliefs.".

The Cliometric revolution, that took the field of economics like a storm starting in the 1960s, made this material view of history the dominant view, so much so, that today we take this approach for granted. Today, we want to first explain economic behavior in terms of differences in the material environment, and only then (if at all) delve into probing any intrinsic differences in preferences. This series of lectures, also follows the tradition of economic history where we attempt to explain the broad evolution of business and markets, assuming that humans across the world are driven by similar motivations of "*pursuit of happiness*", where trade and commerce ("*artha*" in Indian tradition) is an important aspect of that pursuit. If humans diverge in their behavior across societies, we will first like to see if this difference could be explained by the differences in historical material and institutional conditions, which may have led to unique set of norms and practices.

The lecture series was organized by NSRCEL at IIM Bangalore, and the three chapters given here formed the content for the three lectures given on 22nd, 26th and 29th October, 2018 on the topics "*Evolution of Business*", "*Evolution of Markets*" and "*Forces of Evolution*".

Chapter 1
Evolution of Business
(Role of Networks and Hierarchies)

Business is a form of exchange, and the evolution of business is closely linked to how our forms of exchange evolve. Imagine that you are a producer in need for a service, which you do not directly produce. You can procure this service, in three distinct ways. One, you ask a friend or a relative who has some expertise in this area to do this service for you. Two, especially if you are rich, you can acquire a firm that specializes in these services. Three, you can get into a contract with an arm's length service provider, who will provide you the service of a specific quality and price. How do you choose between these three modes?

Firstly, let's look into relational exchange. Whether you know the service provider or not, if this service is something you will like to receive regularly, then the service provider (B) has a strong incentive to be nice to you and to provide you with a service of satisfactory quality. Why so? Because if you are not satisfied with the services and there are alternatives, you can end the relationship, and if the price of the service is high enough, such an end of the relationship will be a significant loss

as a future stream of income for B, the service provider. This is the economic principle of repeated exchange, based on which many economic interactions occur reliably. Traders in the legendary Italian merchant city of Genoa used to conduct long-distance trade based on this principle of repetition (Greif 1994). Investors interested in long-distance trade would hire agents at high wages, and even though there were many temptations for agents to cheat in the long-distance journeys they undertook, they (theoretically) did not cheat, because any cheating would have meant an end of a profitable relationship with the principal.

So, was repeated exchange essential for sustaining such reliable exchange? Not so much. Consider another type of society, which is densely networked, and everybody knows or can know everybody. In such a society a principal who hires an agent doesn't need to pay a high premium wage to an agent to maintain reliable behavior. If you are not satisfied with the services of an agent, you can end the relationship, and notify others of the agent's unreliable behavior, tarnishing their reputation. If the network is dense enough, such a reputation loss would lead to a loss of the future stream of income for B, the service provider. This is the economic principle of reputation-based exchange. The medieval Jewish

Maghribi traders in the Mediterranean have been theorized (Greif 1989, 1993, 1994) of conducting long-distance trade based on this principle of reputation. Investors interested in long distance trade would hire agents with a good reputation within the network, and despite the temptations, these agents would (theoretically) not cheat, because any cheating would have meant a loss of reputation, and the agent will be unable to secure another job within the network of Maghribi traders.

As you see, both these modes rely on building relationships, and trade can occur without the need of any hierarchy or a contract. Avner Greif in a series of seminal papers in the late 1980s and early 1990s laid the economic foundations of this approach, which has become central to the study of the history of business and remains a key topic of debate (see Edwards and Ogilvie (2008, 2009, 2012); Greif (2008, 2012)).

While relationships indeed are pervasive in economic interactions, relational exchange often ignores the importance of power. When we think of the sophisticated trading arrangements of the Genoese merchants, we cannot ignore the fate of peasants elsewhere in Europe, who operated within an oppressive feudal hierarchy.

Feudalism was a business arrangement too, although where all parties did not enjoy equal autonomy, and those who were higher in the hierarchy could exercise considerable control over those below. In cities, a dominant form of business was the family firm like the Medicis in Florence and the Fuggers in Augsburg, who held elaborate wealth through a web of relationships and family control. In China, similarly, the state played a central role in business with businesses acting as subsidiaries of a more massive vertically integrated state. Even today such pyramidal businesses are a prominent form of business in East Asian economies.

What do these hierarchical arrangements have in common? In these arrangements, one party A can exert considerable power over another B. So, if B deviated from the directives of service of A, A could unilaterally punish B. The relationship between A and B doesn't need to be repeated, nor does A need to taint B's reputation within its networks. What is important in this setting, is that A can exert power over B.

In functioning markets, individuals also enjoy a third option - of contractual exchange. This form of exchange appears intuitive in modern times. A, a producer, needs a service, for which it posts an ad. Different service

providers offer the service at competitive prices and quality levels. A picks the option that fulfills the required quality and has the lowest price, irrespective of the identity of B. A and B sign a contract, B provides the service, and A pays for it, as per the agreement.

In this "intuitive" exchange, there is a third party, which often remains invisible – the contract enforcer, which is usually the state or in a more philosophical sense the leviathan. The state's job is to be a good referee, a fair contract enforcer, who in case of a breach of contract, either resolves the dispute or has the power to punish the party that breached the contract. If the state is an unfair or an ineffective referee, it distorts the effectiveness of contractual exchange. This topic of the emergence of contractual exchange and fair and effective contract enforcing institutions, will be the central theme of our second chapter.

Part I: Importance of Embeddedness

Traditionally, the state was poor at effective contract enforcement. We will discuss the extra-legal and private institutions that emerged in their place in following chapters too. In the absence of a fair referee, the option of contractual exchange was limited, and so, business usually occurred through the mode of relationship or

power. A society that is primarily driven by relationships (friends and family), and power (collectors and landlords), where there is little possibility for two strangers to enter into contracts voluntarily, is embedded in a web of relationships. These relationships comprise networks and hierarchies, and you cannot escape their significance if you come from a society that is still modernizing.

In China, as we discussed already, there was a significant role of the state. Outside of this vertical state structure in China historically business would happen through clans or kinship-based relationships (Greif and Tabellini 2017), and even today *guanxi* or a network of reliable relationships plays a central role in the Chinese economy. In pre-modern Europe, merchant guilds would dominate cities. Merchant guilds were large non-kinship-based networks of merchants who would facilitate trade through networks. We already discussed the influence of feudal arrangements in the European hinterland and the power of large family firms in prosperous cities like Augsburg and Florence.

The elaborate embeddedness within networks and hierarchies can be best understood by looking at the Indian caste system, which comprises of several *Jatis*, i.e.

clan, kinship or occupational groups, which have also been arranged in a viscous hierarchy or Varna, or class. Coming from Bihar, one of the questions that has often intrigued me is, why is caste and such forms of networks and hierarchies a persistent feature of people's identity, even in economic settings? To understand this persistence, we need to understand the benefits such embeddedness brings in economic exchange.

Embeddedness: Good, bad and the ugly

Economic transactions are rid with two classic market frictions. First is of information asymmetry (Akerlof 1970). Imagine you want a loan to start a business. Ideally, if your business has good potential, you should be able to receive a loan at competitive interest rates from any (impersonal) banker. So, then why does such credit market not work spontaneously? It doesn't, because it is difficult for a bank at arm's length to know the details of your business. You may very well know the potential of your business, as you are the expert. Yet, the banker does not know the details of your business, and they would not always believe in your word. That is why the banker will charge you a higher interest rate than in the case where it could perfectly assess the potential of your business. This lack of information and the resulting rise in interest rate is an example of information asymmetry

creating friction in the functioning of markets. Now imagine if a banker was your close friend, and who knew the details of your business plan, and also had a proper assessment of your abilities and creditworthiness. Such a banker will be able to offer you a loan with greater confidence, and at a lower interest rate, as the banker has "soft" information (Uzzi and Lancaster 2003) about your needs. So, embeddedness can give economic actors access to valuable information (Uzzi 1996), which is especially more important in the world where information access was costly. Imagine a world without the internet, without the phone, without telegraph or even a working postal system, and even without a cheap printing press and inexpensive books. That was the pre-modern world, and in this world, networks were rich conduits of information.

The second classic market friction is of moral hazard. As we discussed in the case of Genoese traders, an agent carrying the capital of a principal in distant voyages, has the temptation to run away making a sizeable one-time profit. Embeddedness creates a setting for repeated exchange and monitoring. Individuals who act unreliably can be punished either through repetition (ending all future relationships) or reputation (tarnishing the reputation) based mechanisms and at times through

collective action, where the entire community boycotts an unreliable individual or the community as a whole that the individual belongs to (Greif 2006). Additionally, consider the role of local *bhaiyas* as local protectors in North Indian hinterland, or the *mafia* in South Italy. These ad-hoc power brokers emerge in societies with poor governments and can use their capacity for organized violence to bring order, and force compliance to promises. Such ad-hoc power comes with several pitfalls, about which we will talk next.

Embeddedness has its limits, which makes idealized descriptions of embeddedness – the "village", "community based" or "reciprocal" economies (e.g. Polanyi (1945)) – one dimensional (McCloskey 1997). Firstly, networks can become echo-chambers. We are learning this from our experiences with the social media! If our conduits of information are a few individuals, who themselves are connected, we may end up receiving similar and recycled information. If you occupy a position in a social network where you have access to several unconnected individuals, you are in an excellent position to identify and capture opportunity, in comparison to those individuals who occupy positions within network cliques. This insight by sociologist Ronald Burt (Burt 1995), about network brokerage in

"*structural holes*" is of immense influence in the field of social networks.

Additionally, can mechanisms like reputation be a reliable way in which opportunistic behavior be controlled within networks? Legal scholar Emily Kadens has challenged this assumption about the reliability of reputation in some of her recent research (Kadens 2014, 2019 forthcoming). She looked at medieval credit networks and found that reputation itself was an unreliable metric to assess the credibility of a businessperson. Why so? There are limits to reputation as reputation could easily be damaged by gossip or salvaged by effective public relations. Not only that, poor conduct was often tolerated in credit networks, and defaulters could be forgiven. Kadens even found instances where people with a poor history of reliability rose to positions of power. Does this remind you of anybody? Her key insight has been to show how cheating is central to commerce (Kadens 2019 forthcoming), that businesspeople learn to tolerate. In light of the above limits of embeddedness, it begs the question, is embeddedness so valuable and reliable?

Now let's return to the problem of getting a loan. Let's imagine a society where impersonal banking is so costly

and unreliable that it is considered to be the last resort. Let in this society, banking through relationships be the preferred mode. Is this the design of a good economy? If embeddedness or social capital is a resource, is it available to everyone equally? Not so much. In an economy which is driven by relationships, it is difficult for newcomers and especially small businesses to enter a market without previous contacts. Thus, incumbents who have many connections can seek rents at the cost of excluding potentially superior newcomers. Also, these incumbents can bribe the rule enforcers to gain privileges, erect monopolies, and inhibit the running of impartial formal institutions. At the same time, if these incumbents control information conduits, they can attempt to censor information that does not suit their interests, like in the case of merchant guilds, that would at times censor publication of what they called "guild secrets" (Ogilvie 2011).

Also, embeddedness gives rise to long-term relationships and gives emphasis on identity. While contract-based exchange is supposed to be impersonal or generalized, relational and power-based exchange is particularized and built around a person's identity. If we build an economy where a person's identity is the key to getting access to resources (consider the "social-credit system"

being deployed in China), it is an economy with a large scope for discrimination. So, if you have a surname which signals you belong to a community with a history of entrepreneurship, you may be in a better position to get access to valuable resources, than if you come from a community that was historically deprived. Those who do not occupy positions that are favorable (knowing the who's who) in this embedded social structure are significantly disadvantaged, while those in positions of advantage can use their access and power to maintain their dominant position.

The relational nature of business seems to create disadvantage for entrepreneurs from marginalized communities (Dalits) today in India. Raj and Anand (2019) find that Dalits who conduct businesses in more embedded industries have a larger income gap with respect to non Dalit businesses, and a key advantage other communities have is their rich within-community social capital. Economic historian Sheilagh Ogilvie in her work over the last two decades (e.g. Ogilvie 2011) has conducted research that details the pitfalls of particularized exchange and particularized institutions like merchant guilds, in comparison to exchanges and institutions that are generalized and impersonal, that do not emphasize an economic actor's identity.

Part II: Persistence of tradition

The merchant guild and the taxi system

Let's briefly talk about the merchant guild system. Merchant guilds were a dominant form of doing business not only in Europe but also in India. In September 2018 we learnt about the discovery of a five-foot-tall inscription in Tamil Nadu's Pudukkottai District that described the working of medieval merchant guilds in the Chola empire. Merchant guilds were an association of wholesale traders who often had a privileged monopoly to do business in an economic jurisdiction. The guilds carried with them all the advantages and disadvantages that come up with embeddedness. Guilds were rich conduits of information, a setting for repeated exchange, and a platform for collective action. At the same time, they also were cliques where the members of the guild had a strong incentive to restrict the membership of their guilds, so that they could be the only beneficiaries of trade. Until 1500, guilds could wield significant control over their member merchants (Gelderblom and Grafe 2010) and would at times function as a cabal. Their influence began to fade gradually away after 1500 when cities like Amsterdam and Antwerp began to establish institutions that could facilitate contractual mode of economic exchange.

In modern times, we all have seen the slow decline of the traditional taxi associations. Taxi associations have many similarities to merchant guilds. In a world where a stranger, who poses as a driver, could not be trusted, these taxi associations used to grant license to taxi drivers only after considerable vetting. Such vetting led to a pool of reliable drivers, that customers could trust. There were sound economic reasons to keep barriers to entry high so that only those who strongly committed to being taxi drivers could get the license. However, members of the taxi association had little interest in more competition. Hence, even from the perspective of rent-seeking behavior, they were keen to raise the entry barriers further and as a result kept the cost of taxi services high. So, today "the same licensed taxi service can at once be considered as providing a vital, admired, and reliable service, and also be castigated as being an anti-customer clique." (Raj 2017a), highlighting the good and the ugly of traditional and embedded forms of doing business.

Persistence of embeddedness

Let's take a step back to understand why institutions like guilds and taxi associations persist, why we can't do business in a world of spontaneously generated markets. If individuals are given with a choice to pick one of the three modes of exchange, these different forms of

exchange offer different advantages and disadvantages to different players. Let's look at each of them one by one (see Figure 1.1).

Relational exchange is driven by particularized trust. You trust a particular individual or a particular institution, and you build a long-term economic relationship with them. If all do business this way, it gives rise to embeddedness within the network, and parties invest in relationship-specific management techniques which are often tacit and hard to codify (consider Japanese relationship with suppliers), which further strengthens the relationship.

Power based exchange is driven by ownership of complementarity assets. You find a firm to be highly complementary to your business, and you wish to have full access to the resources of the firm so that they can be integrated with your business. This mode gives rise to hierarchies, and large vertically integrated groups (consider giant Korean Chaebols), that are concentrated in markets, and use command management to maintain and enhance the firm's control over resources.

Notice how these modes of exchange are self-reinforcing. None of these modes motivate agents to undertake

contractual exchange, as these modes of exchange are particularized, catering to the specific needs of the particular relationship between the two parties. Contractual exchange is distinct in comparison to the particularized modes of exchange. Contractual exchange requires you to be prepared to pair up with any party that generates demand. When generalized institutions can be trusted (see concept of "*contractual infrastructure*" (Rajan and Zingales 1998)), two parties at arm's length can write contracts. Contractibility increases options that each party has, reducing the entry barriers. Reduced entry barriers increase competitive pressure, and firms begin to invest in improving their management, by formalizing and standardizing their business. Influential series of research by Nick Bloom and John Van Reenen has shown that product market competition is one of the most significant factors that improve management practices (Bloom and Van Reenen 2007). Such formalization and standardization make firms more contractible, reducing their need (if at all) to cater to the specific needs of a particular partner, as is the case in other modes of exchange.

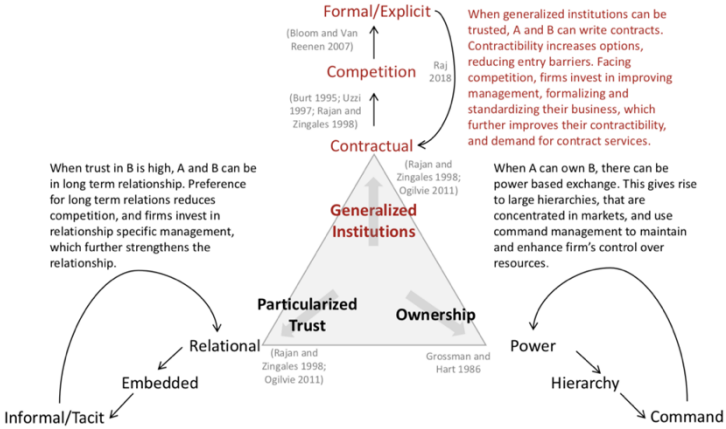


Figure 1.1: The figure shows how the three modes of exchange (relational, power based and contractual) develop systems and business norms that sustain the mode of exchange

Part III: Transformation of businesses

Contractual exchange gives rise to exchange with strangers, which reduces relationship-specific investments and increases investment in general capabilities that make the firm desirable to any stranger in the market, not just a specific partner. This quote from Sheilagh Ogilvie sums up this distinction well, and at the same time succinctly describes the reasons behind the rise of England and Low countries in the sixteenth century. Ogilvie (2011) wrote:

"the guild-dominated societies of Italy, Iberia and German-speaking central Europe were unable to adjust to rapid institutional, commercial and demographic changes of the

sixteenth century. They lost out to the market-oriented civic culture of the Low Countries and England with their increasingly impersonal markets and impartial states, which encouraged forms of generalized trust that favoured adaptation and growth. The weakening of the particularized trust generated by associative institutions such as merchant guilds created interstices in English and Dutch society within which people could experiment with generalized trust in strangers mediated by impersonal markets and impartial states. This cannot be regarded as an accident."

When we look at northwestern Europe during the sixteenth century, we find many distinct changes that began to favor contractual exchange. Firstly, merchant guilds began to lose their influence in the region, and in their place, public notaries emerged, who would do the job of legitimizing transactions. In the commercial cities of the region, any individual merchant began to receive similar sets of rights and privileges, in contrast to elsewhere and in the past, when members of certain guilds would get a privileged service from the local authorities. As generalized institutions emerged, transactions became more impersonal, and writing down business details became more common, not only because it helped organize complex information, but also because

it left a trail of evidence that could in future be admissible in formal courts (Gelderblom 2013).

The separation between home and work wasn't clearly demarcated in traditional economies. As written record became more common during the sixteenth century, the line between the two began to become much more distinct, as firms began to formalize (Kieser 1989) and adopt standardized accounting systems in commercial and printing cities like Antwerp (Puttevils 2017; Raj 2018b). Maintenance of separate accounts for different cash flows, and in general a greater emphasis on records and measurement (McCloskey 2016) meant that businesses started to conduct themselves more formally.

The traditional form of raising revenue for rulers from urban commerce was the granting of privileged monopolies to merchant guilds (Ogilvie 2011). As merchant guilds could fund a ruler in need, they held considerable clout in ruler's attitudes towards a market. If a ruler were to develop more generalized institutions; it needed less particularized sources of revenue, i.e., a system where a broad base of merchants could raise funds, and not a privileged few. The stock market emerged in Amsterdam as one way to fund a large enterprise (Dutch East India company). Generalized

institutions also required investing in state capacity to build a more generalized system of taxation with a broader tax base. Once the generalized system was established, it was in the interest of rulers to support a broad base of growing firms that would act as a source of revenue to the ruler.

Joint stock companies were another institutional innovation that was characteristic of an economy supported by the rise of generalized institutions. Joint stock companies combined the two innovations of generalized institutions: formalization of the firm, and the emergence of the stock market. As firms formalized, and the distinction between home and work became more distinct, partnerships and ownership over assets also became clearly defined. So, the notion of owning a "share" of a firm emerged, as firms became more formal, and the accounting system became more sophisticated. With greater formalization, and better systems of maintaining records (innovations necessitated in part due to the explosion of printing after Gutenberg), large enterprises could be better managed, and its multiple ownerships and transactions could be better monitored. So, over the sixteenth century, the idea of a joint stock company emerged in northwestern Europe.

As a more formal organization of the firm emerged in northwestern Europe, it was able to replace the smaller sustenance-based enterprises and older systems like merchant guilds. Such firms had a better ability to scale up, and over the seventeenth century, there was a rise of large multinational joint stock companies: East India Companies of the Dutch and the English. A comparison of these to the Atlantic trading companies of the Iberian Peninsula is common, and through this comparison, one can appreciate the impact of generalized institutions on northwestern Europe. Scholars have at times characterized both Iberian and northwest European trading companies as monopolies. Indeed, the East India Companies of northwestern Europe enjoyed monopolies granted by their crowns. While the ruler owned the Iberian monopolies, the public owned the northwestern joint stock monopolies as their shares traded in the Amsterdam and London Stock Exchanges. In other words, these joint-stock companies were precursors to modern public multinational corporations, although with monopoly privileges.

The transformation of Indian business

Now let's consider Indian businesses. Firstly, note that in order to understand that the rise of northwestern European businesses, we do not necessarily need to

evoke the Protestant Ethic. The same way, when we study Indian businesses, we do not necessarily need to probe Indian culture. A study of "*the material environment*" that "*led to the perception of new opportunities by certain sections of society, might yield more satisfactory results"* (Tripathi 1971).

India today, is in an era of rapid transformation. It may have been late, but the hockey stick of growth is rapid, as we have seen with the case of China, Taiwan, Korea, or Japan. We observe that there is a rise in entrepreneurship, away from the traditional business groups, and no city is a better testimony to this transformation than Bangalore. While many systematic hurdles are still posed by members of disadvantaged communities, yet you no longer need to be a member of a wealthy business family to be an entrepreneur. How has this happened? In part this transformation happened because of a change in Indian institutions, and how they perceive and deal with entrepreneurs. The NSRCEL, is a perfect example of transformation in attitude towards Indian business, as IIM Bangalore is now catering to an even greater number of entrepreneurs than before.

Today, there is also a greater demand for formally trained managers. In India, a lack of trust in outside managers

limits the growth of family firms, as they grow proportional to the number of male family members (Bloom et al. 2013). As the demand for formal and specialized managerial education increases, family businesses will be willing to drop their desire to keep a tight family control over all aspects of the firm. Over the years, the size of the stock market too has exponentially expanded as more and more firms have gone public, and as financial regulators have matured and started to demand greater transparency and governance structure.

These changes are transformational and disruptive, but something that cannot be taken for granted. There are parts of India, where businesses continue to operate within traditional networks and hierarchies. In other words, Indian provinces are diverging, where in some parts of India embeddedness still persists and entrepreneurship is still a pipe-dream, while in other there is a rise of contractual exchange which has made entrepreneurship a reality.

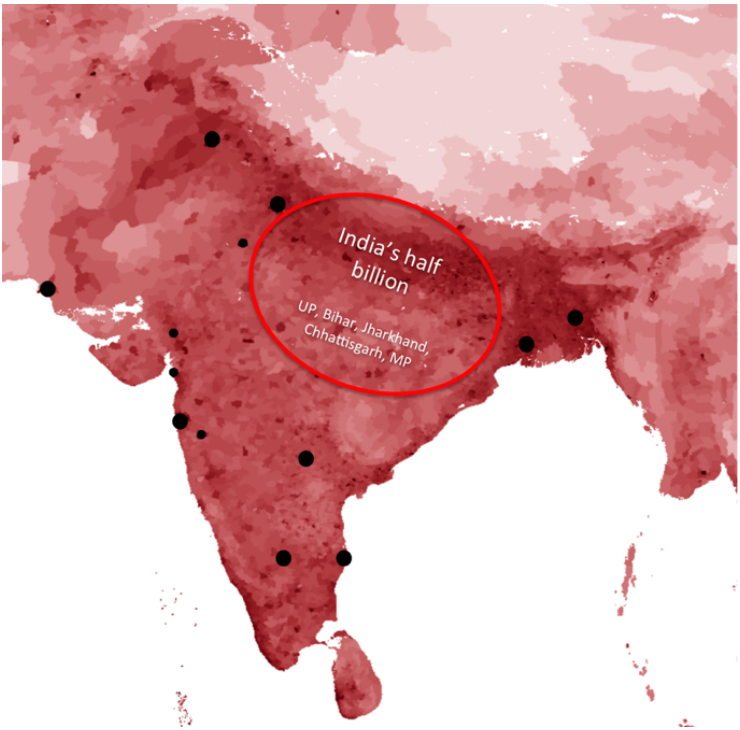


Figure 1.2: The Hindi speaking provinces of Eastern India: Uttar Pradesh (UP), Bihar, Jharkhand, Chhattisgarh and Madhya Pradesh (MP) together make a population close to half a billion. Historically, this region was home to large cities, but today, the region suffers from a "metropolis vacuum". Dark circles represent large cities of the Indian subcontinent, and more maroon areas have higher population density.

Nobel laureate Robert Lucas in his recent research (Lucas 2018) has emphasized the importance of cities in the industrial revolution. Cities match capital with talent. Cities that are accessible (not controlled by a clique of

business and political elites) and cosmopolitan (not hostile to particular groups of people) attract capital and bring people of diverse backgrounds and talents together to form productive partnerships. Such cities motivate people from nearby areas to learn new skills and to invest more in the education and health of their children. In India, we can see this historical process of growth happening in real time, with the meteoric rise of Bangalore. In 1911 Bangalore was only a minor city in India. Today it ranks third, thanks to an environment that is welcoming to entrepreneurs, innovators and investors.

What happens in regions like the Hindi heartland, which lack major cosmopolitan cities (Figure 1.2)? In such regions capital and talent are matched much less efficiently. If people do not expect that their talent will be rewarded because of this mismatch, they have lower interest in investing in themselves and their children. The mismatch creates a vicious circle of low human capital and low growth. Such vicious circle where people don't have hope for a better future, creates a fervent ground for anti-social behavior, like lynching and vigilantism. The Hindi heartland needs a few major cities, to get out of this vicious circle.

Conclusion: Notes on Embeddedness

With this, we end this chapter. Let's summarize what we learnt very briefly. We learnt that relational and power-based exchange have dominated traditional business, and economic exchange was traditionally embedded in networks and hierarches. Embeddedness was able to inefficiently resolve market frictions in the traditional economy, but it also erected entry barriers and limited opportunity for many. We learnt that guild system and taxi associations promised to offer many club-like benefits, but they later turned into cliques. We also learnt that traditional "embedded" forms of business are persistent under weak contracting institutions, as they favor specific investments in particular partners, in place of generalized investments for an impersonal market. We learnt that generalized institutions were important for the emergence of modern business as they boosted contractibility, increased selection pressure, increased formalization of business, and reduced their embeddedness.

So, does this mean generalized institutions are the magic wand of growth? No! Institutions are prone to capture; about which we will talk in great detail in the next chapter

Chapter 2
Evolution of Markets
(Cronyism and Capitalism)

In the previous chapter, we focused on how businesses were embedded in traditional social structures in the absence of markets, and some of the reasons why they stayed that way. In this chapter we will study the evolution of markets

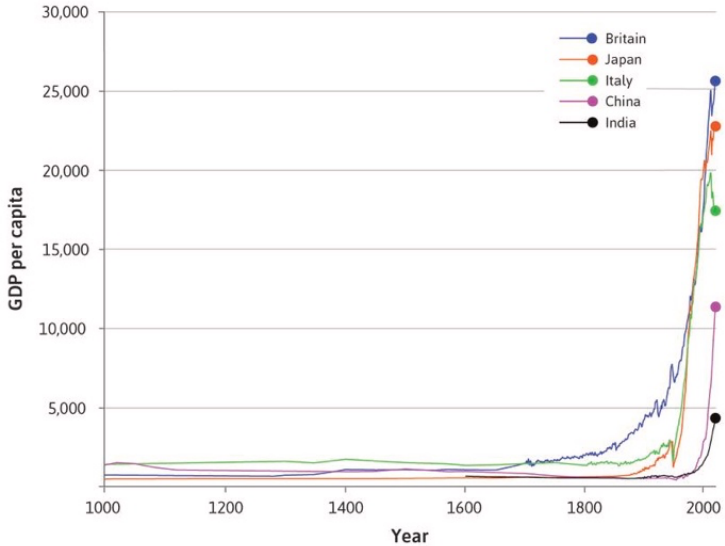


Figure 2.1 History's hockey stick: Gross domestic product per capita in five countries (1000–2015). Source: CORE team (2017)

The graph in Figure 2.1 puzzles many and has inspired the research agenda of many social scientists and historians, including the 2018 Economics Nobel laureate Paul Romer. Until around 1500 the per capita income of the world was not only largely stagnant (some fluctuations withstanding) but also similar. So, an average Indian or an average English were not significantly better or worse in terms of income. There may still have been differences in quality of life though, for example Indians enjoyed much more sunshine, and sugar, and spices, all of which were a luxury for the English. But in traditional societies, if the land was bountiful (like India or China) then people also had more children, which in net meant that per capita resources that people enjoyed remained stagnant. This stagnation of per capita income in traditional economies is referred to as the Malthusian trap, where more income leads to more population, which leads to constrain on resources, which puts a limit on economic growth, and population growth.

Something happened after 1500s and especially after 1750s, which lead to an uncharacteristic hockey stick of exponential growth. First this hockey stick emerged in England, and spread in many western countries, and then came to Japan, and East Asia, and currently we see

this hockey stick improving the economy and living standards in India and China. The Malthusian trap was no longer an issue, as fertility rates began to decline and with technology resources began to expand. Given this exponential growth, scholars have wondered the causes of this hockey stick of growth. It will take several courses, to take a comprehensive look at all the causes that trigger such growth. Here, I will discuss one factor that has been an important theme of this lecture series: the underlying social structure.

In a recent paper, economists David de la Croix, Matthias Doepke and Joel Mokyr, argue that underlying social structure plays a very important role in determining the rate of productivity growth. Training a young person with new skills is an opaque activity. How does the child, or their parents know that the person teaching the skills is actually doing a good job? Such opaqueness leads to a tradeoff.

If a child gets educated by the parents, assuming parents care about the child, the parents try to teach the child well. But there is only a limited set of skills that parents can teach to the child, and so learning is limited to specific skills. So, a child doesn't get to choose what skills they learn. The same is true with clans.

Clans are networks, where a clan master can teach children reliably because the actions of the master can be monitored (due to embeddedness (Ch. 1)). As a clan is larger, more diverse set of skills can be taught to a child. The larger the clan, the greater the diversity of skills the clan can offer. So, a clan-based teaching is better than family-based teaching because even though it is not significantly riskier that the family, but there are more choices that a child enjoys in learning.

Now consider a market, and a market where one can enforce contracts. In this world, a child can enroll to learn from any master, and there is a standard set of skills that the master will be required to teach the child, as per their agreement. If, such a contract can be enforced, the child has significantly more options than either in the clan or the family equilibrium. So, in such perfectly functioning market, the child learns more, and productivity grows faster.

However, consider a market where masters can erect monopolies by forming closely controlled craft guilds. If the market power of these craft guilds is very large, then the supply of masters gets constrained, and in such a

world, a clan equilibrium may actually be better than the guild equilibrium.

The paper (de la Croix, Doepke and Mokyr 2018) summarizes succinctly many of the promises and pitfalls of the markets, while highlighting that a large radius of economic exchange with strangers is valuable for individuals and the society as a whole.

This brings me to a simple question, if impersonal exchange with a stranger is so valuable, then why is impersonal exchange historically not the norm? Why is it difficult for two strangers to do trade with each other? The answer requires us to understand economic governance.

Part I: Puzzle of Impersonal Exchange

How do we govern economic exchange is an important area of research in social sciences. In 2009, economists Elinor Ostrom and Oliver Williamson shared the Nobel Prize. They contributed to a growing literature on economic governance, where contracts were neither complete, nor were they automatically enforced by a smoothly functioning legal system (Ostrom and Williamson 2009). Elinor Ostrom's work focused on how self-governed commons, despite the threat of tragedy of

commons, may be better governed than private owned ones. Oliver Williamson's work focused on how firms erected hierarchies to deal with the imperfections of the market.

Why did communities and hierarchies often do a better job than the market? Because it turns out that cooperative non-opportunistic behaviour between two strangers (which is akin to altruism) is difficult to explain even from an evolutionary stand point. While reciprocity between two individuals, or within a community, or towards kin or a group may be evolutionarily stable (Nowak 2006), charitable "samaritan" acts towards strangers with no short- or long-term rewards is evolutionarily not a stable strategy, as such a strategy is prone to invasion by opportunists. As it turns out in one shot exchanges with anonymous strangers, opportunism is the evolutionarily dominant strategy.

Given this problem of opportunism, seventeenth century English philosopher Thomas Hobbes had a dim view of human nature. He thought that if humans were left on their own, without a higher power, there will be a state of war, "*every man against every man*", and in this anarchy life of humans will be "*solitary, poor, nasty, brutish and short*." (Hobbes 1651). So, Hobbes believed that Human

nature was selfish, and given this nature, a "*common power*" like a state was needed to make two strangers A and B, who are not members of the same community or firm, uphold their promises to each other.

Not all philosophers shared Hobbes's dim view about human nature. Tocqueville, a nineteenth century French philosopher had a brighter view of human nature, as he travelled through 19th century United States. He thought that Americans had learnt a "*science of association*" and were quick to resolve problems by forming associations and corporations. He found such associational spirit to be different from the French or the English, who he thought still relied on a government or a lord to get things done. He opined that "*In democratic countries the science of association is the mother science; the progress of all the others depends on the progress of that one*" (de Tocqueville 1840). This "*science of association*" was a call for more civic norms in economic and social life. In his view, a country like USA had built civic norms of associations which allowed for two people A and B, although strangers to trust and be trustworthy to each other.

Do civic norms really matter for economic exchange and finance? A string of research by economists Luigi Guiso, Paola Sapienza and Luigi Zingales says so. The

researchers compared different regions of Italy, on the basis of their civic culture which they called "*social capital*" using metrics like electoral participation, and found (Guiso, Sapienza and Zingales 2004) that *"in high social capital areas, households are more likely to use checks, invest less in cash and more in stock, have higher access to institutional credit, and make less use of informal credit"* They also found that "*the effect of social capital is stronger where legal enforcement is weaker and among less educated people."* So, civic norms and institutions are substitutes, and in places where institutions are weak civic norms become more important for economic exchange.

We came across two ingredients necessary for sustaining impersonal exchange between strangers: **Institutions** and **civic norms**. Now consider you are the leader of a region that is traditionally embedded in networks and hierarchies (particularized) and is lacking in entrepreneurial activities. You want to stir up entrepreneurial activities. How do you do it?

Some would suggest the path of "*laissez-faire*" where rules and regulations and red tape should be minimized, as they believe deregulation will naturally give rise to new enterprises and partnerships. But as we discussed, regulations may themselves be a remedial outcome of

opportunistic and deceptive behavior that plagued the market in the first place. Economic exchanges are rid with opportunism, and so "*laissez-faire*" deregulation may not solve the problem.

Some may find such opportunism to be a cultural problem and may advocate for education in civic norms. However, culture is slow to change. In an economy lacking in regular interaction with strangers, civic norms in business may not get environment to develop. Some, who believe state is the solution, may advocate for effective and fair institutions that judiciously regulate. However, just as impersonal exchange is prone to opportunism and civic culture is prone to decay, the same way institutions are prone to corruption.

While we would all love to have honest politicians, politics is and has been prone to capture by businesses. Consider the city of Florence. In the medieval era, Florence was one of the most advanced cities of Europe. Yet, a highly prosperous business family – the Medicis, captured the institutions of this great city, and used money to gain political power and political power to make more money. Such political capture led to a decline of Florence. Economist Luigi Zingales (Zingales 2017)

considers this to be a common theme, not just a historical anecdote and writes:

"Most firms are actively engaged in protecting their source of competitive advantage… As long as most of the effort is along the first dimension [of innovation], there is little to be worried about. The fear of being overtaken pushes firms to innovate (Aghion et al. 2013). What is more problematic is when a lot of effort is put into lobbying. In other words, the problem here is not temporary market power. The expectation of some temporary market power based on innovation is the driver of much innovation and progress. The fear is of what I call a "Medici vicious circle," in which money is used to gain political power and political power is then used to make more money. This vicious circle needs to be broken. In the case of medieval Italy, it turned Florence from one of the most industrialized and powerful cities in Europe to a marginal province of a foreign empire."

Now, consider two markets, one with many incumbents competing for political power, and another with a large incumbent is trying to protect its market share. The institutions of which of the two cities will be more prone to political-capture? If a market is competitive, and there is less concentration, then such a market is expected to be less prone to political capture.

How impersonal markets emerge?

Now, that we see that none of the above ingredients: institutions, norms or deregulated exchange alone can give rise to sustainable impersonal exchange, what are the basic ingredients that we need to have to ensure such an impersonal market can sustain itself. We have to consider a market where contracts are incomplete and get enforced by a poorly functioning legal system. This is a tough problem and there are no universally accepted solutions. So, now I will discuss some of my own research (Raj 2018 a, b) on the topic.

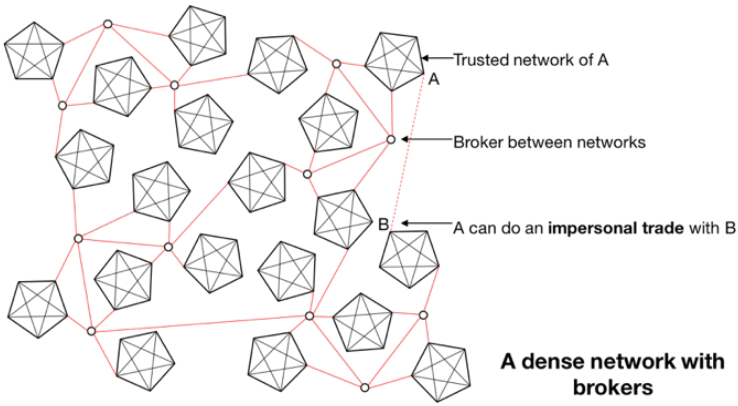


Figure 2.2: Brokers vs. Strangers: The devil you know vs. the devil you don't.

Let's consider this network in Figure 2.2. A trader can do economic exchange in two distinct ways. Using

traditional networks and hierarchies, a trader A can do business via brokers and earn *m*. As this is an embedded market, brokers cannot be substituted (as you are stuck with your networks and hierarchies), and they set the price *m* and enjoy a monopoly in brokerage (so they are elites).

Instead A can undertake an impersonal exchange with a stranger, B, and earn *c* which is greater than *m*. However, this being an impersonal transaction, B can turn out to be a cheater which may lead to a loss of *h* for A, and a gain for B (*c*+*h*). If there is a proper functioning legal system set up by the ruler of the region, then the size of *h* is small, and risks and temptations of cheating are lower.

In this situation which of the two modes of exchange should A choose, and will the ruler aim to install an effective legal system to minimize the loss/temptation to cheat? Let me briefly summarize the key results (Raj 2018a). Firstly, if impersonal exchange is not feasible, the ruler has little interest in establishing an effective legal system for impersonal exchange and in the embedded economy the ruler would rather like to make particularized deals with the brokers for revenue which would often imply granting them with special privileges. So, when is impersonal exchange feasible?

Strong Incentive: If the value gained from impersonal exchange (*c*) is not significantly higher than the value gained from traditional means (*m*), why should A take the risk of impersonal exchange? So, there should be a strong incentive (*c*>*m*) for A to undertake impersonal exchange. Long distance trade is one of those settings where there exists considerable incentive to do business with strangers. Regions with a history of long-distance trade, e.g. Europe (see Ogilvie (2011)), or South India (see Karashima (2009); Subbarayalu (2009); Selvi (2011)) were good settings for such impersonal exchange. However, as the brokers can set the value of *m,* if they find impersonal exchange to be hurting their business, they can always offer a higher value (*m)* to A. So, if the brokers are efficient and can provide their brokerage service at a competitive value, A would not be willing to undertake a risky impersonal exchange. So, for impersonal exchange to emerge, the existing brokers and monopolizing elites should be disrupted such that they cannot offer the value that is comparable to the value that impersonal exchange can provide (*c* >> m). So, an economy needs a **trade shock** that disrupts existing embedded networks and hierarchies and gives rise to to do trade with strangers.

Formalization of business: In the previous chapter we discussed standardization and formalization of business (see Figure 1.1). Adopting accounting systems or an ISO

process can limit discriminatory behavior by a trader, such that they cannot have one set of reliable business practices for those they know, and another set of opportunistic and unreliable practices for those they don't. Formalization of business and adoption of standardization enables traders to trade effectively with any stranger at arm's length in the market, as these arm's length traders will have confidence in formalized traders that produce goods of uniform quality. However, remember that these formalized traders will also like to trade with arm's length traders that have themselves formalized, so that they do not suffer from any discriminatory and opportunistic behavior of the trading partner. In a traditional economy characterized by long term relationships, would you like to be the early adopter of such formalization? If other traders at arm's length have not adopted such formalization, early adoption and investment in such standardized business practices may just be a costly investment. So, the only way in which impersonal exchange can emerge is if there is mass adoption of standardization and formalization above a threshold (beyond which such adoption is no longer costly), that reduces partiality in conduct, and makes impersonal exchange reliable. How can such mass diffusion and adoption of new business practices and standards be achieved? Information shock like disruptive

mass media technologies such as the printing press or the internet could help.

So, for impersonal markets to emerge we need the following ingredients together: We need 1) a strong incentive for traders to go beyond their network and hierarchies to conduct impersonal exchange such that the existing brokers and monopolizing elites are disrupted, and 2) we need a mass adoption of standardized business practices that formalize business and limit discriminatory behaviour. If these two ingredients: **strong incentives that disrupt the existing elites**, and **mass formalization**, can occur together, impersonal exchange can be possible, and only in such a scenario will a ruler have an interest in investing in effective and generalized institutions, that reduce the risk and temptation of cheating in impersonal exchange (see Figure 2.3).

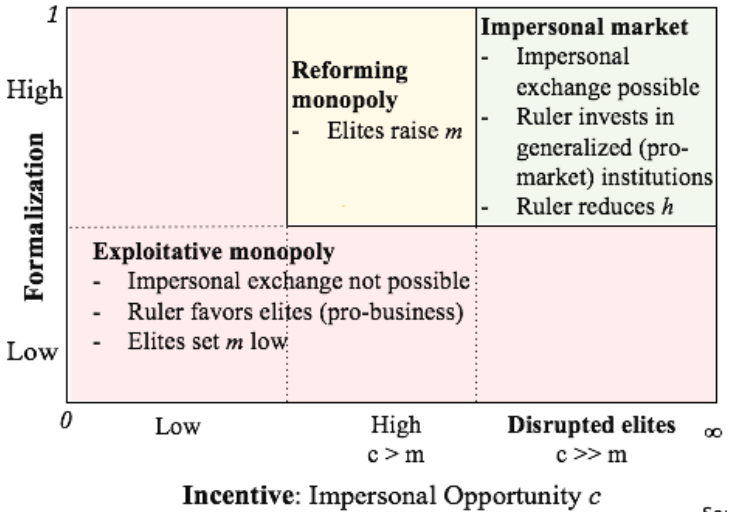


Figure 2.3: Conditions for emergence of impersonal markets.

Part II: Why 16th c. northwestern Europe?

Keeping this theory of impersonal exchange in mind, now let's finally get to history! We learn from the preceding discussion that strong incentives and mass formalization are both necessary for the rise of markets.

As network-based institutions like guilds were dominant historically in a world without formal and impartial legal institutions, and regions needed both **trade and information shocks** to break their persistent dominance.

Economic and technological progress is neither linear nor universal as we saw in Figure 2.1 of the hockey stick. For

much of the human history, economic growth was slow, and it gathered pace only in the last five hundred years. As economic and technological change is nonlinear, scholars (Lucas 2009, De la Croix et al. 2017) have explored whether certain social structures (cities and markets) are more conducive to rapid progress, as they enable greater social interaction and learning between strangers. India had a tradition of long-distance trade, with evolved (non-kinship) merchant guild systems especially in the South (see Karashima (2009); Subbarayalu (2009); Selvi (2011)). Printing had a tougher time diffusing in India (or China) due to its Abugida script (see Saradesāya (2000), Orsini (2016); Angeles (2017)). India did not receive an information shock until the nineteenth century with the rise of vernacular printing with invention of lithography (Raj 2018 b). So, the structural change towards impersonal markets only happened recently in India.

The region where impersonal markets actually emerged was Northwestern Europe, and this emergence was closely linked with the trade and information revolutions that the region underwent in the sixteenth century. The transition of the northwest European economy from guild-based to market-based put the region on a path of

rapid progress and modernity. What were the factors that triggered this transition?

Merchant guilds dominated trade in Europe for much of the second millennium, given all the benefits they had in a medieval economy. While they began as voluntary associations of merchants, they eventually morphed into rent-seeking monopolies that enjoyed privileges from rulers and restricted entry (Gelderblom and Grafe 2010, Ogilvie 2011). In the 16th century, merchant guilds began to decline in northwest European cities like Amsterdam, Hamburg, and London. In their place, institutional innovations like the stock market and the joint stock company emerged. They enabled a more impersonal form of trade. North (1991) and McCloskey (2016) among others have written extensively about the significance of early-modern northwestern Europe for the development of modern institutions.

But what explains the emergence of impersonal markets in northwestern Europe at this time? Any explanation should clarify three important trends: Why did the decline of merchant guilds occur only in the northwestern region? Why did the decline occur only in the 16th century, and not before? Why did other parts of Europe not benefit from the same benefits that were

transforming northwestern Europe?

To answer these questions, I collected city level data on the 50 largest European cities during the 14th, 15th and 16th centuries and codified the nature of the 16th century economic institutions in each of the cities. I focused on the interaction between the disruptive commercial and information revolutions of the late 15th century Europe in explaining the decline of merchant guilds.

I found that merchant guilds declined only in those cities that were at the Atlantic coast (and hence benefiting from a commercial revolution), and had high levels of printing in the fifteenth century. Figure 2.4 shows the nature of economic institutions in the cities of early modern Europe. It also sets out my hypothesis of the interaction between the commercial and information (or communication) revolutions.

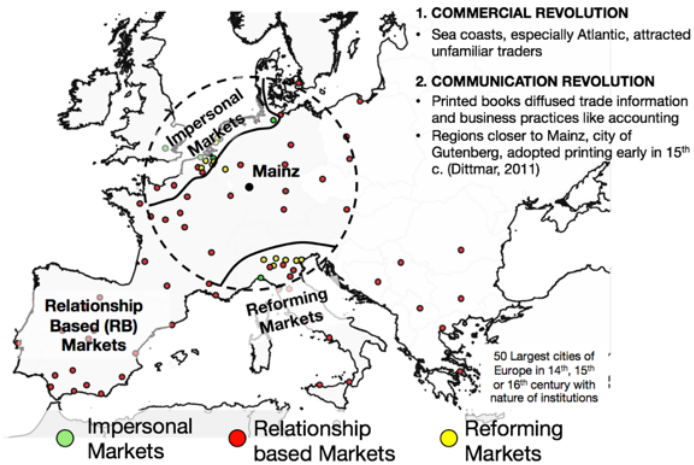


Figure 2.4 The 50 largest cities of Europe in the 14th, 15th and 16th centuries by type of institution. *Source*: Bairoch et al. (1988), Raj (2018b).

The figure describes different conditions in the regions of Europe. Region 1 (northwestern Europe) is close to Mainz and the Atlantic ports, and so it was at the heart of the commercial and communication revolutions. Region 1 contained all the cities with emerging impersonal markets. Region 2 (northern Italy) is close to Mainz and the sea. In Region 2, elites in the cities undergoing reform also reformed to ensure that impersonal markets did not develop. Region 3 (the rest of Europe) contained relationship-based cities.

The trade shock: The value of strangers

Why should the interaction between the commercial and information revolutions matter for the decline of relationship-based institutions like merchant guilds? Network theory can help us understand. Relationship-based and impersonal modes of social exchange provide different benefits to social actors. Relationships bring reliability – even without formal institutions – while impersonal exchanges expand the circle of exchange (Burt 2017). Reliability is less attractive when traders have an increased appetite for risk, which increases if there are attractive opportunities available by engaging with unfamiliar traders.

Historically, in cities that were geographically suitable for long-distance trade, such as *entrepôts*, merchants found impersonal trade opportunities to be attractive. These cities specialised in import, export, and exchange, and would attract unfamiliar traders who were looking for business opportunities. So, traders in such cities would find such impersonal trade opportunities to be attractive, and such cities emerged as cosmopolitan hubs. *Entrepôts* across Eurasia, from Antwerp to Venice to Aden to Malacca, became cosmopolitan hubs of foreign merchants (Harris 2009).

Figure 2.5 Lübeck and Hamburg. *Source*: Raj (2017b).

In the 16th century, the Atlantic coast was undergoing a disruptive commercial revolution with the discovery of new sea routes to Asia and the Americas. Cities at the Atlantic coast, including those in northwestern Europe, became attractive commercial hubs, with high population growth. The bustling Atlantic coast gave merchants the greatest incentive to form new connections with unfamiliar traders, and so to rely less on the existing guild system. My research shows that all the cities in which guild monopolies declined were close to the

Atlantic coast. In addition, the cities that reformed their guilds (but did not dismantle them), as happened in northern Italy, were also close to the sea, if not on the Atlantic coast.

Hamburg is an example of an *entrepôt* in which guilds declined. Hamburg and the neighbouring Baltic port of Lübeck (Figure 2.5) were both important Atlantic port cities in the 15th century. At this time, a competing trade route which went around the Jutland peninsula and through the Sound (Øresund) emerged, which threatened the traditional domination of the two cities. Hamburg stopped giving privileges to merchant guilds and started to attract foreigners in the 16th century. Lübeck, in contrast, protected the interests of its local merchants. It attempted to block competition from foreign (especially Dutch) merchants and supported the privilege of local guilds.

The information shock: Diffusing "ars moratoria"

While commercial cities close to the sea were natural meeting points for traders with rich impersonal opportunities, not all commercial cities on the Atlantic coast developed extensive systems of impersonal exchange. For example, trade in the Spanish city of Seville remained guild-based.

Long-distance trade necessitated doing business in regions and markets about which the merchants had limited information, and with partners or agents who could not be easily monitored. So, informational asymmetry and moral hazard made this impersonal long-distance trade difficult. A socially embedded system of exchange like a guild was suitable for aggregating information through reliable networks and for mitigating the associated risks (Uzzi 1996). For impersonal exchange to emerge, search costs needed to be low, and traders needed to feel confident about the reliability of risky impersonal partnerships. Any improvements in the availability of information would help to increase this reliability.

Improvements in information technology can reduce search costs and increase standardisation, which can reduce the high coordination costs of impersonal market based (and non-hierarchical) exchange (Yates 1986; Malone et al. 1987). One such improvement at the end of the fifteenth century was the introduction of the printing press. Cities in the 16th century in which monopolies of merchant guilds declined had been early adopters of printing technology. They had significantly higher levels of printing in the fifteenth century and published

practical subjects such as economics and commerce more often. Hence, they were distinct in the nature of their market for ideas.

The north-west Europe region was close to Mainz (as were the other regions in which there was a high early adoption of printing). Mainz was the city in which Johannes Gutenberg invented the movable type printing press in the mid-fifteenth century. Figure 2.6a shows that cities close to Mainz adopted printing sooner than other regions of Europe (Dittmar 2011).

Information diffusion before the 15th century was mostly a case of vertical transmission from parents, teachers and other authority figures. The printing press was a disruptive technology that made horizontal diffusion of information possible too. So, trade-related and economic books, and new or unknown business practices like double-entry book-keeping, diffused early and rapidly in the region (Puttevils 2015). This is clear from in Figure 2.6b.

Printing also accelerated the adoption of the Hindu-Arabic numeral system (Figure 2.6c), which helped to popularise more sophisticated commercial, accounting, and financial techniques (Durham 1992, Chatfield and Vangermeersch 2014).

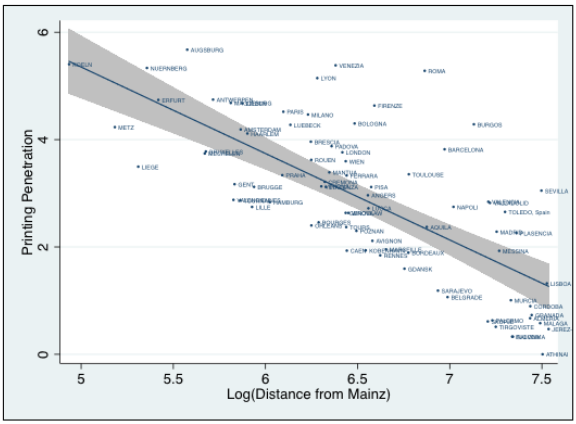


Figure 2.6a The relationship between printing penetration in a city, and distance from Mainz in the 15th century. *Source*: Raj (2018b).

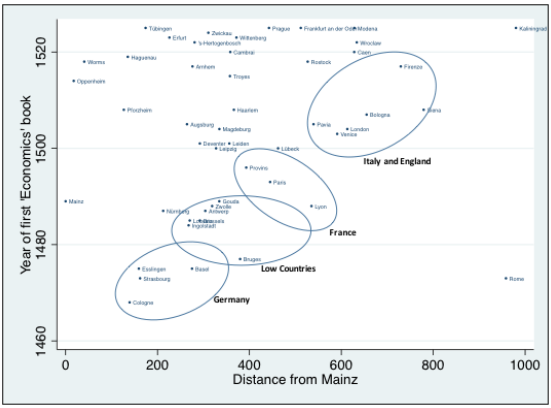


Figure 2.6b The relationship between the year of publication of a city's first economics book, and distance from Mainz**.** *Source*: USTC catalogue and Raj (2018b).

Figure 2.6c Different notations used for Hindu-Arabic numbers in printed books and woodblocks in Germany. *Source*: Hill (1915)

The emergence of impersonal markets required a good incentive to go beyond networks, and the presence of ample information and reliability-enhancing business practices. The winning of both the lotteries was necessary for the emergence of impersonal exchange, by making relationship-based business institutions less attractive (Figure 2.4). Regions like southern Spain (on the Atlantic coast but low levels of 15th century printing), or inland

Germany (high levels of printing but not an Atlantic coast) satisfied only one of the conditions.

Part III: Importance of democratizing the market

Despite a printing revolution, we saw that not all parts of Europe benefited equally from it. The same is true today. If information access is poor (lack of transparency) or businesses don't adopt reliable business practices (poor financial reporting or opaque quality standards), these deficiencies at the business level can make customers and investors question the reliability of new businesses and limit the rise of impersonal and generalized institutions. If market participation is low, politicians, like medieval rulers, may be more willing to enter into a nexus with dominant businesses, like medieval merchant guilds, as market frictions or lack of incentives make the economy dependent on such businesses.

This was the case with the taxi industry for a long time, where customers were willing to pay a high fee to get reliable taxi services as supply of drivers was low (new drivers in cities like London had to pay a high license fee and fulfill tough training requirements). But, better taxi hailing mobile apps like Lyft and Uber, by giving customers access to real time GPS tracking, have revolutionized the industry, much like the

communication revolution did in late fifteenth and sixteenth century. Another area where information access has improved reliability in business is the tourism and travel industry. While in the past the tourism sector was dominated by travel agents and their recommended offerings, now an influx of providers and travel comparison websites, such as expedia.com and AirBnB, has increased the reliability of small unknown hospitality service providers. Today, many prefer to stay at a stranger's home over a reputed hotel chain. Such a revolution in the taxi or the travel industry is following the old historical trend where disruption in how information is made available changes how businesses are organized.

Yet, the effectiveness of these technologies depends on the incentives people have to engage with strangers (commercial conditions). The adoption of ISO systems, or accounting standards doesn't cease deceptive behaviour in the markets, nor will technologies like blockchains unless the economy provides the right incentives to have uniform standards of behaviour, in place of devising ways to target and cheat vulnerable partners selectively. If the economy provides little incentives to cast a wide net to conduct business reliably with strangers, these technologies may merely become a front for deceptive

behaviour (Raj 2018a).

Progress isn't Natural

While, the hockey stick of growth and market evolution aided by technology is enriching living standards around the world, this progress cannot be taken for granted. As economic historian Joel Mokyr points out "*Progress isn't natural*" (Mokyr 2016b), and progress requires unique institutions and culture for growth. So, market emergence cannot be considered to be unidirectional.

Financial development has not had a unidirectional flow of progress throughout history. Finance saw episodes of "*great reversal*" (Rajan and Zingales 2003), in part due to the influence of private interest groups that favoured protection from financial and industrial competition.

We saw throughout this chapter that disruption of existing elites, in order to loosen their hold on political institutions, is important for the emergence of impersonal markets. This leads to a natural question: what is the relationship between capitalism and capitalists? The relationship between the two is complicated and could be described quirkily as "*saving capitalism from the capitalists*" (Rajan and Zingales 2004).

A functioning market is supposed to enhance competition, reduce entry barriers, and as a consequence limit profits that firms can make. In a direct contrast, the job of a firm is to minimize competition, increase entry barriers (ideally through innovation) and maximize profit. So, markets and firms in it are in a constant tension, which at times gets ignored in policy. Pro-Business and Pro-Market policies are often confused to be one and same, when they are usually diametrically opposite (Zingales 2009). Pro-Business policies like historical mercantilism are meant to attract specific businesses, through the granting of privileges. This was the business policy of traditional rulers of erecting particularized institutions that granted privileges to a few merchant guilds (Ogilvie 2011). In contrast Pro-Market policies are meant to be impartial towards all business and are supposed to increase competition by making it easy to do business or get a job. This is the business policy of establishing generalized institutions (like an impartial court), that serves all parties. Discussing lobbying by businesses, Zingales (2009) points out the distinction between pro-business and pro-market policies: "*Most lobbying is pro-business, in the sense that it promotes the interests of existing businesses, not pro-market in the sense of fostering truly free and open*

competition."

While pro-business and pro-market policies can be aligned in some narrow set of conditions, especially during growth phases of markets (Raj et. al. 2019), under a large range of conditions when pro-business policies begin to dominate over pro-market policies it gives rise to concentration. Consider the case of the US telecom industry where in the absence of regulation, market concentration has reached historic peaks, and prices of mobile phone service is the US as a consequence is uncharacteristically high in comparison to similar services around the world (Faccio and Zingales 2017; Rolnik 2017). Given these issues, the relationship between businesses and politicians is of central significance when we wish to understand the recipe of developing impersonal markets, that are inclusive. Noteworthily, in order to understand how businesses and politicians sustain the market-system and its supporting institutions, non-market actors, such as media and non government organizations play a critical role, as they reduce market frictions by reducing information asymmetry, exposing externalities and enabling collective action (Raj et. al. 2019).

Conclusion: India and the inclusive metropolis

India's hockey stick of growth is NOW, driven by the post liberalization boom (commercial revolution) and the IT revolution (information revolution). How inclusive are the markets, will determine what kind of growth India will have? As markets determine the basket of opportunities a child can enjoy as an adult, the nature of markets determines the child rearing decisions of parents. When rural parents consider a child's education, they consider whether to invest in child's generalized education (schooling) so that they will be able to develop a set of marketable skills that will help them get a lucrative job in a nearby city (market), or whether to not send their child to school, and instead educate the child at home/community traditionally and involve them in the traditional family or community occupation.

The above decision of parents determines the type of rural to urban migration a region will have (Lucas 2018). If a city is inclusive (London model), and provides a chance for social mobility, then in such a setting parents invest in their child's schooling in hope that one day their child will be a part of a well-off bourgeois. However, if a city is exclusive (Dubai model) and most migrants who come from nearby regions serve an elite, which migrants cannot be a part of, such a setting gives rise to an unskilled underclass which does little investment on

human capital. Among these two models of growth only the one where markets are inclusive leads to growth as the stock of human capital improves, and the human capital driven economy produces more innovation and productivity.

So, consider the city of Florence again that turned into a playground of the elites (Medicis) by the end of the fifteenth century. Such a city with a narrow concentration of rich in power has ineffective institutions, nonfunctioning markets, a declining bourgeois middle class, a declining cosmopolitan culture which becomes increasingly intolerant. For example, an influential preacher Girolamo Savonarola was burnt at the stake in 1498 in middle of the city square in Florence for his perceived heretical views. Such was the decline of the city that was also home to Leonardo da Vinci! In contrast, cities if become arenas of impersonal exchange that give rise to inclusive markets, there is a broad base of economic actors with effective and fairer institutions, where there is a rise of a bourgeois class or culture (McCloskey 2016) which is driven by human capital, innovation (Cook 2007, Mokyr 2016a) and cosmopolitanism.

Chapter 3

Forces of Evolution (Institutions, Culture and Technology)

In the last two chapters we studied the broad historical evolution of businesses and markets. It was a story of expansion of the social circle. We discussed that "*who are our friends and what is the nature of networks we make, can have macro-level implications on society*" (Raj 2018). In the first chapter we learnt about the two types of exchange: one which is embedded in networks and hierarchies, and another that can rely on arm's length interactions with strangers. We discussed how embedded systems of exchange like merchant guilds can persist due to a lack of incentives or information, or because of salience of identity in embedded exchanges.

In the second chapter we looked at the factors that can widen the social circle and give rise to impersonal and cosmopolitan social systems. We learnt that strong institutions, a trustworthy culture or "*laissez-faire*" markets alone cannot be the recipe for the emergence of impersonal exchange as each of them are prone to corruption, decay and opportunism. We discussed the importance of incentives and formalization in impersonal exchange, and how trade and information shocks can play an important role in triggering a co-evolution

between generalized institutions, standardized business norms, and impersonal exchange. We discussed how this process panned out in Northwestern Europe, and how the same processes may lead to growth in India, as long as the markets were democratized, and growth remained inclusive.

In this chapter, we will discuss about the forces that drive such evolution. Over the last two decades a wave of seminal papers in economic history, made possible by the discipline's "*credibility revolution*" (Angrist and Pischke, 2010) in methodology, have shown the potential of historical settings in providing opportunities for researchers to conduct creative and credible experiments. For example, Acemoglu, Johnson, and Robinson (2001) used historical settler mortality rates to estimate the quality of institutions in former colonies, where higher settler mortality was predictive of more extractive institutions. They used this estimate to study the long-term effects of political institutions on development. Similarly, Michalopoulos and Papaioannou (2016) used the division of ethnic boundaries in Africa along arbitrary lines in Berlin conference in 1884-85, to estimate if ethnic homelands divided by such ad-hoc borders suffered with more ethnic violence today, and if such violence was contagious.

Part I: Institutions

Do property rights matter?

As study of history becomes common in economics, important debates have arisen about the long-term causes of (under)development. In the earliest years of 2000s, this debate was about the type of ***formal institutions*** that cause long-term growth. Seminal papers by Acemoglu, Johnson, and Robinson (2001, 2005) advanced the ***institutional view*** proposed by economic historians like North (1990) (see Greif (2006) for a theoretical treatment of the topic). Institutionalists argue that constraints on the executive and better protection of property rights create a favorable environment for economic development.

Acemoglu, James and Robinson made two path-breaking claims. Firstly, in 2001, they hypothesized that regions where colonizers had more settler mortality, developed more extractive institutions, and these regions today, with a legacy of exclusive and coercive institutions, have lower levels of development (see Albouy (2012) for an alternate analysis). In 2005, they looked at early modern Europe, and argued that regions like Northwestern Europe, which had more constrained executive in comparison to regions like Spain, were greater beneficiaries of Atlantic trade in the long run and enjoyed higher rates of development and urbanization later on.

In another influential paper, Banerjee and Iyer (2005) looked at India, and argued that the regions where the British established the extractive Zamindari land-tenure system like Bengal and Bihar, had lower rates of agricultural development after the green revolution as they were unable to effectively utilize developmental funds. They found these differences to persist even when they compared two neighbouring districts, with and without the zamindari system. When they instrumented for the fact that regions annexed between 1820 and 1856 were less likely to adopt Zamindari system, their results continued to persist (see Iverson, Palmer-Jones and Sen (2013) for an alternate analysis).

Does legal origin matter?

Another set of influential papers by La Porta et al. (1997, 1998) proposed the ***legal origins view***, which argued that countries with a common law heritage like England and its colonies (in contrast to civic law countries like France and its colonies) had better protection for investors especially small investors that led to better capital markets.

Glaesar and Shliefer (2002) argued that in countries with common law, where judges could de-facto make laws by

setting precedents, the level of financial development was higher because laws in these regions were less likely to be captured by special interests. They argued that in regions with civil law heritage where law was codified by politicians, and where courts didn't enjoy any power to set precedent, the laws were more prone to capture by special interest, and more hostile to investor protection. La Porta et al (1998) also found that "*good accounting standards and shareholder protection measures are associated with a lower concentration of ownership, indicating that concentration is indeed a response to poor investor protection*."

Where do ethnic institutions matter?

While this debate between legal origin scholars and formal institutions scholars occurred, in the later half of the last decade, there was an increased interest in the study of informal institutions. Africa with its multiple ethnicities and colonial heritage became a topic of interest (e.g. Nunn 2008). Michalopoulos and Papaioannou (2013 a) investigated the limits of formal institutions in Africa. They exploited "*the fact that the political boundaries on the eve of African independence partitioned more than 200 ethnic groups across adjacent countries subjecting similar cultures, residing in homogeneous geographic areas, to different formal institutions*."

Michalopoulos and Papaioannou compared two bordering regions with the same ethnicities and found that differences in formal institutions could not explain differences in development within ethnicities. While overall there was a null-effect on the importance of formal institutions, they found that regions closer to a country's capital had a greater influence of formal institutions, and their effect began to wane as one went farther away from the capital.

In another paper Michalopoulos and Papaioannou (2013 b) found that higher pre-colonial levels of centralization of an ethnic group was a good predictor of current levels of development which they measured using night-time light density gained from satellite data. For robustness, they compared two neighboring regions, within the same country, with similar colonial legacies but different pre-colonial institutions, and found the differences to persist.

Part II: Culture

Does culture persist?

The importance of ethnic institutions from pre-colonial period highlights the importance of persistence. Papers like Nunn (2008) and Nunn and Wantchekon (2011) tried to tie the effects of institutions on culture. Nunn (2008) showed that regions in Africa that suffered more due to

slave trades, today had poorer economic outcomes. As it was possible that regions with poorer pre-slavery institutions engaged in more slave exports, Nunn (2008) used distances from each country to the locations of the demand for slaves to estimate the long-term effects of exposure to slave trade on economic outcomes. Nunn, and Wantchekon (2011) focused on the effects of slave trade on culture, and especially on trust, showing that regions that were more exposed to slave trade had lower levels of generalized trust today, showing how the legacy of slavery led to persistent mistrust in societies affected by it.

While sociologists like Banfield (1956) and Putnam et al. (1994) have long emphasized the significance of culture and especially civic culture, the intangible nature of concepts such as culture and "*civic capital*" deterred economists from studying the topic in greater detail until the early 2000s. How can something as intangible as civic capital be measured so that it is not affected by other confounding factors like economic or institutional development? Guiso, Sapienza and Zingales (2004) developed novel measures for estimating civic capital. They wrote in that paper:

"The most contentious issue is how to measure social capital…

For example, is the level of trust a New Yorker exhibits in her daily economic behavior the result of good law enforcement or the product of a high level of social capital? We focus on two outcome-based measures that are free from this criticism: electoral participation and blood donation. There are neither legal nor economic incentives to donate blood or to vote. Both decisions are driven only by social pressure and internal norms, i.e., the fundamental components of social capital."

By developing these proxies of civic capital, Guiso, Sapienza, and Zingales could study both the effects and the causes of high civic capital. In their 2004 paper, the authors focused on the economic effects of civic capital, showing that Italian regions with greater electoral participation and blood donation also had higher financial development, and households in these regions used more checks, invested less in cash and more in stocks, and had higher access to institutional credit.

In their paper "*Long-Term Persistence*," Guiso, Sapienza, and Zingales (2016) turned to economic history and asked a related question: what factors gave rise to higher civic capital? In the paper they focused on the medieval city-state experience of Italian cities and showed that cities in northern Italy that had the experience of being in a medieval city republic had higher levels of civic capital

today as measured by an updated set of proxies like organ donation and cheating on mathematics exams. These results empirically confirmed the famous hypothesis put forward by Putnam et. al. (1994) about the historical origins of civic culture in northern Italy. Guiso, Sapienza, and Zingales found that the effect of the city republic experience increased with the length of the historical city republic experience and that this persistence could be transmitted by self-efficacy beliefs (i.e., belief in their ability to complete tasks and reach goals).

Does trust matter?

Based on the literature that developed due to rise in innovative measures of trust, a body of evidence suggests that values and beliefs regarding trust passed down by parents do persist among individuals (Putnam et al. 1994, Uslaner 2002, Tabellini 2008a, Nunn & Wantchekon 2011, Guiso, Sapienza & Zingales 2016, Buggle & Durante 2017), but values and beliefs themselves can gradually change depending on individual experiences (Alesina & La Ferrara 2002, Dohmen, Falk, Huffman & Sunde 2012, Giavazzi, Petkov & Schiantarelli 2014). (see Alesina and Giuliano (2015) and Michalopoulos and Papaioannou (2017) for a review)

Introducing the construct of trust in the empirical study of firm organization, Bloom, Sadun and Van Reenen (2012) studied whether trust could influence the level of centralization of firms and management styles. Their model was simple: when firms trust their managers, they delegate more tasks to them, and this leads to more decentralization, and more time is spent by the top management in expanding the firm. They found that firms headquartered in countries with more trust were more decentralized. To eliminate firm specific effects, they looked within multinational firms, and compared their level of decentralization (collected via a survey) across countries based on the dyadic trust between a host country and the country where the firm is headquartered. They found that higher dyadic trust led to more decentralization, and larger firm size.

How important are ideas?

As we discussed in the previous two chapters, a decline of traditional modes of doing business, was also associated with change in norms. Economic historian Deirdre McCloskey in her trilogy of books on *Bourgeois Virtues* (2006), *Bourgeois Dignity* (2010) and *Bourgeois Equality* (2016), provided a cultural explanation of the rise of "*the great enrichment*" arguing that the acceleration in economic growth is ultimately an outcome of a

revolution in ideas, where a culture made by the bourgeois (a class of merchants engaged in "*trade tested betterment*") emphasized values that favoured rationality, empiricism, and liberalism. Economic historian Joel Mokyr in his latest book *A Culture of Growth* (2016a) makes a similar claim that in the early modern era a fragmented European polity and a transnational network of scholars (Republic of Letters) there was a rise of a competitive "*market of ideas*", which led to innovation and a culture of growth. Following a similar line of investigation, Raj (2018b) found that cities that developed impersonal markets in the sixteenth century had a greater penetration of "bourgeois" trade related books in the second half of the sixteenth century, a pattern that was not found in cities where merchant guilds continued to be the dominant form of doing business (Figure 3).

If ideas matter, religion becomes an important vehicle for both diffusion and suppression of ideas. Economic historian Jared Rubin in his book *Rulers, Religion and Riches* (2017), argues that if religious elites were a source of legitimacy for rulers, then such religious legitimacy constrained the market for ideas which remained monopolized by religious (and not economic) thinking.

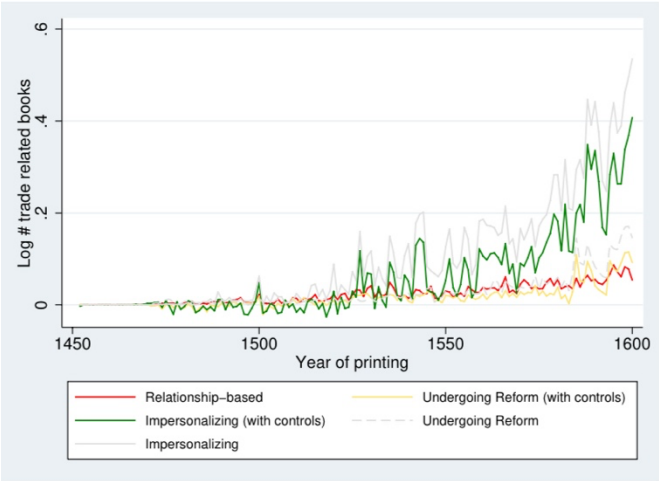


Figure 3 Penetration of trade related books from 1452 to 1600 in Europe, for cities that had dominance of merchant guilds (red), had reforming guilds (yellow), or had dismantled guilds in favour of markets (green). *Source*: Raj (2018b)

In contrast, if legitimacy was secular, it opened up the market for ideas (including lesser control over speech and press). Eric Chaney (Chaney 2016) makes a related claim about the decline of Islamic science. Analysing the nature of books printed in the Islamic world, Chaney (2016) argued that the lively scientific culture of Islam declined after the rise of the political power of religious leaders around twelfth century.

In a recent paper Cantoni, Dittmar and Yuchtman (2018) show that Protestant Reformation in North European

regions in the sixteenth century, had an unintended effect: a reallocation of resources from religious to secular purposes, as secular authorities acquired wealth from monasteries closed during the Reformation. Using rich microdata, they found that in protestant universities, graduates studied less religious and more secular (e.g. administrative) subjects, and in these regions there was a shift away in investment from religious to administrative infrastructure.

Part III: Technology
How does ICT influence markets and hierarchies?

A tectonic shift in the nature and the market of ideas in the sixteenth century should not come as a surprise. In the last chapter we discussed how the introduction of the movable type printing press was a revolution in Europe (Eisenstein 1980, Dittmar 2011), that led to more information availability and education in formal business techniques (like accounting) (Raj 2018b). Is information and communication technology (ICT) always as disruptive? Research shows that ICT revolution can lead to both centralization and decentralization depending on the context.

Business scholars Malone, Yates and Benjamin (1987)

argued in 1987 that information technology may increase or decrease hierarchy in the organization of business, depending on the importance of asset specificity and the complexity of product description in the industry. They looked at finance industry (where there was less asset specificity) and meat packing industry (with asset specificity) and showed the different effects of telegraph introduction in the US in mid nineteenth century. They argued:

On creation of markets: *"Nationwide markets mediated by telegraph developed for products such as stocks and commodities futures. These products were nonspecific assets with many potential buyers. In addition, they were easily describable and consequently susceptible to standardized designations that reduced telegraph costs further. The commodities futures market, for example, only emerged on a national scale after a uniform grading scheme that simplified product description was adopted."*

On creation of hierarchies: *"As Williamson [44] has pointed out, the companies that Chandler identifies as the first to vertically integrate procurement, production, and distribution within a hierarchy were those with asset-specific products, such as meat packers with perishable products requiring railroad refrigeration cars and rapid delivery, and*

manufacturers of complex ma- chine tools with specialized sales and support needs. In the first case, high time specificity outweighed low complexity of product description. In the second case, the product description was complex, and the sales process was high in human specificity. For these firms, the telegraph provided a mechanism by which close hierarchical coordination could be wielded over great distances. Although the economies of scale were the major factor driving this integration, asset specificity and complexity of product description played a role in determining which firms were likely to integrate, using the telegraph as a mechanism of hierarchical coordination rather than of market communication."

Recently, Bloom et al. (2014) claimed that there was a difference in the effects of information and communication technologies, arguing that advancements in informational technologies (which made more information available to those below in the firm hierarchy e.g. CAD software) gave rise to more decentralized firms. In contrast, advances in communication technologies (which made more information available to those at the top of the firm hierarchy e.g. firm intranet), gave rise to more centralization in firms.

Do transport advancements lead to market integration?

Just like ICT, transport technology like shipping and railroads should also influence how markets are organized (e.g. Atlantic trade). Donaldson (2018) used archival data from colonial India to study the impact of India's vast railroad network. Donaldson found that improvements in rail networks gave rise to more market integration in India, as it decreased trade costs and interregional price gaps, and increased interregional and international trade. Donaldson also found that such transport related market integration also led to a rise in income in India.

Donaldson and Hornbeck (2016) focused on the railroad advancements in the United States. In their paper, the authors estimated a county's "*market access*" before and after its connectivity with railroads. They measured this market access by calculating the lowest cost of freight transport based on the existing transport network (railroad and waterway) accessible to the county. As railroad expanded in the United States between 1870 and 1890, market access improved, and Donaldson and Hornbeck found that agricultural land values improved with rising market access, and if such expansion would not have happened, the land value would have been 60% less.

What is the role of media in an economy?

Media is a distinct technology and an institution that has developed with improvements in information technology, printing and market integration. Political scientist Benedict Anderson in his book *Imagined Communities* (1983) goes as far as claiming that the idea of nationhood is a direct result of "*print capitalism*" which gave rise to national "*imagined communities*".

Media is an institution and not just a technology and is influenced by several underlying factors. How does media, the so called "*fourth estate*" become more independent? Gentzkow, Glaeser and Goldin (2006) argued that in the United States production cost of newspapers declined with technological innovation (e.g. Four-drinier process, paper production from wood pulp), and the size of subscriber base and advertising revenue increased with urbanization by late nineteenth century. As a result, the setting created a competitive US newspaper market, which drove newspapers to be more factual and independent (muckraking journalism emerged subsequently). Gentzkow, Glaeser and Goldin summarizing this change suggested:

"In 1870, a newspaperman might make more money pleasing a local politician than in selling papers and advertisements. By

1920 newspapers had become big business, and they increased readership and revenue by presenting factual and informative news."

How important is the media in regulation of businesses and markets? Dyck, Moss and Zingales (2013) documented the effect of investigative journalism on regulation, by looking at muckraking journalism in the US in early twentieth century. Muckraking era of journalism (1902-1917) was a period in American journalism when there was a rise in investigative journalism that especially exposed corruption in business. Muckraking was also characterized by sensationalization of these investigative stories, as different newspapers and magazines competed for the attention of readers and advertisers. If muckraking was effective, it must have influenced the voting patterns of politicians on issues related to regulation in areas where penetration of muckraking newspapers was higher. Moreover, the influence of those magazines that covered such regulatory issues more, should have been higher. Dyck, Moss and Zingales showed that US "*representatives voted differently on regulatory issues that were previously exposed in muckraking magazines, the more so the more diffused were muckraking magazines in their districts*."

highlighting the importance of media and especially investigative journalism on institutions and regulation.

Conclusion: Past and the future

With this discussion on media we end our survey and this chapter. Media is a complex institution, which in closely linked to the technology, culture and institutions of the times. The printing press, which we saw in these chapters to be central in the story of evolution of business and markets, can also be viewed as an important revolution in the history of the media.

What lessons can we learn from the cusp of the sixteenth century or the cusp of the twentieth century about the relationship between institutions, culture, technology and the media. Isn't the cusp of the twenty-first century also a time for a revolution in information and communication technology with the rise of the internet and the mobile phone? At the same time, we are also living in a time of commercial revolution with rapid integration of the world economy. Can we assume that the future will be business as usual, or should we embrace for some tectonic changes in the ways in which human societies are organized? Can we predict those changes?

As much as one may wish to find some golden thumb rule of history, we learnt from the complex labyrinth of historical research that we cannot blandly generalize lessons from the past and should not rely on simplistic and monochromatic ideologies. Over the three chapters we learnt that for every step towards progress in fairer institutions, cosmopolitan culture, and impersonal markets, there is an inescapable shadow of institutional corruption, cultural decay, and opportunistic nepotism, that we need to deal with. While generalizations of history do not work, by looking at historical episodes of transformation, empirically and with rational inquiry, we can learn how societies have overcome the challenges of corruption, decay and opportunism to inch towards building fair, cosmopolitan and inclusive societies.

Policy Note:
Path of Hindi heartland to economic growth is through economic clusters[1]

Double-digit growth in per capita income (in USD terms) is necessary for the states in the Hindi heartland of India to become large economies within the next 15 years (a trillion-dollar economy for Uttar Pradesh). The region has improved in human development indicators; however, it still has high levels of poverty and an often-unnoticed metropolis vacuum - the region despite its large population lacks a major metropolitan agglomeration. Since liberalization, while the south and west Indian states tapped the benefits of globalization (leading to spectacular growth of cities like Bengaluru and Pune), the Hindi heartland could not. This led to a flight of talent and labor from the region to the southern and western states where better opportunities were to be found. A similar dynamic has also led to the stagnation of the North Eastern region of India.

[1] Jointly prepared with Rishikesha Krishnan, IIM Bangalore

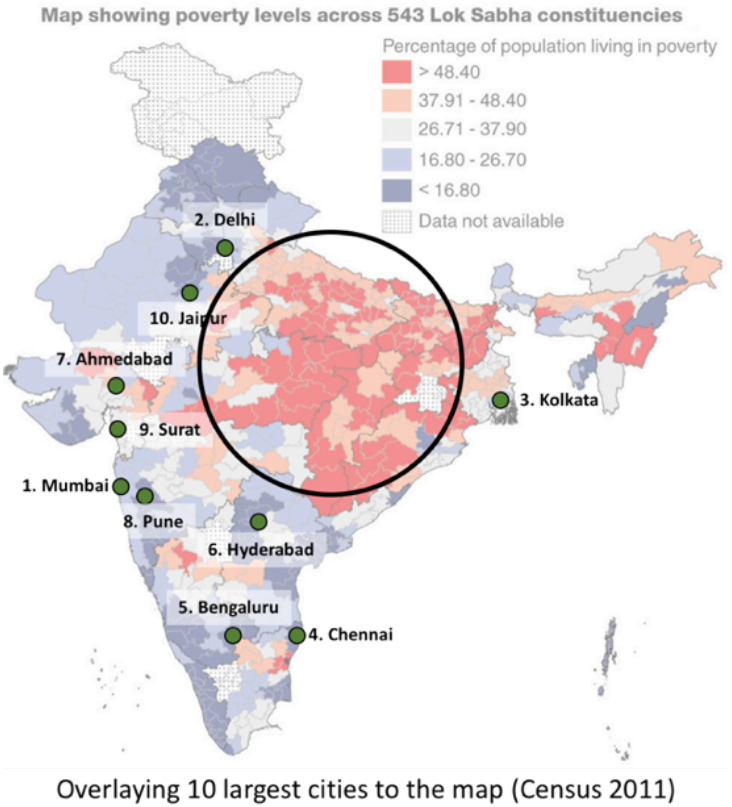


Figure 4.1 The largest cities of India, overlayed over a map showing level of poverty across different Lok Sabha Constituencies (Source: Telegraph 2019)

The Hindi heartland should address this metropolis vacuum, by focusing on reversing the flight, by building attractive economic clusters and inclusive markets in the region. These clusters shall attract business, talent and capital, where they could benefit from region's youth,

institutions and low costs, especially in manufacturing. The region is endowed with a young population and many top institutions. Taking inspiration from "anchoring" universities like Stanford and UCSD (Padgett and Powell 2012), the government can utilize institutions like IIT Kanpur and IIT Varanasi, to anchor enterprises and innovation in Kanpur-Lucknow and Prayagraj-Varanasi regions. Similarly, the Gaya-Patna region enjoys a concentration of key institutions such as IITs, NITs, IIMs and AIIMS, that can anchor talent to the region *under the right conditions*. In the North East, as well the Guwahati-Shillong region is home to key national institutions.

The region by identifying and developing multiple regional economic clusters centered around its many cities, will not only encourage urban development, but also promote the development of surrounding rural areas, by promoting the production of value-added and specialised products and services in the hinterland, marketable for a global economy.

There exists a skill gap even among the educated youth, because the school/college curriculums are not updated to teach a portfolio of basic skills needed for the digital economy. The government should leverage from the

digital revolution and the emergence of massive open online courses (MOOCs) where institutions like IIM Bangalore have taken a lead. These MOOCs can be utilized to offer (mandated) short online courses that teach students basic skills in areas like time and project management, basic financial accounting, and basic tools such as Microsoft Excel, PowerPoint and Word, and video/audio editing. The government can mandate such online skills training, and also build walk-in walk-out apprenticeship centers by revamping the ITI system.

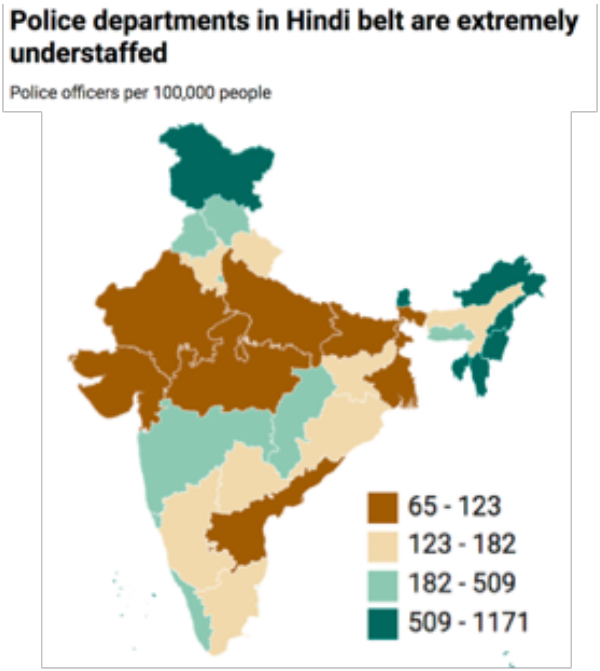
Ingredients of attractive markets that create clusters

In order to build successful economic clusters, the region is endowed with some key strengths. The digital infrastructure has been successfully developed in India since 2000s. This has reduced transaction costs and companies are no longer bound to a specific location for communication related reasons. A key driver of location choice today is logistical and supply chain proximity, i.e. how easily can goods, services and people be moved from one part of the world to another. Hence, after the success of digital infrastructure, the government needs to now prioritize improved transport connections by building industrial corridors in the region. For a densely populated region like the Gangetic plane, the benefits

from building such modern transport connections is even more crucial as by reducing commute times between twin cities like Allahabad-Varanasi the region can achieve its rapid agglomeration as a twin-city. Additionally, in order to fully tap the fruits of the information revolution, the government needs to also improve information delivery especially in those parts of the region (e.g., rural areas) where market access is poor, and necessary information on how to produce, package and sell goods and services to markets may not be available.

Political uncertainty and perception of weak rule of law (e.g. lynching) has marred region's reputation. Weak institutions are the biggest impediment for building an attractive market, as markets need protection of life and property, policy stability and contractual infrastructure. There is a need to build strong and steady institutions that protect life and property, provide policy stability, and develop contractual infrastructure (increasing ease of doing business). The region has one of the lowest per capita levels of police force, which hampers law and order. Investment should be made to expand and modernize the police force. During times of transformation (a time of uncertainty), governments need strong and steady institutions even more, so as to provide

the necessary policy stability. A useful way of developing such stability is by developing clearly set, well thought out and unchanging guidelines and regulations from an early period, that all stakeholders in development are clearly aware of.

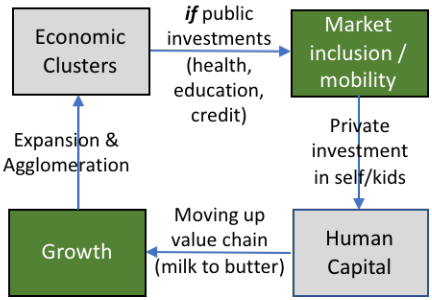


India's police force among the world's weakest.
Live Mint (2019)

Figure 4.2 The number of police officers per 100,000 people in different provinces of India (Source: Mint 2019)

The region has multiple social groups and communities and is hyper-fragmented. Such hyper-fragmentation creates cleavages in society, that can be used to disrupt law and order and social harmony, which will be poisonous for the region's goal of rapid growth and transformation. The region needs to build a common inclusive identity around regional and local pride, in order to build civic citizenship. Inspiration can be gathered from south and west Indian states, that have developed a strong local identity (e.g. Onam festival) that cuts across caste and religious lines. One such way to boost local pride and engagement is by improving civic amenities (e.g. Indore Swachhta Abhiyan). Such a creation of boundary spanning identity is possible, given that Indian voters across demographic groups prioritize similar set of issues that generally around the economy (jobs), civic amenities and local environment.

Choosing the right economic model



There are several growth models of cluster led growth that the Hindi heartland can learn from. The Chinese Pearl River Delta has successfully transformed itself from being a rural backwater to a 2 trillion-dollar economy, and the world's greatest manufacturing hub. Such transformation (benefiting Uttar Pradesh as well) is also happening in the Delhi NCR. Whether it be the Pearl River Delta, or Delhi these regions enjoy high levels of political autonomy, and the power to set their own policies, future direction and taxation. The region can follow this model of autonomous cluster formation in regions like Prayagraj-Varanasi and Kanpur-Lucknow.

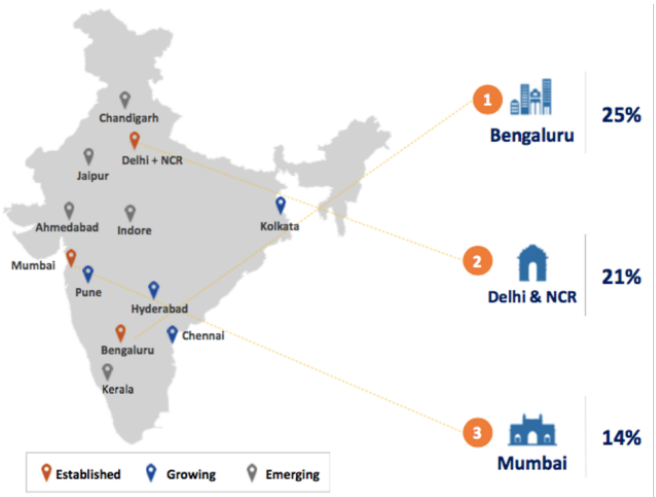


Figure 4.3 Top start up hubs of India (Source: NASSCOM

startup report 2018)

Additionally, it is necessary for the region to look at growth and inclusion as complements (Lucas 2018). The southern states of India - and since 2010s Bangladesh – have grown impressively, and have emphasized free enterprise in economic clusters and hubs and fiscal self-sufficiency. For example, Bangladesh has consciously reduced its dependence on foreign aid, while southern states are major net contributors to the national revenue. The Hindi heartland should commit to fiscal self-sufficiency as well, relying on locally raised funds (or loans/investments/bonds) to pursue its development agenda. Notably, regions like South India and Bangladesh have used their economic growth to generate revenue that funds social and market inclusion through investment in public health, education and credit, with special focus on women and social safety net. Such inclusion (with improvements in human development) then further accelerates economic development creating a virtuous cycle of growth. Southern states have especially focused (like this proposal) on building attractive economic clusters like Bengaluru, Chennai and Hyderabad, that have emerged as successful start-up hubs. Economic clusters of the Hindi heartland (outside of NCR), need to quickly step up in the entrepreneurship

and innovation space, anchored around educational institutions (like IIMs, IIITs, IITs, NITs etc.).

Governance model: Learn from Kumbh

As discussed, one of the key challenges of the region is its perception as a region with weak institutions. An IIMB study (that included the author) found that Uttar Pradesh administration showcased impressive urban planning/governance ability at the 2019 Kumbh held in Prayagraj. It built an astonishing floating city serving 3-5 crore visitors on its peak day. The Kumbh was incidence free and deployed a temporary sanitation system, healthcare infrastructure, transport and housing facilities for millions of visitors. How could the a state government achieve such high levels of effectiveness when otherwise its state capacity is considered weak? Some features of Kumbh governance model are worth emulating and can be scaled up.

- **Clear Accountability**: The government established a Mela Pradhikari Model who was empowered and fully accountable for Kumbh. This enabled long-term planning and effective leadership at Kumbh. Like a Mela Pradhikari, establish Mayors (like a CEO) committed to clusters (not rotating bureaucrats), fully accountable (elected/appointed) for clusters' development and performance, as well as

empowered to take key decisions. (alternative models of leadership also exist).

- **Mission Based**: Kumbh had clear performance guidelines: Safety, Cleanliness and Sanitation. Such clarity over non-negotiable performance parameters led to the entire local machinery putting its full attention on these key performance parameters, which had a clear deadline. Like Kumbh, the government should set clear performance guidelines: clear deadline, monitoring, and implementation protocols on improving basic infrastructure (roads, rail, bridges), amenities (water, hospitals), public places (city center, museums, libraries), universities etc.
- **Focused Attention**: The government publicly committed to a *divya*, *bhavya* and *swachha* Kumbh, with scrutiny from the international media. This created a "do or die" performance pressure for national, state and most importantly the local administration. The governments can commit to publicly stated goals (e.g. a trillion dollar economy for Uttar Pradesh in next 15 years) and create space for critical media and civil society who shall create a "do or die" performance pressure.
- **Decentralized Governance:** The local Kumbh administration utilized diverse governance models

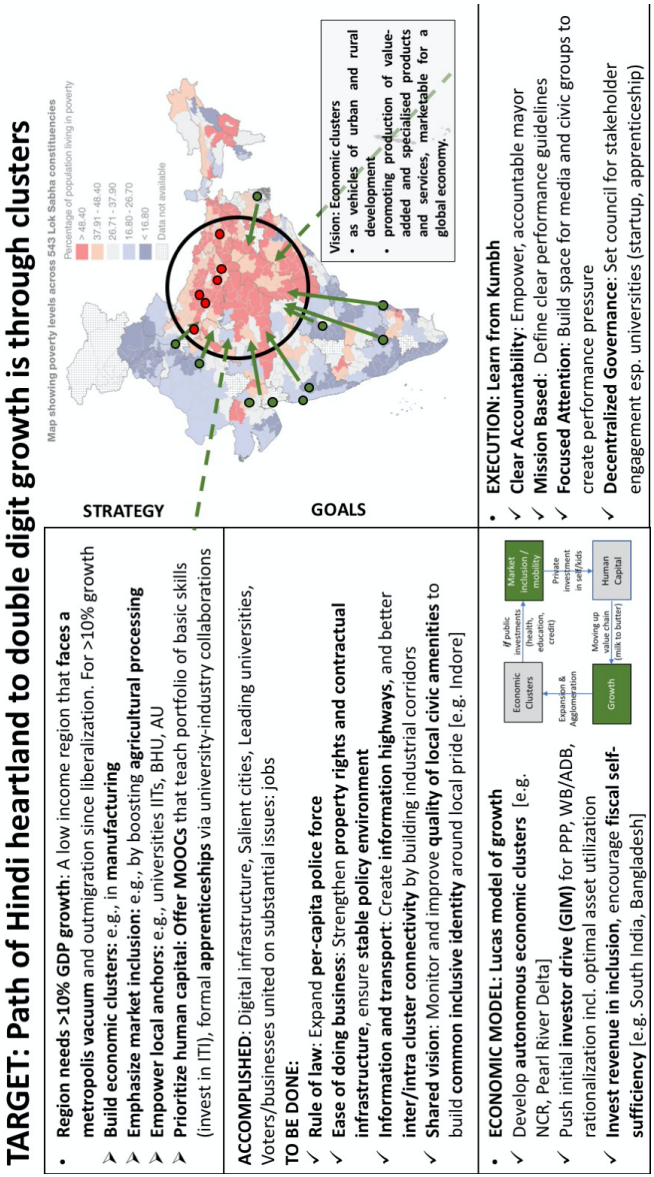
for different days and districts in cooperation with stakeholders like Akhadas and locals, which led to effective delegation and distribution of responsibilities and quick feedback. Government is only a player in governance, although a central one in the goal of building economic clusters. Local initiatives by stakeholders: public/private/civic institutions especially universities (e.g. building start-up hubs, apprenticeship centers) should be supported and incorporated in local government's core plans and local councils (*Mahajanpad*) should be set up for stakeholder engagement.

Conclusion

The metropolis vacuum in the region is unnatural in a region with a population of around 50 crore people (incl. Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh and Uttar Pradesh). Hence, much progress can be made if concerted efforts are made to develop economic clusters in the region, especially around the historically important cities of the Hindi heartland that are already endowed with key institutions.

The region has a large young population, it has greatly benefited from a digital revolution, and has seen rapid improvements in human development parameters. The

time is now ripe to create dynamic and autonomous economic clusters, with proper emphasis on governance, institutions, transportation linkages, and inclusion. Like with all ripe things, it is necessary that they are harvested promptly, to achieve sustained double digit growth.


TARGET: Path of Hindi heartland to double digit growth is through clusters
• Region needs >10% GDP growth: A low income region that faces a metropolis vacuum and outmigration since liberalization. For >10% growth
➢ Build economic clusters: e.g., in manufacturing
➢ Emphasize market inclusion: e.g., by boosting agricultural processing
➢ Empower local anchors: e.g., universities IITs, BHU, AU
➢ Prioritize human capital: Offer MOOCs that teach portfolio of basic skills (invest in ITI), formal apprenticeships via university-industry collaborations
ACCOMPLISHED: Digital infrastructure, Salient cities, Leading universities, Voters/businesses united on substantial issues: jobs
TO BE DONE:
✓ Rule of law: Expand per-capita police force
✓ Ease of doing business: Strengthen property rights and contractual infrastructure, ensure stable policy environment
✓ Information and transport: Create information highways, and better inter/intra cluster connectivity by building industrial corridors
✓ Shared vision: Monitor and improve quality of local civic amenities to build common inclusive identity around local pride [e.g. Indore]
• ECONOMIC MODEL: Lucas model of growth
✓ Develop autonomous economic clusters [e.g. NCR, Pearl River Delta]
✓ Push initial investor drive (GIM) for PPP, WB/ADB, rationalization incl. optimal asset utilization
✓ Invest revenue in inclusion, encourage fiscal self-sufficiency [e.g. South India, Bangladesh]
STRATEGY
Map showing poverty levels across 543 Lok Sabha constituencies
Percentage of population living in poverty
> 48.40
37.91 - 48.40
26.71 - 37.90
16.80 - 26.70
< 16.80
Data not available
Vision: Economic clusters
• as vehicles of urban and rural development
• promoting production of value-added and specialised products and services, marketable for a global economy.
GOALS
Economic Clusters
Expansion & Agglomeration
Growth
Moving up value chain (milk to butter)
Human Capital
If public investments (health, education, credit)
Private investment in self/kids
Market inclusion / mobility
• EXECUTION: Learn from Kumbh
✓ Clear Accountability: Empower, accountable mayor
✓ Mission Based: Define clear performance guidelines
✓ Focused Attention: Build space for media and civic groups to create performance pressure
✓ Decentralized Governance: Set council for stakeholder engagement esp. universities (startup, apprenticeship)

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