

# Jurisdictional Advantage Assessment

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## AN ANALYTICAL TOOL TO MEASURE THE FIT OF INVESTMENTS

### One paragraph précis

Jurisdictional Advantage assessment is less about picking winners than it is about funneling options, mitigating risks, and stacking the odds. It allows decision-makers to reconcile the wide-ranging results of analytical foresight with the relatively few advantages of any one jurisdiction.

### Executive summary

By aligning innovation policy, sectors and industries with the character of place it is possible to stack the odds of developing a successful economy. While nothing is certain, this increases the probability of viable, market-relevant innovation.

Jurisdictional Advantage assessment is a tool. It measures fit. It helps assess the character of place and provides a gauge of “appropriateness” because jurisdictions are ideal platforms for certain activities, but not all activities.

Jurisdictional Advantage assessment is one of a suite of tools that inform strategic choices and innovation targets. It enables tailored policy and deliberate investments.

As a tool, Jurisdictional Advantage assessment scales. Its framework and indicators are versatile enough to provide rigor to high-level strategic decisions as well as low-level commercialization tactics.

# Introduction

## Hollywood wasn't always "Hollywood"

In the early 1900's Hollywood was barely on the map. It was 1930 before it looked anything like the place we know today. Between 1915 and 1930 Hollywood grew from a straggling suburb, seven miles from downtown Los Angeles, to the established center of motion picture production in the world.

Alan Scott's book, On Hollywood<sup>1</sup>, explores why Hollywood emerged as the center of the American film industry, how it established its supremacy over other not so unlikely locales, and how Hollywood came to be its peculiar kind of industrial district generating Jurisdictional Advantages that have been sustained for close to 100 years.

### A start in Southern California

The motion picture industry in the United States started in New York where the Edison Manufacturing Company and the American Mutoscope and Biograph Company were located.

The cold, harsh winters of the Northeast became a problem when scripts called for outdoor scenes and a diversity of background scenery. A host of places meet these needs: Hollywood, Jacksonville, Palm Beach, Phoenix, Niles, Santa Barbara, and San Diego. All are equally attractive. But somehow Southern California emerged as a favored venue. Why Hollywood?

### Beyond balmy climes

For an explanation of Hollywood's emergence, Alan Scott returns to 1908.

1908 is the year that the Edison Manufacturing Company, the American Mutoscope and Biograph Company and several other firms established a cartel known as the Trust.

The Trust was a holding company for patents owned by its members. The patents gave it monopoly over film making equipment. By 1910, when the Trust became the General Film Company, it dominated the film industry.

The General Film Company's control over the filming, production and rental of films was used to throttle the industry. It continued to produce short-film material that was sold by the foot as a commodity even though

audience preferences were changing. According to the critics of the time, this had an enormous negative impact on film quality and the evolution of the industry.

### Answering new demands

While the General Film Company relished its power, the first studio was being built in Southern California. By 1912 there were 17 production companies in the area.

- In 1915 Cecil B. DeMille brought the Lasky Feature Play Company to town. His film, *The Squaw Man*, was the first Hollywood movie to enjoy international success.
- In 1916 Lasky merged with Zukor's Famous Players Company to become the Famous Players-Lasky Corporation (which eventually became Paramount).
- Around the same time the Fox Film Corporation came to Hollywood and Carl Laemmle launched Universal Pictures. Lasky, Zukor, Fox and Universal were the first Hollywood moguls.

These new production companies were much more interested in film content and audience appeal than the New York based firms. Their interest in feature films (versus the short films of the Northeast) made them more open to the emerging stars of the motion picture industry. This openness and interest in long-style narratives put them in direct competition with the Trust's continuing practice tightly controlled production of short-films rented by the foot.

### Regionally rooted advantage

Something new grew out of the disparate collection of branch plants that took root in Southern California in the few years before 1915.

And, while this could have happened in any of the earlier cited locations, it is these "systemically rooted competitive advantages [that helped] to sustain an upward spiral of growth and development, while making it increasingly difficult for other locations to capture markets ...

The superior dynamic of individual and collective development that came to function in Hollywood, in combination with the self-imposed shackles that hindered the maturation of the motion picture industry in New York, allowed the former to catch up with and then to greatly surpass the latter"(Scott, 2005: 24).

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<sup>1</sup> Scott, A. (2005) *On Hollywood: the place, the industry*, Princeton: Princeton University Press.

## From then to now

Of course, all that Scott described has begun to change again. Serious moves are afoot in Hollywood. Just five films were shot there in 2008. More and more production is moving into New Mexico, Vancouver and Toronto.

This story illustrates the importance of going beyond the simple analysis of industries. It highlights the fragility of legacy positions and, hopefully, inspires attentiveness: advantages are never permanent.

Scott's work illuminates some of the reasons why descriptions of Jurisdictional Advantage must be supplemented with answers to "questions of when and how virtuous circles of increasing-returns effects come into existence." He argues that a "potent line of attack is to focus on the dynamics of cumulative causation and the ways in which the competitive advantages of a particular place emerge endogenously, out of their own forward momentum"(Scott, 2005: 32-33).

Scott takes great pains to illustrate that the moment of inception is random. The preexisting social and natural conditions cannot account for emergence. "The actual shift of a given agglomeration into a leading competitive position often bears no relationship whatever to any conditions that may have exerted an influence on its initial location"(Scott, 2005: 33).

Once emergent, social and natural conditions matter a great deal in new opportunities. Much depends on context and the environment for success.

## To stack the odds

So what does Scott's story of Hollywood mean for us here? If preexisting conditions do not account for emergence – then who cares?

We care because the characteristics of a place stack the odds in favor of some industries over others. Like Scott wrote, Hollywood had to be someplace warm – Charlottetown, it turns out, did not fit the bill.

While we cannot predict where "virtuous circles of increasing-returns" will emerge – we can know which places have a higher probability of success if emergence occurs. This matters when regions are thinking about new industries. Of the many options, any one jurisdiction is best positioned to host a few.

To play the innovation game well, our best tactic is stacking the odds. Our success is about probability and not certainty.

## Find the right fit

If the characteristics of a place help stack the odds in favor of one industry over another, then it is worth trying to understand those dynamics. If investments that land outside these supporting conditions must fight all the odds of an open market in addition to the challenge of an inhospitable environment – why not focus on those inside and forego the hassle? An important, market-

relevant fit occurs when there is simple consistency between a system, activities within that system, and any new effort.<sup>2</sup>

Jurisdictional Advantage assessment is a tool to measure "fit". Like the list of questions asked by a psychologist, or the path of inquiry followed by an ecologist - it helps assess character – in this case, the character of place. It provides a gauge of "appropriateness" because jurisdictions are ideal platforms for certain activities, but not all activities.

Jurisdictional Advantage is less about competition than it is about the unique, market relevant qualities of a region. It is composed of conditional elements that can drive higher productivity, greater innovation and growth, and pay higher wages among a set of industries located in the region.

Understanding the characteristics of place allows decision-makers to leverage related advantages and increase the odds that new investments are successful. The assessment tool helps guide the strategic deployment of regional assets and capacities into areas with relatively high probability of success.

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<sup>2</sup> Porter, M. (1996) 'What is strategy?', *Harvard Business Review*, November.

# High-level overview

*"Some problems are so complex that you have to be highly intelligent and well informed just to be undecided about them."*

- LAURENCE J. PETER

Whatever your view of Laurence J. Peter (he was, apparently, an obnoxious man), his quote recognizes a key challenge in decision-making: Better information does not always resolve complexity.

Decisions are often hard. When millions of dollars are at stake - decisions are always hard. Making no decision or not taking action, while easier, also counts as a decision.

How to balance the never quite resolved need for data against the ever-present need to decide? How to make a conscientious, explicit, and judicious use of the best evidence<sup>3</sup>? How to measure and weight the demand conditions, factor conditions, related and supporting industries and overall context when building strategy or making investments<sup>4</sup>?

These are only a few of the questions that stand between us and difficult choices. But the answers are critical when we are taking steps that guide economies, tailor the destiny of firms, and ultimately, create the future of our families.

## The importance of fit when regions compete

Michael E. Porter has risen to dominate discussions of strategic choice. His Harvard Business Review article, "What is Strategy?" (1996), offers clear insight on the relationship between strategic choice and the essence of Jurisdictional Advantage assessments.

In the article Porter discusses the concept of fit - the synergy between strategic choice and the context in which the decision is made. Strategic fit among activities is fundamental to any advantage and, more importantly, the sustainability of that advantage. The fit occurs when there is a simple consistency; activities are reinforcing and effort is optimized. "Rather than seeing [strategic choice] as a whole, [decision-makers] have turned to 'core competencies', 'critical' resources, and 'key' success

<sup>3</sup> Pfeffer, J. and Sutton, R. (2006) *Hard Facts, Dangerous Half-Truths and Total Nonsense: Profiting from evidence-based management*, Boston: Harvard Business School Press.

<sup>4</sup> Porter, M. (2000) 'Location, competition, and economic development: Local clusters in a global economy', *Economic Development Quarterly*, vol. 14, no. 1, pp. 15-34.

factors. In fact, fit is a far more central component of competitive advantage than most realize" (Porter, 1996: 70)

While Porter singles out the fragmentation of whole systems into parts he is not advocating that the parts should be ignored. He is arguing that each part must be understood in the context of the whole.

These insights are critical as we turn to consider regional economies – the focal interest of large corporate players and their stakeholders. Economies are complex: highly integrated, globally interconnected, and highly agglomerated on centers of activity<sup>5</sup>. There is always the temptation to break economic organisms into pieces – but it is important to maintain the discipline that

considers each piece within the context of its existence.

Failing to consider regional economies in a holistic way opens the door to unbalanced decisions. Over specialized economies often can't adapt

to outside pressure; under specialized economies can't compete<sup>6</sup>.

## Beyond competition

That regions compete is no excuse for focusing on competition to the exclusion of what is really at stake.

Sun Tzu, in his masterpiece on competition, *The Art of War*<sup>7</sup>, describes the pinnacle of strategy as "the sheathed sword". The idea is to move beyond competition and focus on outcomes. Instead of win-lose scenarios, the pinnacle of success is winning without any knowing anything is lost (Sun Tzu, Ch. 3).

Winning the regional contest for innovation and investment can be more than just outrunning other jurisdictions<sup>8</sup>.

When the focus shifts from a comparison of jurisdictions to an understanding of unique capacities and stacking advantages – we move from competition to position-making.

<sup>5</sup> Rosenthal, S. and Strange W. (2003) 'Geography, Industrial Organization, and Agglomeration', *Review of Economics and Statistics*, vol. 85, no. 2, May, pp. 377-393.

<sup>6</sup> Fuchs, G. and Shapira, P. (2004) *Rethinking Regional Innovation and Change: Path dependency or regional breakthrough?*, New York: Springer.

<sup>7</sup> Sun-tzu (1983) *The Art of War*, ed. James Clavell, New York: Delacorte Press.

<sup>8</sup> Boschma, R. (2004) 'Competitiveness of regions from an evolutionary perspective', *Regional Studies*, vol. 38, January, pp. 1001-1014.

Position-making builds on Porter’s understanding of fit. It focuses on consistency, reinforcing emerging opportunities, and optimizing effort. This focus ensures that well-fit opportunities are pursued and that each is leveraged to maximum benefit.

Moving beyond competition to position-making shifts our attention away from mimicking the decisions of others and toward creating a context in which our jurisdictions attain the ultimate expression of their potential.

## A measure of fit

Just as bespoke tailors make the best suits, so too are tailored policies best suited for complex economies. It is not possible to make a one-size-fits-all policy. It’s also not possible to make a one-size-fits-all measure.

Jurisdictional Advantage assessment is limited to its purpose. It measures the character of place. It does not do foresight, or due diligence or competitive intelligence. While there is overlap with these other tools, Jurisdictional Advantage assessment is not sufficient to replace them.

In Figures 1 through 4 we present the broader context of which Jurisdictional Advantage assessment is one part.

## Myriad opportunities

Interest in Jurisdictional Advantage assessment is driven by a need to reconcile the vast range of market opportunities with the myriad capacities large corporations can deploy in those markets (Figure 1). The set of options is too large. Some way is needed to funnel the choices and target the outcomes.

### *Choosing to focus*

Figure 2 illustrates the challenge of bridging from endless

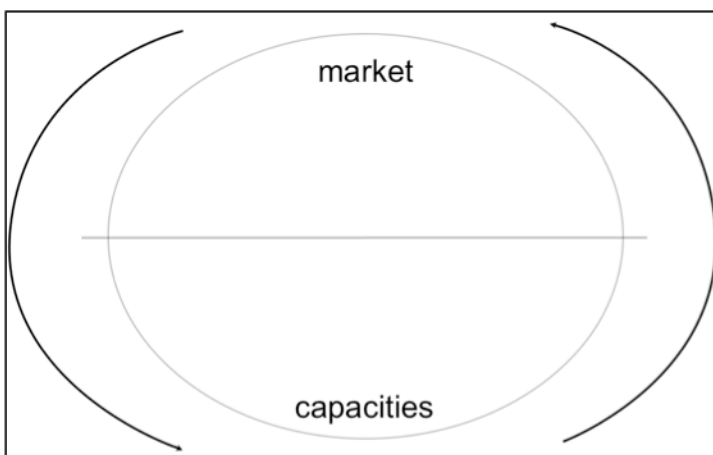


Figure 1: Reconciling market opportunities and jurisdictional capacities

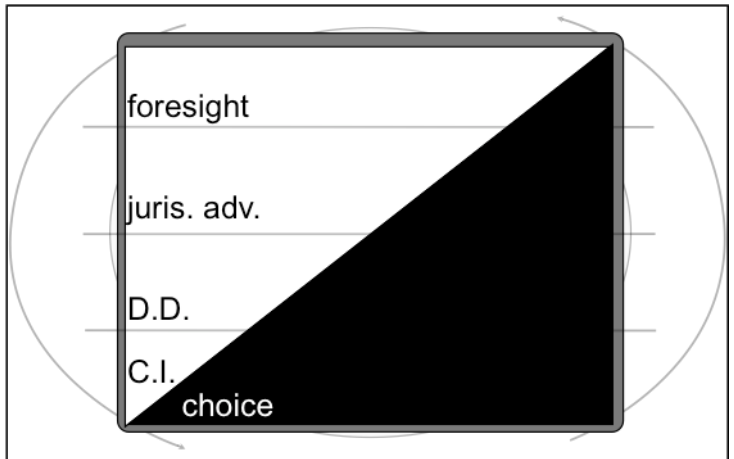


Figure 2: Foresight, Jurisdictional Advantage assessment, due diligence and competitive intelligence inform choice options

market potential to a specific set of focus capacities. Tools that instill rigor and organize questions best serve this challenge.

**Analytical foresight** has the widest scope. It asks what might be done if certain scenarios emerge. It seeks to link what is known of the present with what we can do in the future. Rather than being predictive, it is proactive.

**Jurisdictional Advantage** assessment lies one step below foresight. It takes the wide-range of possible future scenarios and asks, “Which few of these are we best suited to pursue?” It reconciles the many options with the relative few a jurisdiction will be able to exploit.

Next is **due diligence**. In a general discussion of sectors and industries<sup>9</sup> (versus a specific discussion of firms), the questions it asks are specific to the sector. It asks questions such as: If we are focused on this specific sector, what markets are important, which global dynamics matter most, and how are trade trends evolving?

One step further, now into industries, **competitive intelligence** asks: Which firms matter most? What technologies are in play? Where are the key elements of differentiation? And, most importantly, what must be done next?

These analytical tools provide a staged process to decision-making. In a rigorous and consistent way, they move toward focus through increasingly specific levels of inquiry. The evidence they provide helps tailor the options about which choices of focus are made.

<sup>9</sup> In our work ‘sectors’ and ‘industries’ are used somewhat analogously. Generally sector is considered the broader of the two but both describe sub-categories of the general ‘economy’. Sectors are comprised of industries. Industries are comprised of firms. The firms are related by business function or service. For example, if Energy were the sector, clean coal and conventional oil would be industries.

### Tailoring targets

Following a similar pattern, policy tools help bridge from the vast pool of potential any large corporation to the relatively few market targets it is able to support (Figure 3).

Starting with **strategic policy**, we ask: Of the gaps that remain and given the options to pursue, which objectives matter most? Which policies create the platform needed for the jurisdiction to succeed?

Leveraging policy objectives, **government programs** will target the positions needed to deliver the targets. Which capacities are missing? What support is required? How are current positions best reinforced?

Once positions are defined and programs are implemented, **analytics** guide the funding provided and ensure metrics monitor outcomes. Analytics provide evidence that intended impacts are achieved and, as is inevitable, the need for change is identified.

Together, evidenced-based policy tools tailor the impact of government's actions. They help move economic development from supporting a wide set of alternatives toward the relative few market outcomes a jurisdiction is best positioned to achieve. The tools help government create a context where targeted innovation succeeds.

### Informing decisions

Jurisdictional Advantage assessment and the other tools presented here inform decisions; they do not make decisions. They enable increasingly specific layers of information on strategic choices and innovation targets (Figure 4).

By enabling tailored policy and deliberate investments, these tools help stack the odds of developing a successful economy.

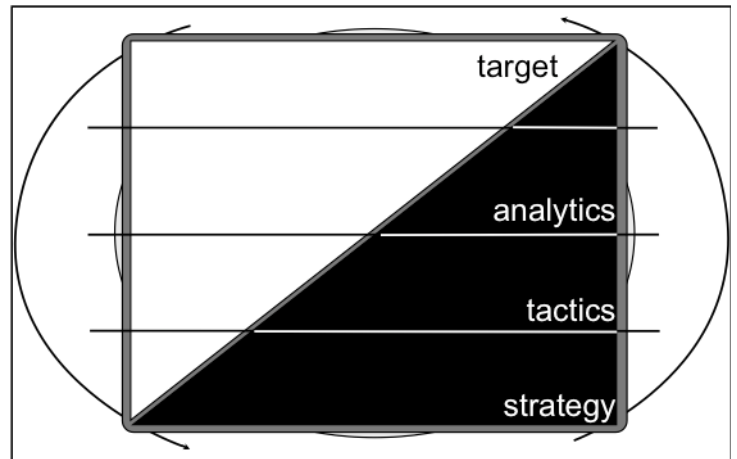


Figure 3: Strategic policy, program tactics, and analytics inform target options

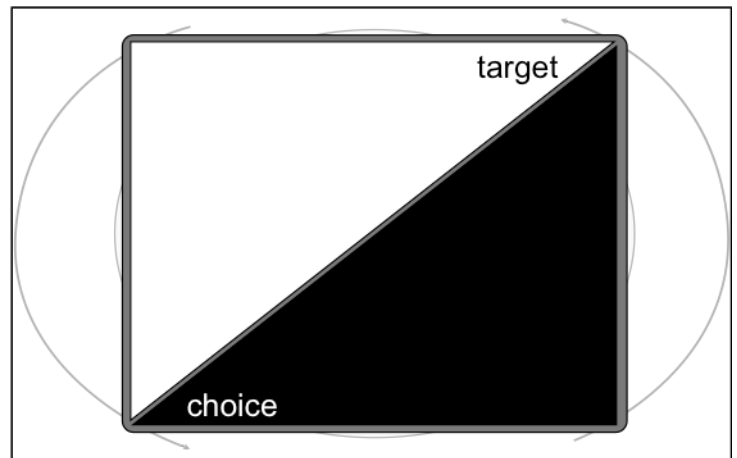


Figure 4: Suite of tools for strategic choice and innovation targets

# Definition of Jurisdictional Advantage

Jurisdictional Advantage is defined as:

The unique and difficult to replicate, market-relevant capabilities, supporting institutions, constructed environment, natural environment, and industrial ecosystem that characterize a region and stack together to drive higher productivity, greater innovation and growth, and pay higher wages among industries located there.

While the definition is long, the meaning is simple. Jurisdictions are comprised of elements, some of which help create or sustain market opportunities for industries located in those regions. When these advantages have market relevance, they encourage innovation and inspire growth that together drive up wages.

Within the definition there are several aspects worth noting:

- **First** is the similarity of this definition to definitions commonly given to competitive or comparative advantage.
- The **second** aspect to note is the focus on industries.
- **Finally**, it is important to acknowledge the nature of the definition itself and its focus on the character of places.

## Comparing Competitive and Jurisdictional Advantage

Anyone working with competitive and comparative advantage will see familiar elements. The only difference here is the focus on "jurisdictions".

Jurisdiction describes the geographic area of control or range of impact available to the organizations making the strategic decisions. Put simply: Influence defines the scope of jurisdictional advantage.

For example, the reader might have some competitive advantage in genetic technologies - but if the resources are not available or the freedom to operate is too narrow or the area they operate in has not shown success in that area before - they might not have jurisdictional advantage, relative to those that do.

## Industry matters most

Industry is important to this definition. Industries (and the sectors they compose) derive the most direct benefits from Jurisdictional Advantage and are, therefore, the most important moving component of this puzzle<sup>10</sup>.

## The character of place

Finally, as written earlier, Jurisdictional Advantage is the character of place. In this it is similar to the French concept of "*terrior*". The concept of "*terrior*" developed through centuries of French winemaking. It is based on observations of what made wines from different regions, vineyards or even different sections of the same vineyard, or from different years so different from each other. "*Terrior*" describes the unique aspects of a place that influence and shape the wine made from it.

Just each person's character is comprised of the combined consequence of their parents, upbringing, education, and experiences - so too are places defined. For some industries place is as much an actor in success as management, R&D, and financing. Jurisdictional Advantage is a state in time - it can change, grow or evolve but only at the rate an individual might move their own character.

Just as regions are a composition of parts, so too is the definition of Jurisdictional Advantage. Figure 5 illustrates how the five elements of Jurisdictional Advantage: Capabilities, Supporting Institutions, Constructed Environment, Natural Environment, and Industrial Ecosystems are conceptually part of a whole. A detailed discussion of these elements continues below.

*Jurisdictional Advantage describes the unique aspects of a place that influence and shape everything it makes*

<sup>10</sup> Low, M. and Abrahamson, E. (1997) 'Movements, bandwagons, and clones: Industry evolution and the entrepreneurial process', Journal of Business Venturing, vol. 12, no. 6, pp. 435-457.

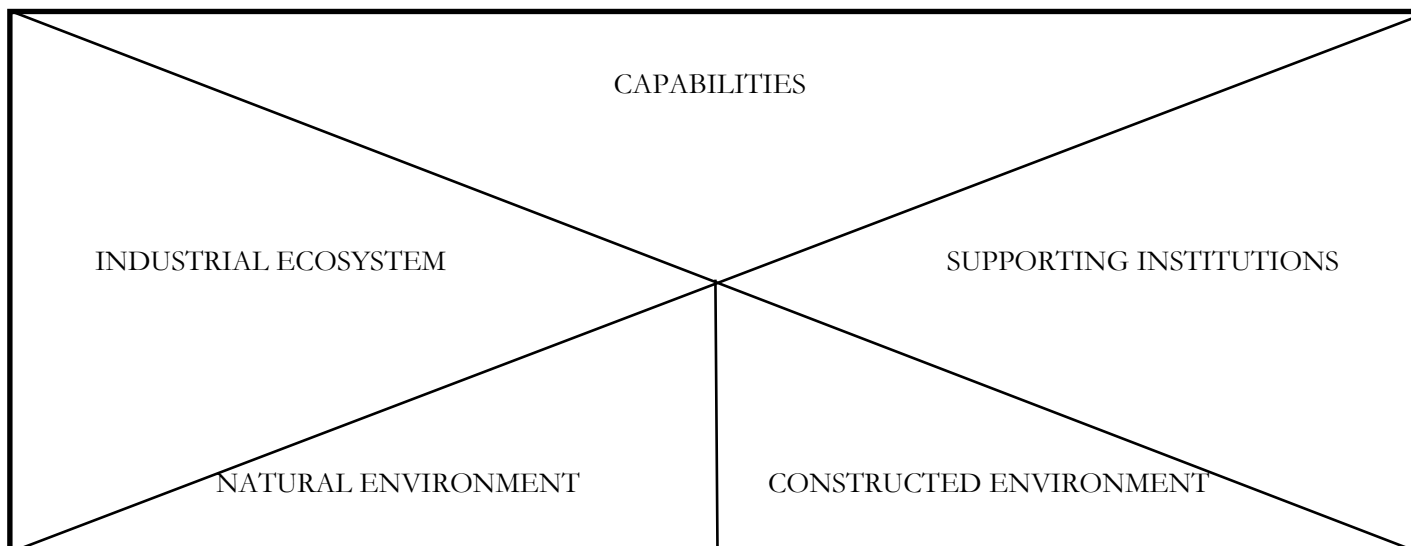


Figure 5: Jurisdictional Advantage and its five elements

## Building Jurisdictional Advantage

### Theoretical requirements

In a 2007 working paper entitled "Constructing regional advantage: Platform policies based on related variety and differentiated knowledge bases"<sup>11</sup>, Bjorn Asheim, Ron Boschma, and Philip Cooke provide a framework for building Jurisdictional Advantage. The paper brings together four relatively new notions. First is "related variety", a key concept from evolutionary economics. The second is "absorptive capacity". Third is "differentiated knowledge bases". And the last is "policy platforms".

The rest of this section discusses the application of these notions to Jurisdictional Advantage and uses a broader set of literature to flesh out the concepts. It also builds an answer to the most often asked question we are asked in this work: "How do we build Jurisdictional Advantage?"

### Related Variety

Related Variety is a concept introduced by Frenken, van Oort, and Verburg in 2007<sup>12</sup>. Ashiem, Boschma, and

<sup>11</sup> Asheim, B., Boschma, R. and Cooke, P. (2007) 'Constructing regional advantage: Platform policies based on related variety and differentiated knowledge bases', *Papers in Evolutionary Economic Geography from Utrecht University, Section of Economic Geography*, no. 709, [Online], Available: <http://econ.geo.uu.nl/peeg/peeg0709.pdf>

<sup>12</sup> Frenken, K., van Oort F., Verburg, T. (2007) 'Related variety, unrelated variety and regional economic growth', *Regional Studies*, vol. 41, no. 5, pp. 685-697.

Cooke use the term to describe "sectors that are related in terms of shared or complementary knowledge bases and competencies" (Ashiem *et al.*, 2007: 4).

The authors argue that neither regional diversity nor regional specialization stimulate innovation - it is regional specialization in related variety that induces innovation. Their position is supported by Feldman<sup>13</sup> and Koo<sup>14</sup> who argue that complementary industries that share knowledge should be the focus of development strategies.

Their findings follow Schumpeter's famous ideas on innovation, particularly that real innovations stem from the recombination of existing knowledge in entirely new ways<sup>15</sup>.

*Real innovation stems from the recombination of existing knowledge in entirely new ways*

Ashiem, Boschma, and Cooke conclude that major innovations are more likely to occur when knowledge spills

from one industry to another - rather than within one industry. But, it is most likely to occur when the two industries share common competences.

### Absorptive Capacity

Ikujiro Nonaka wrote a remarkably well-read article for Harvard Business Review called "The knowledge-creating

<sup>13</sup> Feldman, M. and Audretsch, D. (1999) 'Innovation in cities: Science-based diversity, specialization and localized competition', *European Economic Review*, vol. 43, no. 2, pp. 409-429.

<sup>14</sup> Koo, J. (2005) 'Knowledge-based industry clusters: Evidenced by geographical patterns of patents in manufacturing', *Urban Studies*, vol. 42, no. 9, pp. 1487-1505.

<sup>15</sup> Schumpeter, J. (1961) *The theory of economic development: an inquiry into profits, capital, credit, interest, and the business cycle*, Opie, R. (trans.), New York: OUP.

company" (1991)<sup>16</sup>. In the article, he highlights the importance of knowledge exploration and knowledge exploitation - two core skill sets that drive an industry's absorptive capacity.

The transfer of knowledge requires absorptive capacity in firms among regions. Firms need to share, cognitive proximity, or similar knowledge and expertise to share new knowledge<sup>17</sup>.

"Once a region specializes in a particular knowledge and competence base, this will act as an incentive, offering opportunities to local firms to form further improvements in familiar fields of knowledge on the one hand, and as a selection mechanism, discouraging knowledge creation that does not fit into the regional knowledge base on the other hand" (Boschma, 2008: 5)<sup>18</sup>.

The main components of absorptive capacity include<sup>19</sup>:

**Access capacity** – the ability to connect and link to international networks of knowledge and innovation. This capacity requires agents, resources, and culture.

**Anchor capacity** – the ability to identify and domesticate external knowledge from people, institutions, and firms. It is a process of identifying, attracting, and articulating the context between externally mobile knowledge and immobile local context needs.

**Capacity to diffuse knowledge** – the collective ability of a place to adopt and assimilate new innovations, practices and technologies and spread them through the economy.

**Capacity to create knowledge** – the ability of a place to generate new ideas, discoveries, designs and inventions. Its capacity to promote local knowledge development and to activate a territorial dynamic of innovation.

**Capacity to exploit knowledge** – the general capacity to utilize knowledge for commercial use and to extract

value from it. Exploitation activities involve the ability to generate new knowledge through agents, resources and an entrepreneurial culture.

## Differentiated Knowledge Bases

"The underlying idea behind the differentiated knowledge base approach is not to explain the level of competence (e.g. human capital) or the R&D intensity (e.g. high tech or low tech) of firms but to characterize the nature of the specific knowledge on which innovation activity is based" (Asheim, Boschma, and Cooke, 2007: 11)

Focusing on differentiated knowledge bases has meant a shift from a firm's internal knowledge base to globally distributed knowledge networks and open innovation<sup>20</sup>. It has also changed the character of valuable knowledge from knowledge that is more advanced, complex, or sophisticated to differentiated knowledge - knowledge that is science-based, engineering-based, and artistic-based.

## Policy Platforms and Platform Policies

Asheim, Boschma and Cooke advocate regional innovation policies that broaden the economic base while building on existing region-specific resources.

They argue against picking innovation hotspots or "brainports". Because almost all regions have growth potential, predicting which regions will grow is difficult. "There is a need for tailor-made policy strategies, geared toward specific potentials, and focused on tackling specific bottlenecks in regions" (Asheim, Boschma and Cooke, 2007: 17).

Creating tailor-made, regionally specific, policies is a complex ambition. It poses what Horst Rittel and Melvin Webber have called a "wicked problem"<sup>21</sup>.

A wicked problem is one where several stakeholders have a major stake in how decisions are made, it is difficult to discern a single, "right" answer, the root issues that inform the decision are complex and tangled, and any decision has important and lasting impacts.

The path forward, as described by Rittel and Webber, and supported by Asheim, Boschma and Cooke, is social

*There is a need for tailor-made policy strategies, geared toward specific potentials, focused on tackling specific bottlenecks*

<sup>16</sup> Nonaka, I. (1991) 'The knowledge-creating company', *Harvard Business Review*, vol. 69, pp. 96-104.

<sup>17</sup> Nooteboom, B. (2000) *Learning and Innovation in Organizations and Economies*, Oxford: Oxford University Press.

<sup>18</sup> Boschma, R. (2008) 'Constructing regional advantage: related variety and regional innovation policy', *Report for the Dutch Scientific Council for Government Policy*, [Online], Available: [www.ncl.ac.uk/curds/assets/documents/BoschmaNewcastleSeminar2008.pdf](http://www.ncl.ac.uk/curds/assets/documents/BoschmaNewcastleSeminar2008.pdf)

<sup>19</sup> Mahroum, S. et al. (2008) 'Innovation by adoption: Measuring and mapping absorptive capacity in UK nations and regions', London: NESTA. [Online], Available: [http://www.nesta.org.uk/assets/Uploads/pdf/Research-Report/innovation\\_by\\_adoption\\_report\\_NESTA.pdf](http://www.nesta.org.uk/assets/Uploads/pdf/Research-Report/innovation_by_adoption_report_NESTA.pdf)

<sup>20</sup> Chesbrough, H. (2003) *Open Innovation*, Boston: Harvard Business School Publishing Corporation.

<sup>21</sup> Rittel, H., and Webber, M. (1973) 'Dilemmas in a general theory of planning', *Policy Sciences*, vol. 4, pp 155-169.

(versus analytical). As mentioned earlier, the work is one of "position-making" rather than decision taking.

The mass of information needed to support position-making is more complex than most are used to dealing with. It means that more assumptions, ideas and concerns will be in play than any one decision-maker is able to keep track of. A process is needed to track each of these dynamics as they evolve.

Asheim, Boschma and Cooke call this "joined-up thinking" and "joined-up policy".

Joined-up thinking is a process of engaging in "interface conversations" and introducing other, external expertise to "triangulate" the validity of views, and update them as megatrends emerge.

Joined-up policy is "where policy cleverly seeks to achieve more than one outcome with a single instrument" (Asheim, Boschma and Cooke, 2007: 21). It exploits spillovers among diverse regions and industries with a single policy that radiates laterally - like a platform.

The authors call "joined-up thinking" a "policy platform" and "joined-up policy" a "platform policy".

### **To build, tie together**

The authors tie these four areas together by concluding that "'related variety' involves transitioning from the waning to into the waxing opportunity by 'constructing advantage' through engaging 'differentiated knowledge bases' in the moulding of regional platform policies and even more localized policy platforms" (Asheim, Boschma, and Cooke, 2007: 23).

### **A practical application**

In 2008, NESTA undertook a major study of the UK's absorptive capacity<sup>22</sup>. It produced a valuable, evidence-based model for the capacity of regions to absorb innovation and construct Jurisdictional Advantage. Their study involved developing a number of measures and creating a weighted index.

In the same year the Ewing Marion Kauffman Foundation sponsored "The 2008 State New Economy Index<sup>23</sup>" that benchmarked economic transformation in

the United States. It benchmarked states by rate of transition to a global, entrepreneurial, digital, knowledge-based and innovation-based economy. It used 29 indicators related to knowledge jobs, globalization, entrepreneurial dynamism, information technology, and innovation.

Together the NESTA and Kauffman studies covered many of the most dynamic elements of Jurisdictional Advantage. Clearly, natural resources and most infrastructure investments are inflexible but knowledge-based priorities, investment mechanisms, and aspects of industrial ecosystems are highly mobile.

To provide a sense of how to measure the capacity of sectors or industries to build new Jurisdictional Advantage, we combined these two studies and the indicators to form an index. Below, we briefly explain the index and discuss how it is applied.

### **Explaining the index**

Our index is grouped into four main areas - Knowledge-based economy, Innovation-driven investment, Entrepreneurial dynamism, and Global integration. Given its purpose, namely to describe the capacity for newly constructed Jurisdictional Advantage, the elements of the index are volatile. An index is used to filter out some of this volatility while still preserving the intention of the measure.

#### *Knowledge-based economy*

A knowledge-based economy is expected to be more prosperous than commodity-based economies (particularly those based on natural resources). Knowledge-based activities add value to manufacturing and services and help increase wages. The capacity of sectors and industries to excel in this space is an indication of their ability adopt or deploy new Jurisdictional Advantages.

The indicators used in this area cover four related areas: 1) education level of the workforce, 2) integration of R&D performed by government, post-secondary institutions, and industry, 3) number of patents filed by sector or industry, and 4) the concentration of knowledge intensive companies.

<sup>22</sup> Mahroum, S. *et al.* (2008) 'Innovation by adoption: Measuring and mapping absorptive capacity in UK nations and regions', London: NESTA. [Online], Available:

[http://www.nesta.org.uk/assets/Uploads/pdf/Research-Report/innovation\\_by\\_adoption\\_report\\_NESTA.pdf](http://www.nesta.org.uk/assets/Uploads/pdf/Research-Report/innovation_by_adoption_report_NESTA.pdf)

<sup>23</sup> Atkinson, R. and Andes, S. (2008) 'The 2008 state new economy index: Benchmarking economics transformation in the States', *Ewing Marion Kauffman Foundation*, [Online], Available: [http://www.itif.org/files/2008\\_State\\_New\\_Economy\\_Index.pdf](http://www.itif.org/files/2008_State_New_Economy_Index.pdf)

### *Innovation-driven investment*

Investment is the life-blood of innovative sectors and industries. It enables the cash-intensive work of product development, acquisition of new technologies, and rapid scale-up of successful innovations. Where private investment is strong, product and service innovations are more likely to succeed because they benefit from the support and interest of the experienced individuals (and related networks) involved. The sectors and industries most able to attract investment are the sectors and industries most likely to succeed in the adoption and successful use of new Jurisdictional Advantages.

Investment indicators used in this index include are 1) private share of public sector R&D investment and 2) active engagement by private capital sources.

### *Entrepreneurial dynamism*

Dynamism, growth, and competition are important characteristics of an entrepreneurial sector or industry. Key components of a healthy Industrial Ecosystem are early-stage ventures, thriving Gazelles, and innovation-oriented MNEs. Entrepreneurial sectors and industries are the areas most likely to attract and successfully leverage new Jurisdictional Advantages.

The indicators used in this area measure 1) the number of fast-growing Gazelles, 2) speed of growth of firms, 3) the number of entrepreneurs starting businesses, 4) the number of active MNEs, and 5) the rate at which new, innovative products are introduced to the market.

### *Global integration*

The fastest growing economies have been globally integrated economies. As a trading nation, Canada has strong links to global markets. Exports are usually dominated by trade with the United States. Globally integrated sectors and regions are the most competitive places to locate new Jurisdictional Advantages.

Global integration indicators reflect 1) the extent to which local manufacturing and services are export-driven and 2) the sector's or industries' success in attracting investment by foreigners.

### **Applying the index**

If applied in an ongoing series (the Kauffman analysis was conducted in 1999, 2002, 2007 and 2008), the index described above would be a useful measure of the best places to build new Jurisdictional Advantages.

Sectors and industries with high adoptive capacity have the highest probability of success when moving into new

areas of innovation. The index would suggest where to focus efforts that identify opportunities for spillovers and related varieties of innovation.

The value of the index is in targeting these efforts. While any sector or industry has some capacity to build Jurisdictional Advantage, not all are equally suited to the challenge. As mentioned earlier, Jurisdictional Advantage is the slowly evolving character of place. Its character, like that of the reader and the author, is more the product of a lifetime than the last few weeks.

When there is an intention to build new Jurisdictional Advantage, the assessment tools we have described in this paper will identify what is missing and the likelihood of a sector or industry to succeed in absorbing the remaining required elements. As long as potential new Jurisdictional Advantages are filtered for complementarity (reinforced by existing knowledge-bases and competencies) the probability of success will be higher than if this were blindly pursued.

To finish tying this back into the theoretical discussion above, successful position-making will also depend on the range of knowledge bases supporting an attempt to create Jurisdictional Advantage and the policy platforms facilitated by government and other supporting institutions.

Most attempts to create Jurisdictional Advantage focus entirely on the science-based requirements of that opportunity. Engineering-based requirements (often within the Constructed and Natural Environment elements) and artistic-based requirements (scattered across Capabilities and Supporting Institutions) are key.

Differentiated knowledge bases can shift the point of competition from most-advanced, most-complex, or most-sophisticated to best-fit and most-completely-leveraged. In Canada we often let go of emerging Jurisdictional Advantage early because we stop at science-based competencies when engineering-based and artistic-based competencies are needed to fully capture new opportunities.

Policy platforms designed by Supporting Institutions need to “join-up” industries and complementary competencies to any attempt at new Jurisdictional Advantage. The gaps identified by Jurisdictional Advantage assessments and the index presented here must be addressed by platform policies that to sew together programs and exploit spillovers.

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