

Constructing Jurisdictional Advantage

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Abstract: As the barriers to trade and costs of transportation have decreased and the speed of communication has increased, paradoxically, geographically defined clusters of related firms have become fundamental cornerstones of regional economic growth and national competitiveness. Substantial changes in the nature and sources of industrial competition have yielded advantages to jurisdictions that build up public goods and infrastructure and provide incentives for innovative activity. We introduce the term jurisdictional advantage – the deliberately construction of a coherent activity set to promote economic competitiveness and prosperity. This paper describes the outlines of this new economics of competition based on the importance of firm location, the prominent role that jurisdictions play and the ways in which jurisdiction advantage may be created and sustained.

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The economic fortunes of firms and regions are intertwined. Building on Marshall (1920), a consensus is developing that economic growth is a local process and that city-industry clusters are an important, if not the most important economic unit, in generating innovation, competitiveness and prosperity. The growing body of evidence suggests that firms located in clusters enjoy higher productivity growth and innovate more, growing faster and paying higher wages (Aharonson et al 2004; Baptista 1998; Baptista & Swann, 1998; Beaudry, 2001; Beaudry & Breschi, 2003; Swann & Prevezer, 1996). While the literature documents these advantages, these topics have more than an academic interest. Firm location may provide an important strategic dimension. Moreover, all levels of jurisdictions from nations, regions and cities are concerned with economic growth, the quality of jobs they are able to generate for their residents and the stability of their local economies.

The relevant policy question is how to apply this appreciation of the benefits of location and cluster dynamics to implement policies and strategies to simultaneously promote economic growth in jurisdictions and firms. This question takes on greater urgency given structural changes in the world economy brought on by competitive pressures from newly emerging low cost countries and their residence firms. While corporate outsourcing allows firms to lower production costs technologically sophisticated firms compete on the basis of differentiated performance and innovation. And, it is in this case that certain locations confer an advantage that increases the productivity of investments made in innovative capacity by providing a platform to leverage key resources and relationships. Of course, this advantage is typically the result of specific unique characteristics that are built up over time to form a coherent place specific activity set that is not easily transferred or replicated and forms the basis for sustainable advantage for both firms and industries (Feldman and Martin, forthcoming).

This paper draws from the well developed literature on corporate strategy to consider how cities or political jurisdictions may position themselves in their search for what we term jurisdictional advantage. Rather than use the more passive term locational advantage our use of

the term jurisdictional implies political will and policy making ability. Given this definition, we consider how concepts from corporate strategy may be applied to the management of jurisdictions. For firms, the overarching goal is to gain and maintain competitive advantage, which translates into above average returns for shareholders and this is achieved by creating a competitive strategy that is appropriate to the firm's resources and capabilities. Certainly, cities have more complex objective functions that span multiple constituencies and outcomes; however when we think about economic development the analogy may be instructive. Section 3 presents the evidence on the dynamics of clusters and the ways in which location promote innovation. This section diagrams three examples of regional activity sets to demonstrate the reinforcing activities that create well-known clusters and to offer some insights into how these clusters came into existence. Specifically we consider Hollywood and film industry, and the New York fashion industry. In each case, a set of firms and institutions and relationships define the jurisdictions' success. Indeed, the shape that the industry has taken is endogenous to the factors within the cluster. For example, the film industry, as we know it, would not exist except for innovations that originated in Hollywood. And individual firms may not have been as successful in other locations. Certainly, firm decisions such as the relocation of Novartis's worldwide R&D operation to Cambridge Massachusetts suggests recognition of the benefits of the advantages that location offers and only serves to reinforce clustered industry advantages. Section 4 considers the endogeneity of industry and jurisdictional success. Section 5 considers how jurisdictional advantage may be constructed and Section 6 concludes.

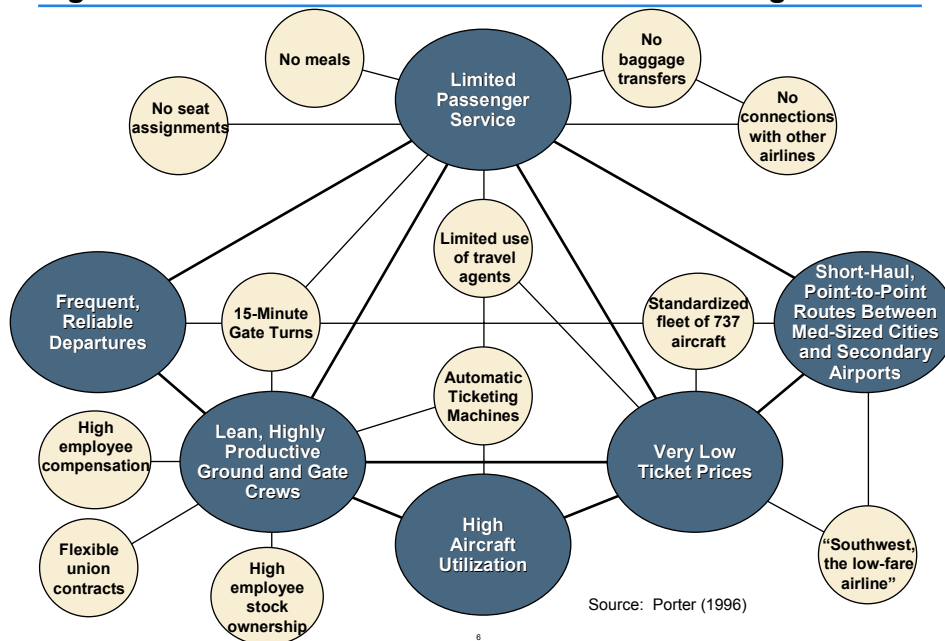
Activity Systems: Borrowing from Corporate Strategy

One important school of competitive strategy holds that competitive advantage arises when firms create unique activity systems which provide an advantage over competitors based on lower cost or production differentiation. (Porter 1980, 1985). Activity systems are a coherent web of activities that, taken together, provide an advantage that is difficult, if not impossible, for

competitors to replicate, because the individual activities fit well together and actually reinforce each other. The essence of strategy is constructing an activity set that allows the firm to perform differently than the competition to perform different activities than the competition.

Porter (1996) offers the example of Southwest Airlines which has been the most successful airline in the US market over the past 30 years, in level of profitability, stability of earnings and growth in market share. This competitive advantage is not the product of any single thing that Southwest does, such as flying a completely standard fleet of Boeing 737s, or by flying from secondary airports, or having the most frequent daily departures from each of its locations, or by utilizing the Internet rather than travel agents for booking. Rather, as demonstrated in Figure 1, Southwest achieves advantage by performing this outline set of activities that fit together and reinforce each other to produce a significant and sustainable cost advantage over its competitors. To challenge Southwest Airline’s success, a potential competitor would have to match every single aspect of Southwest’s activity system.

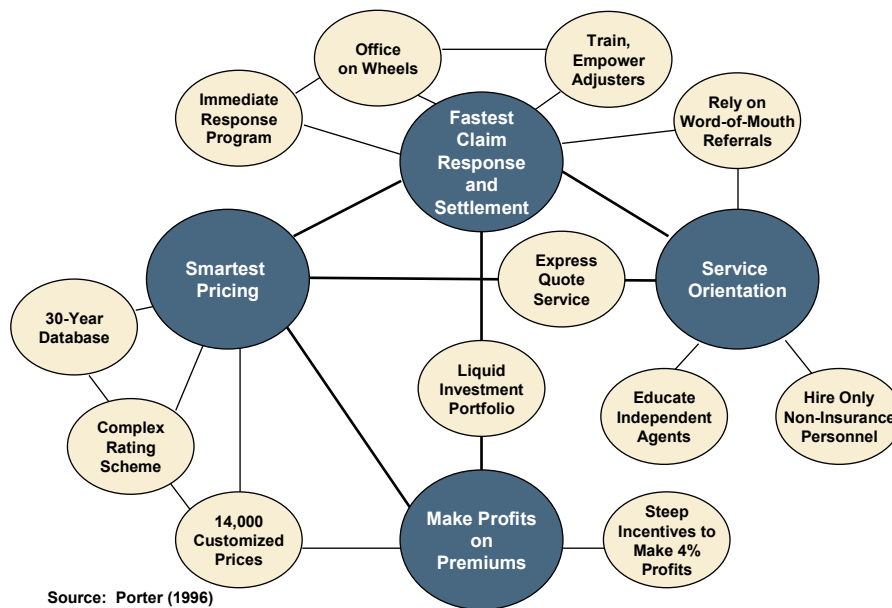
Figure 1: Southwest Airlines: Low Cost Advantage



The activity system can provide a low cost advantage by enabling the firm to produce a product or service for a segment of customers that is roughly equivalent to that of the competitor at a significantly lower cost – resulting in higher profitability than the average competitor as is the case for Southwest Airlines. Any firm with a cost advantage is able to built prices and ultimately forces the marginal firms who do not have a similar cost advantage out of the industry.

It is important to note that being a low cost firm is not the same as being the firm attacking lowest price. Having the same cost structure as competitors and deciding to sell at a lower profit margin is not a strategy for long term advantage, but rather a strategy of transferring value from corporate shareholders to customers. It is simply not a sustainable long-term strategy. Any competitive firm can simply cut its own prices and margins to compete in the short run. This, ultimately, leads to a race to the bottom in terms of profitability.

Figure 2: Progressive Insurance: Differentiation Advantage



Alternatively, a firm can establish a differentiation advantage by producing a product or service that is considered to be uniquely valued by a segment of customers and for which those customers are willing to pay a premium price. For example, Progressive Insurance offers a

differentiated automobile insurance service to the non-standard segment of drivers (Porter 1986). It offers quotes that are better-tailored to the true risk categories of drivers and provides quick and easy settlement of claims by way of an extensive fleet of van-based adjusters. Like Southwest Airlines, Progressive also has a unique activity system that features many activities, such as its massive pricing database, a fleet of claims-settling vans, unique training and compensation structures, as well as unique investment philosophy, which fit together and reinforce each other to produce a service that is highly valued by its customers and is produced at a competitive cost.

An effective differentiation strategy also requires operational efficiency and a competitive cost structure. Firms that charge a premium price while not maintaining an efficient cost structure end up with low profit margins that will not yield long term competitive advantage. Keeping the cost structure under control requires an activity system that minimizes the total systems cost of providing a differentiated product or service.

The concepts of strategy and strategic thinking have become well accepted by firms over the past thirty years. Strategy allows firms to define what they are about and most importantly what they are not about. In the next section of the paper we argue that a city or region should seek to attain jurisdictional advantage by building an activity system that is unique and is valuable in producing either a low cost or differentiation advantage over other jurisdictions.

The Components of Jurisdictional Activity Sets

In this section we consider two well-known industry-city clusters to provide a heuristic for identifying jurisdictional activity set. The two examples considered here are Hollywood and the New York Fashion Industry. By examining these well-known examples of coherent activity sets, we gain an understanding of how they came into existence and how they reinforce one another. These clusters emerged over time, starting from rather humble beginnings to become established centers of activity, indeed the locus of activity for their industry.

Hollywood: The early genesis of the motion picture industry

Hollywood is so well known that its name represents both an industry and a geographic place (Scott 2005). In 2001, the Southern California entertainment cluster, as defined by The Institute for Strategy and Competitiveness employed 178,000, or 16% of national employment for this industry. The average wages in the entertainment industry are \$60,000 which was 50% than the national average wage for the industry and great than three times the average wage for the region.

Hollywood has been the global center for film production since the 1920s. Through changes in production technology and business models, Hollywood has maintained this dominance. Rather than look at the industry currently, this section draws on the work of Allen Scott (2004 and 2005) who considers the early genesis of Hollywood and how it established itself as the dominant center for the industry. Scott rejects the conventional explanation that the industry located in Southern California due to favorable weather conditions and scenic vistas. This narrative draws on Scott's analysis to demonstrate the coherent activity set that created the industry's dominance.

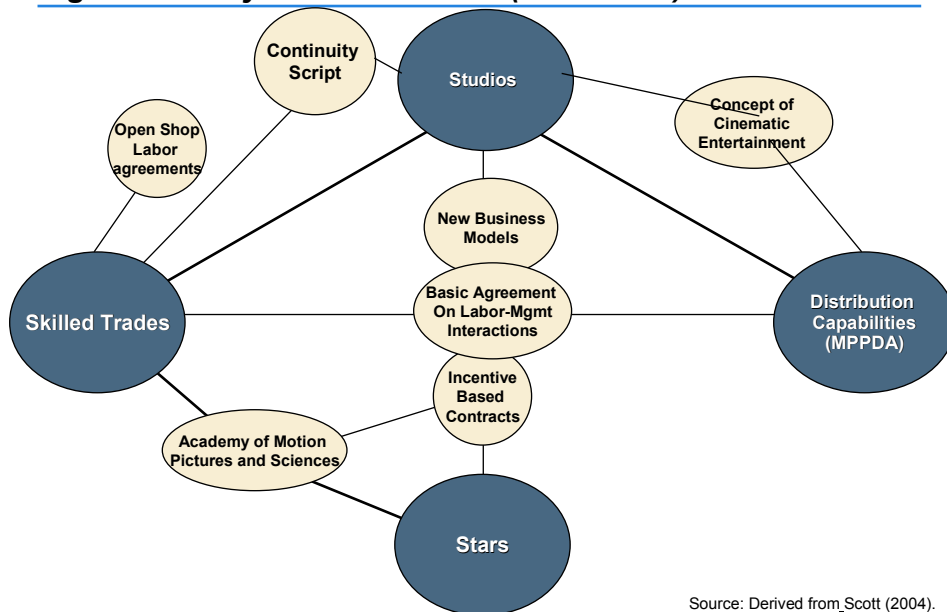
At the turn of the century the US motion picture industry was concentrated in New York City, at that time the entertainment capital of the United States. The firms produced in New York in the early part of the twentieth century were diverse short subjects that were distributed from projection in nickelodeons or store-front theaters. The emphasis was on action events like train wrecks or the rescue of a damsel in distress. The technology was new and the ability to record events was emphasized over plot lines or the star value of actors and actresses. In 1912 there were 17 production companies working in LA however these companies were primarily headquartered elsewhere.

The New York based Motion Picture Patent Trust priced its films by the foot, irrespective of quality. This policy gave producers little incentive to raise quality or innovate (Scott 2005:17) In contrast, Hollywood independent producers concentrated on feature films and promoted

individual stars. For example, Thomas Ince pioneered the development of methodological procedures to breakdown the shooting process into disconnected segments that were reassembled later (Scott 2005: 18-19). This innovation lowered costs and gave rise to studio system with its advanced division of labor and sophisticated managerial model of production. There were similar advances in the conceptualization of cinematic entertainment that were witnessed by the production of *The Birth of a Nation* in 1915 (Scott 2005:19-20).

A supporting infrastructure developed that reinforced the activity set. Scott (2004: 26-27) notes that in a 1929 directory there were multiple entries for skilled crafts that supported the film industry such as film editing, file laboratories, agents, orchestras, costumes and props. In addition, the open shop labor market arrangements in Los Angeles, which were in place until 1935, were an attraction to producers. The Academy of Motion Pictures Arts and Science was created in 1927 as an overarching union with five branches representing producers, writers, directors, actors and technicians. The Academy is most well known for the Oscar awards which reward artistic achievement.

Figure 3: Hollywood California (circa 1928)



Source: Derived from Scott (2004).

Figure 3 diagrams the activity set that established Hollywood's lead is presented circa 1928, the about the time when Koszarski (1990) notes that the term Hollywood was used in a generic sense that is common today to refer to the motion picture industry.

Hollywood was able to differentiate itself from New York with a different activity set that include the advance of new business models. Initially, Hollywood offered a cost advantage and this allowed the industry to experiment.

The New York City Fashion Industry

New York City has become synonymous with fashion (Rantisi 2002a). Due to its specialization in custom-made styles Paris held the position as the world center for high fashion into the 1950s. Rantisi (2002a and b) documents the ascendance of the New York Fashion industry and the core competencies that reinforce the industry's dominance. This section draws upon her research.

The New York apparel industry had modest beginning on the lower east side of Manhattan, the site of skilled immigrant communities in the 1880s. At that time, New York focused on the ready to wear market and was limited by a lack of design capabilities, a focus on low-quality fabrics and great reliance on a mechanized production system. Most large cities had garment districts at the time and there was nothing particularly unique about New York. By 1920 the industry migrated to the Garment District in the western part of midtown where it is currently located. In the intervening years, institutions that supported and shaped the way in which industry developed to focus on high value-added fashion were created (Rantisi 2002b: 447-8).

Figure 4: New York City Women's Garment Production

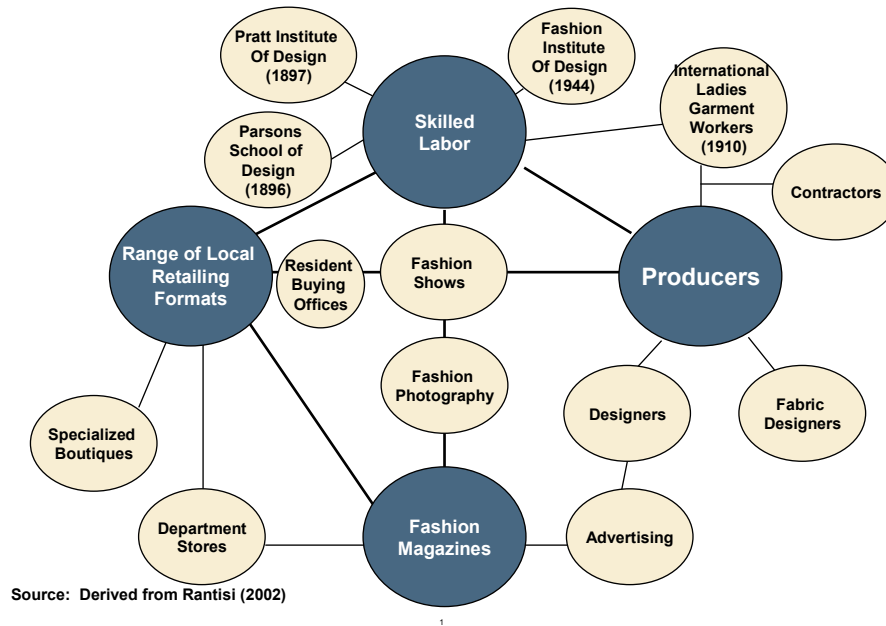


Figure 4 provides the activity set that reinforces the fashion industry in New York. The development of a range of retailing formats in New York from department stores like Macy's, Bloomingdales and Lord and Taylor's, and specialized boutiques such as Henri Bendel helped to develop varied markets for the industry's output. Fashion magazines, notably Women's Wear Daily (now WWD), Harpers Bazaar and Vogue helped establish a fashion culture and to disseminate industry trends to the national market. This was supported by the developing advertising industry and expertise in fashion photography. The international Ladies Garment Workers Union helped promote safe working conditions and standardized wages. This ensured high-quality goods, encouraged women to upgrade their skills and also enabled workers to become active consumers (Rantisi 2002b: 448). Supporting educational institutions such as the Pratt Institute, the Parson School of Design and the Fashion Institute of Technology ensured a steady supply of skilled labor. In addition, the production system became to be characterized by a large number of specialized contractors, job shops, and specialty fabric designers. These small, niche firms provide a flexibility and culture of experimentation.

Currently, the New York cluster accounts for 40% of U.S. value added for the category of women and children's fashions (Rantisi 2002b: 442). Although Los Angeles has greater employment in this industry category, wages for New York are more than double the national average for the industry.

In sum, both industries demonstrate the two industries examined here are innovative and certainly use technology but they are not technology intensive (Storper and Christopherson 1987). For the movie industry every movie production may be thought of a new product that embodies innovation. Certainly every new season of fashion provides an innovation in style (Rantisi 2002b). Their economic success indicates that consumers are willing to pay for the novelty and innovation that originate from these jurisdictions.

Examination of the Boston Biotech Cluster (Owen Smith and Powell 2004a) or Silicon Valley (Kenney and Patton 2004) also yield a coherent activity set that connects biotech firms to venture capital, specialized business services such as contract research organizations, and legal services, as well as universities. These activity sets are well known and have been described in the literature as innovative infrastructures. Network analysis highlights formal linkages that may increase innovation (Owen-Smith and Powell, 2004b; Uzzi and Spiro 2004). Our examples demonstrate that activity sets also include localized institutional linkages and new business models that may underlie the success of industries in certain places and provide a source of economic advantage.

Both example examined here were able to translate an initial cost advantage into a sustained competitive advantage through the construction of an activity set that yielded an advantage based on differentiation. Moreover, these two industries examined here are illustrative as they are creative industries where human capital known as talent is important (Caves, 2002). In a global economy where unskilled labor is inexpensive, transportation and communication costs are negligible and raw material matter little, talent is becoming an important competitive

asset. However, talented individuals do not work alone. Indeed, talent may only be recognized and appreciated in specialized setting where genius may be recognized and appreciated.

Hollywood demonstrates that innovation in business models that accompanied technological breakthroughs in movie making were critical. Indeed, Hollywood represented a vision of what the motion picture industry might be. While there are certain individuals who stand out as influential the activity set reflects the efforts of a cast of thousands. New York fashion demonstrates the success of building on rather pedestrian activities. In both cases, the industries began as low cost competitions. What allowed these examples to differentiate themselves is the construction of reinforcing activity sets that both promote and further define the industry. Without these supporting institutions the clusters may not have achieved primacy within the industry.

The examples presented here are intended to be illustrative. And perhaps the tendency upon reading these examples is to dismiss them as offering unrealistic aspirations for average locations. Yet the literature contains a large number of detailed and carefully constructed case studies about different industries and the genesis of the jurisdictions in which they reside. The heuristic of activity sets presented here and the study of how coherent activity sets emerge may be used to consider elements that are missing in certain locations that are less successful. Moreover, rather than simply replicating existing successful clusters when we consider these activity sets it becomes apparent that activities are reinforcing and that the success of the industry and jurisdiction co-evolve. The following section considers the intrinsic dynamic co-evolution that exists in the construction of jurisdictional activity sets.

The Endogeneity of Industry-Jurisdictional Success

When we focus on innovation it is easy to forget that what is high technology and novel to one generation is banal and taken for granted by successive generations. An examination of the ways in which technologies and industry evolves reveal the importance of prior actions and

the cumulateness of advance or path dependencies. Certainly entrepreneurial vision is important and this vision certainly must be affected by the individuals and groups that entrepreneurs regularly meets with, observes and whose values she shares. Moreover, the path of emerging industries is difficult to predict and is extremely fluid. Our current understanding of an industry may never be able to anticipate future scientific developments, the temperament of consumers and their acceptance of a product and the directions that technology may take.

History is replete with examples of co-located firms defining technological frontiers and speeding up the rate of technological advance. The geographic concentrations of related industries create synergies that provide unique activity sets that promote the emergence of new industries: combining new knowledge with existing expertise is the essence of innovation.

Sociologists such as Latour & Woolgar (1986) in discussing scientific discoveries or Abbate (1999)'s history of the Internet document the cascading decisions that shape the human creative work. This suggests that innovation is socially constructed and reflects a consensus vision of what is possible with a technology, product or industry. Innovation is thus a creative activity influenced by the personalities, expectations and conversations of the individuals involved. Certainly, to the extent that these social interactions are facilitated by co-location and frequent interaction innovation becomes a local event. And the characteristics of the jurisdiction and the industry co-evolve over time.

Being at the locus of activity for an industry promotes innovation which requires translating new ideas into consumer needs and product markets. When a technology reaches a stage when it can be easily understood and valued, the established centers may be described as first movers, already having an advantage over other locations. Increasing returns is a feature of innovation and knowledge-based industry activity that offers a distinct cost advantage (Arthur 1996). As a result, there is a tendency for activities which are ahead to get even further ahead. By the time an industry is well known enough to be targeted for economic development first-mover jurisdictions have probably already captured the lion's share of the benefits and are

positioned for greater advantage, making it difficult to catch-up or overtake them following the same technology.

Moreover, for clusters to be successful there is a need not to be captured by the prevailing logic of the industry but to adapt a new model that reflects a different vision for the industry. In Hollywood, new production models, greater artistic content and control. New York, a location that could not compete on the basis of costs in the apparel market moved up-market to the fashion market, developing aesthetics reinforced by local fashion magazines, advertising agencies and design school.

New industries typically begin with new firm formation and the efforts of entrepreneurs. Some of these new start-ups will be gazelles in terms of rapid growth, creating new industries and disrupting existing firms in their wake. Most will be smaller players that will operate in a niche for which the firm has some competitive advantage.

Notably, these actors in these locations have adapted to changing circumstances as firms reoriented their focus using institutions and resources in the jurisdiction. Rantisi (2004) documents the response of the New York fashion industry to major exogenous shocks such as the war years (1940-44) and heightened market volatility (late 1960s – mid 1970s) and finds that individual “actors and groups of actors reflexively drew on and adapted their institutional infrastructure to reorient their trajectory along a new path.” In this example and others, we witness the endogeneity of industry evolution and the attributes of jurisdictions.

Constructing Jurisdictional Advantage

To construct jurisdictional advantage requires a jurisdictional strategy – a set of choices that produces a jurisdictional activity system that generates either low cost advantage or differentiation advantage. Jurisdictions are, in many respects, collections of firms, both large and small. And just as firms are one economic entity that organizes resources and production,

jurisdictions are themselves another economic entity that provides another type of platform for organizing resources.

We may consider the customers for a jurisdiction to be job-providing entities – primarily, but not exclusively, firms. High wage jobs are the reward for the jurisdiction that can generate advantage and in doing so incubate, grow and attract firms. Jurisdictional advantage produces an environment that both attracts investments by existing firms to the jurisdiction and promotes the creation of start-up businesses in the jurisdiction. It also produces an environment that helps all of these firms prosper while operating in that jurisdiction.

A differentiated jurisdictional strategy exists when a set of activities produces a uniquely attractive environment for a given segment of job-providing entities at a similar cost to other jurisdictions yet with greater potential benefits. An example is the externalities available to a biotech firm by locating near a number of industry-leading biotech firms already operating in the greater-Boston area. These externalities are outside of the ability of markets to price but there is evidence to suggest that firms gain economic value from them. Firms are simply more productive in certain locations, better able to innovate and create unique value. It is this greater productivity that translates into higher profits and higher wages.

The logic of endogenous growth suggests that new start-up firms will be an important source of growth. New firms are based on the identification of new market opportunities and they frequently get started as a means to bring new technology to the market. Most importantly, these firms are relatively geographically immobile as entrepreneurs build upon local networks and expertise. Individuals start companies based on their prior experience and interests, typically fulfilling some niche that a larger firm may judge too small, exploiting a new opportunity that may have a risk profile unsuited to a larger firm, or using a unique set of skills and knowledge to develop applications. Many individuals have location inertia because of lack of family mobility, simple preferences or the risk of establishing a new company in a new location. In building their

companies, entrepreneurs rely on their local contacts, connections, and knowledge of the business environment.

What is low cost in the context of jurisdictional advantage? It is not low wages, which is the first thing that may come to mind. A low-wage jurisdictional strategy is like a low price company strategy. It simply does not produce long term advantage. At a company, a low price strategy produces low profits for the shareholders and is dangerous because it leaves the company vulnerable to being out-invested by high-profit competitors. A low wage strategy produces wages that are lower than the average of other jurisdictions. This connotes disadvantage for its residents not advantage.

Industrial recruitment incentives with special tax breaks and various other inducements that lower the costs of doing business are not low cost strategies either. The evidence is that this type of strategy is a race to the bottom in a zero-sum game. There is no evidence that it leads eventually to higher wages, which is the measure of a successful low cost jurisdictional strategy. Moreover, these types of operations are frequently the first to be closed when the cost structure changes.

A successful low cost jurisdictional strategy would exist if a jurisdiction produces an equivalent environment but at a lower cost. For example, the city of Edmonton, Alberta is noted to have produced a K-12 educational system that generates among the highest results of any North American jurisdiction, which it accomplished with below-average costs through unique approaches to management of the system (Chen and Mintz 2004). This allows Edmonton to charge lower personal taxes, other things being equal, which increases the after-tax wages of residents, enhancing the competitive outcome of the jurisdiction. To the extent that others have not been able to emulate these results it appears Edmonton has a coherent activity set that is not easily replicated.

Economic growth is not easy to capture: there are no guarantees. But the emerging literatures on growth theory and the new economic geography offer some insights that may shape

jurisdictional advantage. This literature is informed by the microeconomics of innovation which suggests the importance of skilled labor and the mix or composition of activities within a jurisdiction's activity system. The success of a firm and the success of the region are interrelated and endogenous in the terminology of economics and this is the basis of jurisdictional strategy and advantage.

Economists have long known that industries cluster spatially for a variety of reasons: what is critical is that these clustered industries tend to be more innovative and have greater productivity which is why we observe wage premia for such clusters (see for reviews Baptista, 1998; Feldman, 2000). An important distinction is between the geographic concentrations of production and the location of innovation. Whereas the geographic concentrations of production is often due to the location of natural resources, ease of transportation or historical inertia, the location of innovation is due to knowledge externalities and subject to increasing returns. While innovation yields greater productivity and the increases in wages that jurisdictions seek, jobs associated with routine production remain geographically in place as long as the physical investments are economically viable. Once physical assets are depreciated or obsolete, if the market changes or costs become uncompetitive, these locations are easily abandoned. As a result, property values fall and the jurisdiction suffers.

The idea that location is beneficial to firms' innovative success is central to theorizing in economic geography about the benefits of cities. Certain locations supply localized knowledge externalities or spillovers that provide positive economic value but are beyond the ability of market mechanisms to price and efficiently allocate. The significance of localized knowledge spillovers as inputs to firms' innovative activities suggest that their most creative and highest value-added activities do not proceed in isolation, but depend on access to new ideas. Location mitigates the inherent uncertainty of innovative activity: proximity enhances the ability of firms to exchange ideas and be cognizant of important incipient knowledge, hence reducing uncertainty for firms that work in new fields (Feldman, 1994). Innovation clusters spatially where knowledge

externalities reduce the costs of scientific discovery and commercialization. In addition, firms producing innovations tend to be located in areas where there are necessary resources: resources that have accumulated due to a region's past success with innovation. In this way, firm success and city economic growth are endogenous and mutually dependent. The cumulative nature of innovation manifests itself not just at firm and industry levels, but also at the geographic level, creating an advantage for firms locating in areas of concentrated innovative activity. These factors can generate positive feedback loops or virtuous cycles, as clusters attract additional specialized labor and other inputs, as well as the greater exchanges of ideas.

Path dependency implies that the course of technological development or technological trajectory of specific localities is historically determined and may be the result of serendipity or small events. Krugman (1990) uses the example of candle-wicking, a type of local craft, as a source of competitive advantage in the carpet industry and a reason why the industry located in Alabama. Through such examples, the literature suggests that clusters are seeded by a variety of methods; however, their growth can only be facilitated by building upon existing resources.

Skilled workers, known in the literature as human capital, or alternatively as talent, are important to geographic clustering. Baker and Treffer (2003) confirm that human capital is more productive in cities. Cities act as magnets for human capital and individuals living in cities receive a wage premium when compared to similar individuals. Labor is less mobile than capital and workers become more skilled as they age but then correspondingly become more immobile as they form relationships, raise families and become members of communities. One important advantage of geographic clustering is that it provides pools of skilled labor which are mutually beneficial as firms can easily find specialized skilled labor and workers can advance their careers by moving between firms without incurring the costs of relocating.

Within these pools of skilled labor there are potential entrepreneurs who may take ideas out of established firms to form new enterprises. An observed anecdote fact about entrepreneurship is that individuals do not relocate to start firms but instead use existing local

contacts and networks to start their firms (Feldman 2001). This form of locational inertia indicates that regions that hold stocks of potential entrepreneurs are more likely to be successful at promoting new firm start-ups and establishing new industries. Innovative start-ups frequently create new markets where no competition exists and demand is not sensitive to product costs. Small firms frequently become the mechanism by which a new technology is commercialized and their competitive advantage lies in being first to market or offer a higher-quality product. Lacking the resources of their larger counterparts, small firms must leverage capabilities in their local environments.

The composition of activities in a jurisdictional activity system matters. Jacobs (1969) argues that diversity is important for innovation and that cities are the source of considerable innovation because the diversity of knowledge is greatest in cities. According to Jacobs, it is the exchange of complementary knowledge across diverse firms and economic agents which yield a greater return to economic activity. Feldman and Audretsch (1999) find that diversity across complementary economic activities sharing a common science base is more conducive to innovation than is local specialisation. In addition, their results indicate that the degree of local competition for new ideas within a city is more conducive to innovative activity than in a local monopoly. Indeed, we may expect that if a local economy becomes too dependent on one firm or one industry it may drive out new ideas. Florida and Gates (2002) argue further that a rich cultural environment in a jurisdiction is correlated with economic success of the city. They use the share of workers in artistic industries such as writers, dancers, painters, and others as an indicator of cultural richness and find a correlation with economic success. In addition, they also find a link between the levels of open-mindedness in a jurisdiction to be correlated with economic success.

Porter (2003) demonstrates how clusters interact with each other – that is, the clustering of clusters (Porter 2003). Certain clusters, for example, education and knowledge creation; analytical instruments, aerospace vehicles and defense; communications equipment; information

technology; and medical devices appear to cluster with together. The synergies between these industries provide unique activity sets, and areas with multiple and overlapping clusters of expertise facilitate the emergence of new industries such as nanotechnology, bioinformatics and advanced telecommunications.

It is clear that jurisdictional strategy is not a winner-take-all phenomenon in which a single city comes to dominate. No jurisdiction is good at most industries. Each jurisdictional activity system appears to be tuned for certain industries and not for others. . Moreover, cities are part of the system of cities or what urban economists call an urban hierarchy: every city has a unique niche that is interrelated to other cities. Duranton and Puga (2001) find that new products tend to be developed in large, diversified cities which they term nursery cities, the places where new products are incubated. Once an idea is refined, the firm invests in more specialized, smaller cities where production costs are lower due to an emphasis on process innovation and learning-by-doing. Each type of innovation requires a different mix of skills; however, innovations are complementary and each has a role to play in competitive advantage.

However, it does appear in North America at least, that very large cities foster the clustering of clusters, which produces even higher wage levels than would be expected under a straight line regression (Institute for Competitiveness & Prosperity 2003). This also appears to be the case in the U.K., with London emerging as a cluster of clusters. Very few cities will be at the top tier of the urban hierarchy; however, every jurisdictional activity set has a place in the hierarchy. Understanding how a city is positioned relative to other cities, not in a competitive sense but in terms of mutual dependence and differentiation offer a potential strategic lever.

Uniqueness and adaptation, not uniformity and replication, provide jurisdictional advantage. In corporate strategy, if all competitors simply benchmark against each other and replicate what each other is doing, there will be no advantage and the benefits will flow to the customers, who will simply play off the look-alike firms against each other to suppress prices. Exactly the same principle may be expected to hold for jurisdictions. Competitive advantage and

economic growth may come from the creation of unique activity systems, not from simply replicating one another. Benchmarking is currently a very popular notion in economic development policy, but the problem with benchmarking is that it appears to encourage duplication and uniformity, not diversity and the exploration of unique advantage.

There is a big question as to the role of firms in jurisdictional advantage. A firm can act simply as a taker and exploiter of a jurisdiction. However, a firm is better served by being an active partner in jurisdictional advantage rather than a passive taker. As soon as it has made investments in a jurisdiction, it has an incentive to make the jurisdiction better so that the jurisdiction provides more advantages in the future.

Moreover, the existence of externalities suggests that firms are receiving benefits that are outside of the market mechanism to price. While it may be argued that firms pay more taxes as a result of the higher profits they earn as a result of externalities, it may also be argued that firms may actively cultivate the sources of the agglomerative benefit by investing in local universities, building infrastructure, etc. Moreover, these investments are tax deductible and provide a means to make targeted investments in jurisdictions rather than relying on the process of government budgeting. This is to say that firms may actively build the external resources and infrastructure that benefit their bottom line.

There is case study evidence that in the process of building their firm expertise, entrepreneurs also contribute to building external resources and institutions that promote their business interest. In the process of building their firms, entrepreneurs contribute to growing the cluster (Feldman 2001). Sponsoring research at local universities, endowing university training programs and networking all benefit the initiating firm but also create externalities that will have local benefit. As entrepreneurial businesses begin to thrive, resources such as money, networks, experts, and related services develop in, and are attracted to, the region. With this infrastructure in place, more entrepreneurial ventures locate and thrive in the region, which ultimately may create a thriving cluster where none previously existed.

In many senses, the better definition of advantage may be the total utility of residents, which includes non-pecuniary benefits as well as monetary benefits. Firms can positively influence the overall welfare of residents in the jurisdiction by showing aspects of social responsibility which produce externalities that further enhance the jurisdiction and also benefit the firm.

Corporate outsourcing is also interesting in its relation to jurisdictional advantage. Outsourcing is not an issue of jurisdictional advantage or disadvantage per se. Bangalore does not have jurisdictional advantage over Silicon Valley. Bangalore is a price leader, not a cost leader. It produces dramatically lower wage levels than Silicon Valley, so in this respect it is highly disadvantaged, even as Bangalore is powerfully advantaged over other parts of India. This is not jurisdictional as much as it is individual. It turns out that many programmers, call centre attendants, and others are learning to their dismay that thanks to falling telecommunications and coordination costs, the clearing price for their skill-set in Silicon Valley is a fraction of what it used to be.

An issue, however, is whether the firm has a responsibility to its jurisdiction not to outsource because of the dislocation costs that outsourcing causes. There is no clear answer on this issue. What is clear is that as firms outsource jobs from Silicon Valley to Bangalore, they are reducing the number of existing high wage jobs in Silicon Valley. The question is whether they can create an equal number of new high paying jobs locally. If they can't, the employment base in Silicon Valley will drop. To the extent that the jurisdiction benefited from the economies of scale associated with large numbers of skilled workers, firms that engage in the net export of high-paying jobs may negatively impact the jurisdictional advantage of their home territory.

We may ask what firms lose when they outsource. There are various historical examples, such as semiconductors, where the countries that were the site of outsourcing became competitors in subsequent rounds of product development. What is lost in outsourcing may be a familiarity with production and product design that suggest the next round of innovation (Pisano 1994).

Chesbrough and Teece (1996) argue that outsourcing may hamper the kind of complex, systematic innovation that creates new generation valuable business breakthroughs.

Conclusions

Two extreme philosophies available to jurisdictional policy makers in matters related to economic development. One potential approach is based on letting market forces determine the allocation of resources, a simple laissez faire philosophy. The underlying rationale is that industrial clusters that are part of successful cities arise for a variety of historically contingent or serendipitous factors that are not easily replicated. Firms locate and invest in particular cities for reasons that are not well understood, much less predictable and controllable. This view suggests that the most constructive thing a jurisdiction can do is let market forces determine its future. Given the challenges of collective jurisdictional decision-making, the laissez-faire approach has appeal but since industrial development demonstrates high levels of path dependence and increasing returns, if a city misses out on an important trend, new technology or infrastructure, it may miss out for a very long time. Moreover, it is not clear that laissez faire will yield an efficient allocation of resources given the existence of market failures associated with innovative activity. After all, this is one of the classic reasons for government provision of infrastructure, funding of basic research and promotion of public goods such as education. These resources which are associated with market failure take on new importance in the emerging knowledge-based economy and suggest that there may be a role for collective action and government participation.

As a result, an opposing philosophy advocates aggressive planning towards a targeted industry. There are myriad examples where politicians and civic leaders focus on some emerging, high growth industry with greater fanfare but don't get the anticipated result. One

illustrative example is New Jersey's failed attempt to leverage its prominent research universities and substantial private sector R&D to replicate Silicon Valley (Leslie and Kargon, 1997). The net effect yielded strategic partnerships rather than broad-based economic development. Even when efforts are successful at generating start-up companies it is difficult for a jurisdiction to garner longer term benefits if complementary assets are lacking (Connecticut Center for a New Economy 2004).

A middle alternative to the two philosophies discussed is an attempt to influence the quality and shape of economic outcomes by making judicious investments and avoiding costly mistakes – deliberately constructing jurisdictional advantage by building on existing, not easily replicated resources and complementing private sector activities. The pursuit of jurisdictional advantage is not without its challenges because there are so many factors that influence the outcomes. However, given that future prosperity and quality of life are at stake, the questions of how this might be done are of more than just academic interest.

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