SUSTAINING REGIONAL ADVANTAGE

James W. Harrington, Jr.¹ University of Washington November 2005, slightly revised August 2006

I. PREMISES

By "the **region**" I refer to the geographic area where individuals live, sleep, work, and raise families. For most people, this is a territory smaller than the nation-state: in poorer, rural cultures it may be the village, while in wealthy urban cultures it may be an extended metropolitan area. For the purposes of this paper, I will define **regional economic development** (RED) as the employment of and returns to local labor, land, and natural resources, in ways that are sustainable over generations. To take an 18th century liberal view of political economy, the purpose of an economy and of economic development is to improve people's material well-being, where they live. Since the employment, education, and health of people depend on the opportunities available in their regions, we should care about RED and its continuation across generations.

Politically, we care about local/regional economic development because individuals, families, and governments have huge psychological, social, and economic investments in local regions: a sense of history and shared future, personal wealth in the form of real estate, investment in the form of physical infrastructure. These are powerful forces that motivate governments at all levels toward a concern for regional economies.

What allows for sustainable employment of the people, land, and resources of a region? In this paper, I explore three requisites: capital to provide the advance funds for organizing resources, infrastructure, and labor before they realize a return; a division of labor to allow synergy among individuals' activities; and institutional arrangements that catalyze exchange, learning, and sustainability of these interactions.

II. CAPITAL AND THE DIVISION OF LABOR

Sayer and Walker [1992] insisted that we should make capital, not firms, the motive force in our analyses. The returns to capital go not to "firms" but to the owners of shares, land, bonds, etc. Some of this is invested in private, profit making activity anywhere that can attract the investment with a promise of return. Some goes into consumption activity. Some goes into taxes – some of which is reinvested in physical or human infrastructure in particular countries or regions. Some is appropriated by managers, if shareholders allow. Some goes into philanthropy, and some of that is invested in physical plant. For example, several landmark civic structures were built in central Seattle in the 1990s (art museum, baseball stadium, city hall, football stadium, library, opera house, symphony hall) as a result of locally held capital returns (from Microsoft, Boeing, telecommunications, insurance, and real-estate development) that were spent via taxes and philanthropy.

Capital is not bound, therefore, to any one form of organization, certainly not to the firm..... Competition may therefore occur within firms, between divisions, profit centers, or individual projects. At the same time, investments sunk into specific places mean that competition will equally be manifest in local boosterism between cities or in the global clash of nations. Similarly, capital accumulates not only within firms, but in banks, merchant fortunes, the infrastructure of cities, and the savings of nations, and exploitation is not confined to the shop floor or the envelope of the firm; surplus value is also siphoned of through wide channels of rent, interest, and taxation [155].

Think about corporate takeovers, buyouts, board coups, financier-driven reorganizations, venture-capital and angel financing of specific firms - each of which has impact on regional economies. These are not driven by firms, but by the owners of capital.

Capitalism is motivated solely by the demand for ever higher returns to the owners of capital, and those returns are generally sought through increasing the technical and social division of labor – across larger scales, by

¹ I am eager for this paper to motivate a dialogue with colleagues; please contact me at <u>jwh-uw@comcast.net</u>.

establishing divisions among social groups (women, minorities, immigrants) so that ever newer groups can be exploited as they are given elements of production, to move some operations to places where labor is cheaper, or by dis-integrating operations to other firms or other sectors [Sayer and Walker 1992]. Capitalist accumulation requires some displacement of costs outside what we might call the formal accounting system: to geographic spaces outside the system (e.g., other countries); to members of the family (generally women and children) as unpaid labor; to parts of the natural world that have not been valorized (the creation of value from little known species or from human genes); to particular social groups; or to future generations [Jessop 2000: 66].

Given people's and governments' commitment to places, the geographic mobility of capital investment is a problem insofar as investment is more mobile than people, and people's well-being depends on their and their governments' access to capital. What motivates capital movement? What motivates capital fixity? Do these vary under different political-economic systems?

Under the neoliberalism that has taken hold in much of the world, regions attract capital based on:

- New frontiers for exploitation unlimited land, labor, or resources, and the government subsidy of capital investment and corporate operations. Appendix A is taken from the Nevada Commission on Economic Development, a quasi-public agency that advises the state government on economic development initiatives to reduce the private cost of capital investment in Nevada. This can be very successful – Las Vegas, Nevada has been one of the most rapidly growing metropolitan areas in the US for 20 years – but how sustainable are these advantages? The even more rapid growth of investment in many Chinese cites, which have become the new center for the world's consumer-goods manufacturing, is motivated in part by the influx of workers from inland, rural areas, and the returns are earned in part from externalizing costs onto the physical environment at a dizzying rate.
- 2) The premium paid for local availability of scarce resources, such as extracted natural resources, an excellent harbor, or highly specialized labor which reduce the mobility of capital to be invested to gain a return from these resources.
- 3) More subtly, capital investment is attracted towards the regular creation of new ideas and ways of operating that are unique to the local region. Let's call this "knowledge," which creates new (and therefore monopolized) products or that uniquely increases the returns to operating in the region.

One can name other sources of capital attraction. Some, such as the investment in booming retirement communities in warm, coastal areas of the US, can be traced to (1) above: available land, attractive climate, and government subsidy in the form of low taxes and limited public support for infrastructure such as schools. Rapidly growing regions can *then* benefit from a deepening division of labor, through which specialized services are established to increase the profitability of capital investment in enterprises that can avail themselves of these services.

Finally, in some contexts capital is invested

4) locally by government fiat. In the US, military bases manifest this limited government deployment of capital resources. To what extent is early 21st century investment in China located by central government decisions?

III. KNOWLEDGE AND LEARNING AS SOURCES OF ADVANTAGE

Much recent writing has argued that useful knowledge is a linchpin of capital productivity, and that despite the seeming mobility of "knowledge," some of its development and use is tied to particular places. Perhaps more broadly, Storper [2002] argued that "learning economies" is a more accurate description of successful economies than "post-industrial," "flexible," or "knowledge-based," which phrases suggest that capitalism has fundamentally changed and that disembodied "knowledge" is paramount.² Storper noted that:

- elements of industrial capitalism (divisions of labor, importance of large firms, and the defining characteristics of capitalism) still dominate economic organization;
- it's insufficient to be able to change output characteristics and organizational configurations to be "flexible" in general; and

² Florida and Kenney [1993] coined the phrase "innovation-mediated production" to encapsulate the role that product, process, organizational, and marketing innovation play in creating profitability in almost every sector.

• advanced knowledge and technology cannot sustain regional advantage for long, without continual improvement.

This motivates the following questions:

- 1. What is knowledge, in the context of companies and organizations?
- 2. In what ways is organizational knowledge important?
- 3. To what extent and under what conditions is the development of organizational knowledge key to the returns to and flow of capital within companies?
- 4. How do organizations gain knowledge?
- 5. What roles do individual workers play what matters in preparing workers for these roles?
- 6. What roles can/do regional milieux play in the creation of organizational knowledge and competence?
- 7. How does understanding regional milieux help us identify what regional assets are relatively fixed?
- 8. How can *regions* gain and hold knowledge?
- 9. In what ways can regional entities be active participants or even motivate such learning?
- 10. What public investments and policies support and improve these processes?

1. What is knowledge, in the context of companies and organizations?

Let's define **organizational knowledge** as the ability for an organization to make use of information to improve its operations. To understand this simple definition, we need to distinguish knowledge from information, and to understand how it is that organizations can have knowledge distinct from the knowledge of individuals within the organization.

Belussi and Gottardi [2000] distinguished (raw) information (what we might call "data," though it certainly may be qualitative), knowledge (both explicit and tacit), and (organizational) competence (which is the ability to deploy knowledge to improve production, marketing, and competitiveness). Howells [2000] cited Polanyi's 1967 book *The Tacit Dimension* as the origin of the distinction between explicit knowledge and **tacit knowledge**: "that which defies codification or articulation – *either* because the performer herself is not fully conscious of all the 'secrets' of successful performance or because the codes of language are not well enough developed to permit clear explication" [Gertler 2004: 134]. However, these are not empirically separable: "While tacit knowledge can be possessed by itself, explicit knowledge must rely on being tacitly understood and applied. Hence all knowledge is either tacit or rooted in tacit knowledge. A wholly explicit knowledge is unthinkable" [Polanyi 1967: 7; Howells 2000: 53].

By **competence**, Foss [1996a: 1] "understands a typically idiosyncratic knowledge capital that allows its holder to perform activities...in certain ways, and typically do this more efficiently than others. Because of its skill-like character, competence has a large tacit component, and is asymmetrically distributed. It may reside in individuals, but is in the context of the theory of the firm and strategic management perhaps best seen as a property of organizations rather than of individuals." Carlsson and Eliasson [1994: 694-9] distinguished four types of organizational competence:

- the ability to choose among "markets, products, technologies and organizational structure... and key personnel"
- the ability to integrate and coordinate activity
- the ability to conduct the specific functions of the firm
- the ability to learn: "create new competence internally [and] acquire knowledge... diffusing the knowledge throughout the organization. Learning is a major part of the organization and draws significant (although not easily measured) resources... learning should be viewed as a costly and targeted process... that takes place in all activities within the firm.... Firms select, store and accumulate knowledge through learning and become endowed with different technological capabilities."

If competences are to earn a return on the investment required to generate them, they must be: valuable, unique (or a unique combination), not easily imitated, and not easily substituted [Eriksen and Mikkelsen 1996: 62-3].

Organizations gain competencies beyond the knowledge of individuals, through the division of labor. Jessop [2000: 65] emphasized "the separation of intellectual and manual labor and the transformation of the former into wage labor producing knowledge for the market." In addition, the more general process of creating organizational

practices and procedures reduces the dependence of the organization on individuals, except insofar as individuals develop tacit ways of working with – or around – each other.

2. In what ways is organizational knowledge important?

As defined above, organizational competence is *sine qua non* for a successful firm, which must manage its resources in response to characteristics and changes in its suppliers, buyers, regulations, etc. However, as technological, marketing, and financial sophistication become widespread, capitalists who want to see more than a bare-minimum return need to find new frontiers: new products, cheaper production methods and locations, new ways of managing supply chains and product distribution.

Loasby [1996] distinguished two dimensions of competences: "the degree of specificity" of application; and "the degree of control" – how well and how exclusively does the firm control the competence [41]. Each determines the profitability of sinking capital into gaining and maintaining competence: how broadly can the firm use its competence, and to what extent is competence a unique asset from which the firm can earn economic rent? "The term 'distinctive competence' was first used by Selznick (1957)... It refers to those things the organization does well in comparison with its competitors" [Carlsson and Eliasson 1994: 690].

Nonaka et al. [2000: 1-2] developed a

knowledge-based view of the firm, the most recent development in the theories of a firm, [which] views a firm as a knowledge-creating entity, and argues that knowledge and the capability to create and utilize such knowledge are the most important source of a firm's sustainable competitive advantage. Knowledge and skills give a firm a competitive advantage because it is through this set of knowledge and skills that a firm is able to innovate new products/processes/ services, or improve the existing ones more efficiently and/or effectively. The *raison d'etre* of a firm is to continuously create knowledge.

3. <u>To what extent and under what conditions is the development of organizational knowledge key to the returns to and flow of capital within companies?</u>

Not all firms or organizations are knowledge based, in Nonaka's sense. A firm that controls a scarce resource facing increasing demand (like petroleum!) can earn a high return based on its asset. Small, locally oriented gardentending or house-cleaning companies find clients by word of mouth, and can remain quite stable in operations. Volunteer and non-profit organizations, including many colleges and universities, can survive in a very conservative fashion. However, these situations seldom attract new capital investment seeking high return, and are seldom the bases for sustained regional economic development.

Further, note that "owning" or internalizing a competence is a capital investment that may not bring a return if the competence is so specialized that it's never or seldom needed, or if mere 'ownership' is insufficient for its use (it may need complements; it may need greater expertise in other parts of the organization; it may be embodied in individuals in whom the firm has invested, but whom then leave the firm). On the other hand, not owning a competence costs money in identifying, paying, and monitoring an external source of the competence – and even then, internal complements may be required.

4. How do organizations gain knowledge?

Belussi and Gottardi [2000] suggested public and organization-specific routes toward new knowledge:

- In "the public regime," governments spend funds on education, research, and development, and governments design incentives for individuals and organizations to engage in knowledge generation. Governments also lay the regulatory framework for firms' ability to lay claim to intellectual property, including, in some settings, knowledge originating in the public or common realm [Jessop 2000].
- Firms can gain knowledge and expertise from outside, through market purchases of equipment or specialized services, through observation and imitation, hiring new people, or formal collaborations. Nonaka et al. [2000]

reviewed the well-rehearsed argument that knowledge transactions are difficult to handle through a pure market, because the utility or value of knowledge is uncertain (at least to the buyer), the transmission of much knowledge has a tacit component, and the production/use of some knowledge represent a pure public good (high cost of production, low marginal cost, indivisible in provision or difficult to appropriate full returns).

• Firms can work internally on technical development, systems improvement in finance, marketing, procurement, and generating systems for continuous process monitoring and improvement. Despite the cost of such internal development, this ability to develop and deploy new systems, and to assess their value, is key to sustainable knowledge and competences. Individuals within the organization gain capability and confidence, and the resultant knowledge is unique to the organization [Carlsson and Eliasson 1994; Nonaka et al. 2000].

Cooke et al. [2005] surveyed 455 smaller firms, grouped into five sectors, across all 12 UK Standard Regions. The authors asked questions about the firms' economic and innovative performance, business collaborations, and managers' social connections – within and outside their local regions. From this, the authors extracted relationships between SME performance and inter-firm connections (what they called firm-specific social capital), and between SME performance and aggregates of social capital within each region. They found that individual firms' connections matter for their innovativeness. "Specifically, innovative firms tend to make greater use of collaboration and information exchange, to be involved in higher trust relationships, and to make greater use of non-local networks" [1074].

Organizations that recognize the importance of new, unique competences strive to create a context in which tacit knowledge is shared and participants share frameworks through which they turn information into knowledge [Howell 1996]. Nonaka et al. [2000: 3] posited

that individuals and organizations have a potential to grow together through the process of knowledge creation. Organization is a place where an individual transcends him/herself through knowledge creation. When individuals interact with each other at such a place, [each] transcends [his or her] own boundary.... Creating knowledge organizationally does not just mean organizational members supplementing each other to overcome an individual's bounded rationality, as is the case in the division of labor in production. In organizational knowledge creation, one plus one could be more than two. It can be also zero, if interactions among individuals work negatively.

5. What roles do individual workers play – what matters in preparing workers for these roles?

Individuals make use of prior education, training, and experience to turn tasks, information, and experience into knowledge – whether their tasks entail product development, process improvement, shop-floor production or service, marketing, or supply-chain management. We receive information all day long, and have to create useful knowledge from our experiments and experiences.

However, different mixes of backgrounds matter for firms in different sectors. Hussler and Ronde [2005] used data on firms reports of different types of competences and government-collected data on the prevalence of particular types of training and scientific expertise within regions. They concluded that firms in different sectors rely on different competences and fare well in regions with different educational policies.

Different employers have vastly differing expectations of how knowledgeable and capable workers should be, with respect to the processes with which they work. Taylorist "scientific management" entails a fine division of labor that attempts to remove most skill and *á priori* knowledge from low-skilled jobs (such as component assembly, customer call centers, fast-food sales). These expectations depend on industry and national norms and employee turnover. These differences imply different levels of education and experience required for entry, and different commitments to worker training. Thus, national regulations that affect labor turnover (very high in the US, very low in Germany, very low for segments of the workforce in Japan) also affect the willingness of employers to provide training. Labor stability and tenure result in more returns from employer-provided training, and greater importance in keeping long-term employees interested and challenged [Stern 1996; Freeman 1988; Sorge and Streeck 1988; Jessop 2000; Gertler 2004].

Rapid increases in employee mobility (whether motivated by employers or employees) reduces employers' already-low willingness to invest in worker training. However, it increases workers' desire for continued training [Stern 1996]. One result of this is indeed the increased willingness of workers, especially knowledge workers, to bear the time and out-of-pocket costs of training (community colleges, online courses, advanced degrees). This has increased the demand for evening, distance, and professionally oriented programs by colleges, universities, product vendors, and for-profit training centers: another example of the externalization of costs from producers onto workers and their households, and onto the public sector. It also makes it very important that workers be able to get advice on reasonable training choices and options – advice that is hard to get, since the colleges and universities don't know what will be needed in the future. Does this result in misallocation of resources spent on education and training? Does this over-steer workers toward general programs?

6. What roles can/do regional milieux play in the creation of organizational knowledge and competence?

No organization can internalize all relevant competences – at least, not in a rapidly changing sector.³ The external sources of competence, noted in III.4. above, promulgate and benefit from the same synergy that Nonaka et al. [2000] prescribed for knowledge-creating organizations. The production, implementation, and (when possible) dissemination of tacit knowledge is a key source of competitive advantage in a world where codified knowledge is spread through education, media, and travel, and codifiable knowledge is spread through the efforts of (among other things) paid consultants [Maskell and Malmberg 1999].

Gertler [2004] presented three challenges that tacit knowledge presents for firms attempting to compete on the basis of unique, tacit knowledge: (a) producing, (b) appropriating, and (c) reproducing/replicating/sharing tacit knowledge. Among the strategies for overcoming these challenges are:

- clustering key activities in "learning regions";
- establishing and encouraging "communities of practice" within and across organizations across organizations, proximity helps for both logistical and what I'll call cultural reasons; within organizations, organizational closeness can perhaps substitute for spatial proximity;
- establishing "knowledge enablers" whose span of dissemination spans boundaries within large organizations.

Cooke [1999] argued that subnational regions complement global linkages as the geography of the new economy, because of the:

- decreasing autonomy of national economic policy in the face of freer trade, global financial markets, and international companies' investment and sourcing;
- decreasing national basis of firms as production units large firms (and their networks) are global; small firms are either local or are networked to be intimate parts of global production/marketing networks;
- important determinants of the location of specialized, productive investment are often at the regional scale.

Thus, a region can be simultaneously a locus of shared communities of cultural and technical practice, a container of potential employees and support services familiar with surrounding sectors and actors, and a source for smaller firms to ideas far outside the individual entrepreneur's experience [Belussi and Gottardi 2000]. However, in the aforementioned study, Cooke et al. [2005] attempted to separate (a) individual firms' social and business linkages within and beyond the region from (b) levels of aggregate interaction among all firms and their managers within each region. They found that firms' self-reported performance and innovativeness was significantly related to their involvement in networks of social and business connection outside the firm, but not so related to the aggregate level of interactions across all firms in the region. Regional differences in connectivity reflect the fact that "certain types of firms (e.g., innovators or knowledge businesses) tend to make greater use of particular forms of social capital and, typically, there are greater numbers of these firms in the more favoured regions" [1074].

In other words, every region is not a rich milieu for every sector, which leads to the next question.

³ This is an arguable assertion. Ford Motor Company (during the middle third of the 20th century) and IBM (during the 1950s and 1960s) were very famous for industry dominance, technological sophistication, and nearly complete vertical integration. However, some industrial historians argue that these companies eventually lost ground because of obsolescence of their business models.

7. How does understanding regional milieux help us identify what regional assets are relatively fixed?

Whatever the characteristics of a rich milieu (section 6, above), those are also the characteristics that can yield sustainable advantage in a knowledge-based economy – by providing opportunities for capital investors to benefit from externalized processes of knowledge generation that are unique to the region and the sectors involved. Recent theoretical developments strongly suggest that "human capital accumulation and positive externalities induced by certain kinds of investment can propel an economy into a higher and permanent growth path" [Fitoussi and Luna 1996: 336]. These sources of advantage have different economic and political implications from other courses of profit: externalization onto the public sector, impoverished new entrants to the labor force, or degradation of the physical environment. Yet it is likely that investors will take advantage of all these sources of profit, as seems evident in the increasing reliance on public infrastructure and training throughout the knowledge-based economy.⁴

Table 1 attempts a simple answer to this question. Private capital (or in a mixed economy, mobile capital whatever the source) is what's required for any large-scale development and employment of local resources. The last five rows describe locationally fixed assets of regions, important to sustainable economic development of knowledge-based activity.

Asset or source of advantage	Mobility	Sustainable across generations?	Importance to knowledge- based activity
Public subsidy (tax breaks) ^a	extreme	perhaps	somewhat
Externalization of environmental costs	extreme	no	not very
Private capital	extreme	yes, so long as investors receive high returns	very
Inexpensive labor ^b	moderate	so long as interregional wage differentials exist	somewhat
Specialized labor	moderate	yes, so long as public, corporate, and/or household sectors invest	very
Sources of new knowledge	moderate	yes, so long as public and/or corporate sectors invest	very
Specialized suppliers and services	moderate	yes	very
Networks for communication and synergy of new knowledge	moderate	yes	very
Public infrastructure	none	yes, so long as public sector continues to invest	very

Table 1: Mobility, sustainability, and importance of regional assets for knowledge-based activity

^{*a*} Implies externalization of costs onto households or more heavily taxed businesses.

^b Encouraged by migration from low-wage or rural settings, government discouragement of labor unions, lack of a binding minimum wage; implies externalization of costs onto the public sector, the household, or low-wage workers themselves.

8. How can regions gain and hold knowledge?

Cooke [1999] and Florida [1995; 2002] generated similar lists of localized institutional arrangements can support continuous innovation among producers in the region:

• Localized networks of specialized producers

⁴ However, this is an empirically researchable question: for example, do private, profit-seeking firms make as much use of publicly supported training in rich milieux (successful, industry specific technology clusters) as in locations where government training and tax support major sources of capital attraction?

- Rapid communication of market needs, technological changes, etc.
- Reproduction of skilled, specialized labor.
- Organizational (and legal) norms that encourage what Dei Ottati [1984] refers to as soft infrastructure:
 - Cooperation through reciprocal agreements
 - Cooperation based on custom
 - Cooperation sustained by reputation
 - Cooperation provoked by competition
 - Cooperation integrated by trust.

9. In what ways can regional entities be active participants or even motivate such learning?

In their analysis of innovative economies, Cooke and Morgan [1998] recognized key roles for three types of actors: firms,

- ➢ governments, and
- intermediate associations" such as trade associations, chambers of commerce, labor unions, civic organizations many of which are intermediate not only in situation but also in purpose, serving to intermediate among firms, governments, and workers.

I would add a fourth complex sector,

higher education and research institutes.

Much of this paper has dealt with the first two actors. Intermediate associations or intermediaries come in many forms, and bear some greater discussion.

The university sector (public and private/not-for-profit) exists to provide the social and physical infrastructure for long-term research and the interdisciplinary interaction and context-setting necessary to turn research into knowledge and insight. In the US, unlike much of the world, higher education and basic research often co-exist in the same universities. However, these research universities are complemented by a wide range of two-year colleges (junior colleges or community colleges), colleges that grant baccalaureate and master's degrees, and for-profit organizations that provide courses and some degrees. Kim and Harrington [2004] found that the research and human-capital linkages of major universities are geographically far-flung, and are primarily with large firms and other universities. Community colleges provide education and employee training primarily for local employers, and have a very limited research program. Universities have such a complex set of roles that, as currently organized, they serve badly as key brokers of innovative activity: the motivations and reward structures are not compatible. Recognizing this, Nielsen [1996: 243] insisted on the importance of technological service institutes which "must be able to act as companies which deliver solutions to a sufficient number of firms, in ways that contribute to strengthening the firms... through intense co-operation with universities and government labs." Alongside (a) universities and (b) government research laboratories, service institutes round out what Nielsen calls "the knowledge and research system."

Knowledge-intensive business services (KIBS) are usually profit-motivated firms. However their functions include intermediation of new knowledge. "They provide expertise that represents the accumulation of knowledge from working for a variety of different companies and in different countries" [Bryson 1997: 108]. Bryson reported that the UK government has attempted to create an explicitly intermediate actor, by consolidating its technical and support services for SMEs into a network of private, but subsidized business-services companies, to provide for "one-stop shopping." However, in "telephone interviews with 825 SMEs… only 2% of companies stated that they would approach a Business Link company for advice" [107]. I wonder whether SMEs in Japan or Korea, given the pervasive success of government-industry cooperation, or in China, with its history of state control of enterprise, are more likely to avail themselves of publicly provided or publicly subsidized expertise?

10. What public investments and policies support and improve these processes?

Storper [2002] suggested "a new heterodox policy framework" [146] that promotes

- "networking among firms,"
- technology awareness and transfer,

- "public institutions that provide for industry- or region-specific labor training, for *strategic changes in the direction of training* [emphasis added], and that help workers to secure jobs" [147]
- support for early entry into promising research and production,
- supply of entrepreneurial capital and support services,
- cooperative or shared support services (also see Storper and Scott [1995]).

RED policy has increasingly recognized that residents and institutions are the "stickiest" regional assets. Rather than chasing and subsidizing private capital investment, State and local governments should attempt to draw residents into the labor force, subsidize their occupational attainment and further training, provide high-quality physical infrastructure, and catalyze mixed-sector forums for information sharing about human-resource needs. Education and training provided by secondary and two-year post-secondary institutions are the most important to calibrate to local needs, as these services are used almost exclusively by local residents and local employers.

"Governments" are constituted at international, national, provincial, and local scales, and operate through direct action and through regulating private-sector actions. "Markets do not exist or operate apart from the rules and institutions that establish them and that structure how buying, selling and the very organization of production take place" [Zysman 1994: 244]. Gertler argued that the key determinants and structural norms for the financing, operation, staffing, and governance of corporations are regulated by the national government or national-level finance markets. As we have seen, these processes have implications for the time horizons and rules under which investors use corporations to externalize costs.

By using a set of time-series for occupational change, IT adoption, and wage inequality in the US, Howell [1996] concluded that the increasing gap between American low-paid, hourly workers and its highly paid professional class⁵ is a result of

- tapping an increased supply of low-wage workers (increased supply of young unskilled workers, increased female LF participation tied to removal of social supports, etc.) and
- social policy that has removed governmental restraint on labor-market practices, much more than of
- decreased demand for workers without education and formal training.

Howell drew the implication that government actions to increase the education and skills of low-wage and unemployed workers will be insufficient to ease the wage gap – but that government must re-institute higher regulation for the operation of labor markets.

IV. CONCLUSIONS

Substantive conclusions

To encapsulate my argument:

- RED depends in on the attraction of capital resources to finance the employment of people and resources.
- Private capital moves across regions, sectors, and companies in an attempt to find higher returns.
- Returns are maximized both by externalizing costs to the public sector, households, or the future reducing sustainability.
- Returns are also maximized via the control of scarce resources in great demand: natural resources, new products, new processes.
- If we define organizational knowledge as the ability for an organization to make use of information to improve its operations, then increased organizational knowledge can be a source of sustainable profitability for capital and sustainable improvement for government.
- Organizations can increase this type of competence as a result of concerted efforts to integrate knowledge among members of the organization, to communicate codified and tacit knowledge among organizations, to work with public-sector sources of education, training, and knowledge production, and to develop intermediaries that broker knowledge and skills among organizations.

⁵ The average annual earnings of men, without high-school diploma, working full time, dropped by 20 percent in the 10 years after 1979. Over the same span, the ratio between the upper 10 percent and the lowest 10 percent of US employees grew from 3.6 to 4.4 for me and 2.7 to 3.8 for women.

• Some of these competence-building activities result in localized and sustainable advantages of particular regions for particular activities: sustainable regional advantage.

Researchable questions

In distinction to the generalized questions abound which this paper is organized, I would like to draw out some questions for which we can find empirical answers. For this presentation I'll focus on the questions that relate Western neoliberalism to the context of Chinese metropolitan regions.

- 1) What are the current trends in these motivations for domestic and international capital movement to Chinese cities:
 - a. availability of land, basic labor, or resources, and the government subsidy of capital investment and corporate operations?
 - b. local availability of scarce resources, such as extracted natural resources or highly specialized labor?
 - c. regular and deliberate creation of new ideas and ways of operating that are unique to the local region?
 - d. central government decisions about the location of investment?
- 2) Do Chinese local systems for knowledge generation and dissemination (what we might call regional innovation systems [Cooke 1998]) vary according to the degree of local involvement by international actors?
- 3) What are the institutional arrangements for occupational training: internships, apprenticeships, technical colleges? Who bears their costs (students, workers, families, employers, governments)? Do these arrangements vary across the major cities? Coastal versus interior regions?
- 4) What form do knowledge intermediaries (Cooke and Morgan's "intermediate associations") play in Chinese industrial sectors? Are these intermediaries constituted at local or regional scales?
- 5) How likely are small enterprises in China, with its history of state control of enterprise, to avail themselves of publicly provided or publicly subsidized expertise?
- 6) How much overt metropolitan or municipal competition is there for capital investment? Is this manifested at the national, political level or in direct negotiation with potential corporations or state agencies? What are the usual points of negotiation: tax rates, labor training, land acquisition, public infrastructure?

Methodological concerns

Much of the research cited and suggested in this paper entails identifying institutions and institutional practices. By nature, institutions intersect, overlap, and contradict each other: indeed, it is the unique mix of overlapping institutions (regarding employee mobility, internalization of research, mix of firm sizes, government support for research; or education, training, employment tenure, unemployment insurance) that defines and distinguishes one region from another. Empirically identifying regional institutions is difficult. Since the key importance of institutions is the way they influence individual and organization behavior, it's worth noting Block's three sources of social influence:

- "individual choices (which may or may not be structured by markets and the single-minded pursuit of economic rationality),
- state actions that structure an economy (by, for example, creating the institutions that enable the working of markets or other systems of production and allocation), and
- social regulation 'the social arrangements that condition and shape microeconomic choices,' and through which 'individual economic behavior is embedded in a broader social network.'" [Block 1990: 42, cited on Gertler 2004:78].

One key to identifying institutions and their interaction is to perform comparative research in similar settings: for example, metropolitan areas with similar sectoral structures, in the same country

From a trade theory/ local development perspective, each region needs to develop comparative advantage in knowledge-intensive activities based on:

- its unique configuration of resources efficiency insists that these resources be used to their mutual advantage; and
- institutional arrangements (organizations; inter-organizational formal institutions, rules, and public policies; informal norms such as communication and cooperation) influence the ability of individual agents to maximize the use of the region's resources.

In other words, it is necessary to identify regional assets that are relatively fixed and public investment and policies that support and improve those assets.

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APPENDIX A



http://www.expand2nevada.com/walkingwounded/pdfs/press_kit.pdf

For Immediate Release Contacts: Jeanie L. Ashe, 800-336-1800 October 2004 Julie Ardito, 775-829-3706 James Woodrow, 702-254-5704 Reasons to Move or Expand Your Business in Nevada

Tax Climate

- No corporate income tax
- No personal income tax
- No unitary, franchise or inventory tax
- No inheritance tax
- No estate and/or gift tax

Workers' Compensation

- Nevada's workers' comp rates lowered an average 9.1 percent in 2004
- California's workers' comp is double the national average
- California's workers' comp reform promised 20-30 percent savings to companies
- when in reality businesses have only seen approximately 9-10 percent savings

• California companies are paying more workers' comp insurance and employees are receiving proportionately fewer benefits

Utilities

• Nevada's power costs are on average 28 to 36 percent lower than California's Labor

• Nevada is the second in the nation to have the highest job growth rate for the past five years

• Workforce of nearly 1.2 million

• In August 2004, Nevada's unemployment rate was four percent well below the U.S. unemployment rate of 5.4 percent and California's unemployment rate of 5.8 percent.

Central Access to Major Markets

• Situated at the hub of the 11-state western region, Nevada is ideally located for companies seeking cost-effective, rapid access to major domestic and international markets

• With a market area of 51 million people within one day's drive, companies can benefit from Nevada's low cost tax and operations environment while accessing California, the world's sixth largest economy

• Nevada is strategically positioned for access to California's vast technology resources while escaping the costs and barriers of doing business in California National Ranking

• Nevada is ranked number two in the nation as the best place to grow a business according to the Small Business Survival Index 2003. Added to the lists of lower taxes, electricity rates and work comp rates, Nevada has lower health care costs and fewer bureaucrats to impede the process.

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