

Consumption-Driven Urban Development

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Abstract

Economic, political, cultural and environmental distinctiveness may attract high quality workers and firms as well as reflect a region's export viability. We hypothesize that local consumption activity can be a source of such distinctiveness and thus of long-term growth and stability and that specialization does not reflect export activity alone. Using skewness across metro regions in the US as a distinctiveness measure, we show that some occupations are more lopsided in their distribution than others. Since some highly skewed occupations like health care support workers and artists, media, entertainment and sports workers are known to be chiefly local-serving, their regional significance can be attributed to variations in residents' local consumption spending rather than export demand. We conclude that economic development practitioners should weigh the considerable investments, including subsidies and tax incentives, made in wooing and retaining presumptive export base activities against those that might target distinctive local consumption activities (consumption base, occupational analysis).

Most scholarship by economic geographers and regional scientists assumes that urban economic growth is driven by change in the export base, i.e. locally-produced goods and services that are exported. In this paper, we argue that the consumption base of urban regions, i.e. goods and services that are locally produced and locally consumed, can also be a source of regional job growth and stability. Our argument critiques both the logic of the export base model, echoing some long-standing caveats, and the conventions used to operationalize it, particularly the short cut in which high concentrations of jobs in certain industries are used to proxy for export activity. We propose that urban analysts use a related measure, the coefficient of localization across metro areas, as a way of detecting distinctiveness in economic activities among metros and without assuming that highly distinctive ones reflect export rather than local orientation.

We argue that the local consumption base can be a source of growth for several reasons. First, changes in regional tastes and preferences and thus in consumer spending in favor of goods and services that are locally produced can produce job growth without any expansion in the export base. This phenomenon is much broader than economists' notion of import substitution. The latter generally refers to regions' efforts to produce for themselves the same goods and services they previously imported. However, the demand for output from local consumption-oriented sectors may also rise when residents shift their purchases to new types of goods and services that are more likely to be produced locally. Such shifts can be facilitated with development policy and strategic investments in the local consumption base. We use the cases of casinos, arts and cultural activities and health care as examples.

Second, growth in such sectors may be amplified because the composition of inputs in certain local consumption sectors may be more labor intensive and may create jobs filled by people whose propensity to spend locally is high, because of the structure of their preferences. Again, examples from the arts and cultural and health care sectors are used illustratively.

Third, innovations that eventually develop into new export sectors often begin as local-serving experiments. A product or service that is pioneered locally, with local support and feedback, may blossom into something attractive to consumers or producers elsewhere, enabling job growth and diversifying the community's economic base. It is plausible that many such specializations never materialize when economic development resources are denied to apparently local-serving start-ups.

Fourth, superior local consumption base offerings help to attract skilled workers, managers, entrepreneurs, and retirees to choose the region as a place to live and work. They bring their human capital, companies, and retirement incomes into the regional economy, increasing its size and diversity. In the first part of this paper, we develop these arguments, acknowledging contributions by others to these insights.

As an empirical probe of the significance of the consumption base, we examine the degree of skewness in major occupational groups across the largest 50 metros in the US from 1980 to 2000. We designate occupations with low levels of skewness as local-serving, but we do not assume that those with high levels are export-oriented. We simply infer that uneven distributions of jobs in occupational groups connote distinctive productive structures across the metros. For occupational groups that are over-concentrated in some metros and relatively absent in other, we explore the plausibility of

differentiated consumption patterns as causal, relying on secondary and qualitative evidence. For instance, we treat production occupations (craft and assembly workers) as export-oriented, based on extensive study and good data on export content of the industries in which they are concentrated. But other highly skewed occupations, such as health care support workers and artists, media, entertainment and sports workers, are known to be heavily local-serving outside of exceptional cases such as the Mayo Clinic-hosting Rochester, Minnesota and the cultural industries poles of New York and Los Angeles. Differential presence of these occupations across metros as a whole, we argue, must in large part be attributed to variations in local consumption spending on the part of residents.

We find that the non-distinctive occupations grew more than twice as fast as the distinctive occupations in these metros over the period. While most of the distinctive occupations increased their skewness over the period, most local-serving occupations decreased their uneven distributions overall. Remarkably, then, large US metro economies were more alike in occupational structure in 2000 than they had been twenty years earlier. We reflect on secular trends in incomes, household structure, labor force participation, and tastes and preferences that partially explain the dramatic growth and homogenization of large portions of the local-serving sector.

We conclude that the local consumption base consists of three groups: clearly local-serving activities, some apparently local-serving activities that are mixed in orientation (e.g. managerial and business/financial operations), and distinctive activities whose significance is at least in part explained by unique local patronage patterns. Our findings and interpretations have important implications for economic development

practice and resource investments by metropolitan regions and cities. Practitioners should weigh the considerable investments, including subsidies and tax incentives, made in wooing and retaining presumptive export base activities against those that might target distinctive local consumption activities. The latter could include nurturing capacity that might result in greater capture of the local dollar or develop new consumer-oriented products and services, using the local market as proving grounds. More broadly, local spending on parks, recreation, cultural facilities and programming, and good urban planning, as inducements to attraction and retention of residents, may be as important to economic development as export-oriented programs.

The Neglect of the Consumption Base

The dismissal of the consumption base as an independent source of regional growth is an analogue of the hegemony of export base theory. In economic development, economists and practitioners have long treated the export base as the basic engine of area development, for spatial units as large as national economies and as small as tiny rural towns. Ever since Douglas North's (1955) elegant statement of it, indebted to Harold Innis' (1940, 1956) staples theory, the export base argument goes more or less as follows. In a trade-integrated world, regions outside of one's own are superior producers of many goods and services locally consumed, and in order to be able to pay for these imports, the region must specialize in exportable goods and services where they have a competitive advantage.

From the beginning, the theory had its critics. In his famous debate with North, Charles Tiebout (1956) pointed out an obvious logical flaw in the theory: the world

economy as a whole does not export. In addition, a regional economy's ability to provide for itself increases as its income from exports grows, resulting in import substitution. Tiebout also argued that people have different consumption patterns in different regions, complicating the model's application. Making the case for endogenous rather than exogenous growth theory, Tiebout harkened back to Adam Smith, positing that an elaborating internal division of labor could spur regional growth without export growth. His theory was brilliantly applied by Diane Lindstrom (1978) in her famous book on the early Philadelphia region, where she showed that a relatively autarchic region grew robustly from deepening internal synergies between diversified farming and city manufacturing industries.

Despite consistent warnings about the weakness of the theory (Blumenthal, 1955; Tiebout, 1962; Williams, 1997; Malizia and Feser, 1999; Markusen 2007), export base ideas drive much of the targeting and priorities in state and local economic development efforts today. Over time, interest in import substitution has waxed and waned, leaving the export base emphasis unquestioned. Yet cross-sectional and time series empirical exercises have failed to find a clear relationship between exports and aggregate growth (Jung and Marshall, 1985; Ghartey, 1993; Sharma, Norris and Wai-Wah-Cheung, 1991). In the 1990s, economic geographers and regional economists developed a new corpus of endogenous growth models, most recently summarized in Aghion and Howitt (2007), but these have not been subject to testing as competitors of export base models. Although in practice, the better applications of export base models and multipliers take into account nuances such as leakages in second round expenditures and labor intensity, wage levels and propensities to consume of export sectors, very few economic development texts or strategies seriously consider the

consumption base as a source of growth. That is the project of this paper, and we now turn to causal arguments about the consumption base potential.

Local Consumption as Import-substituting

Export base theorists have long acknowledged that in theory regional growth can result from import-substituting activities. In fact, it has long been observed that in large cities, the local consumption share of regional employment is higher than in smaller cities. As cities grow, they break through minimum efficient cost of production barriers, enabling new businesses to offer consumer goods and services. Large retailers have market threshold formulas that guide them in siting stores in growing communities. Small towns that cannot support a bowling alley, a live theater company, a healthcare clinic, or a semi-professional sports team may expand to a population and employment range that will support such enterprises. Applied since the 1960s, minimum requirements techniques that surveys similarly-sized cities to find the lowest employment level necessary to satisfy local demand confirmed the tendency for non-basic to basic ratios to rise with growth and size (Pratt, 1968), but these, too, assume that all employment in excess of the minimum requirements are related to external demand rather than differential local spending.

Using too literal an application of export base theory and multipliers, cities often underestimate future total employment effects associated with new large enterprises. For instance, in the 1970s, the city of Boulder, Colorado, underestimated future expansion in its local-serving sector following the building of a new IBM facility employing 5000 people. The City had applied its current multiplier, based on the existing ratio of export to

consumption activity, to estimate additional housing and commercial demand. But IBM added so much employment that new import-substituting sectors could now operate profitably in the local economy, greatly increasing overall population and job growth. This unanticipated explosive expansion kicked off one of the most virulent anti-growth episodes of any city in the country. Today, Boulder's greenbelt, an ample swath of undeveloped public land purchased by the city in the 1970s and managed for recreation and wildlife, is an amenity that has greatly increased its allure as a place to live and work.

In this example and in the literature generally, import-substitution has been conceived as new local businesses (or branches of external businesses) supplying goods and services that existing residents were previously buying elsewhere. For instance, in his seminal work, *The Community Economic Base Study*, Charles Tiebout argued that import substitution was a neglected issue: "Import substitution implies producing locally some of those goods and services which were previously imported" (1962: 67). Economists have dismissed the consumption sectors' potential for employment gains because trade theory argues that spatial divisions of labor are a superior use of resources. By implication, few attempts to supplant imports will work.

However, import substitution can be thought of in a much broader vein. If new consumption activities are offered in communities where they did not exist before, they may divert local consumer expenditures from one set of goods and services to an entirely different consumption mix. Classically-constructed import substitution theories assume that consumption tastes and preferences are fixed. But new norms can be created through innovation and marketing efforts that offer people expanded consumption possibilities.

Casinos are a good example of how changes in local consumption options can spur development by shifting discretionary income expenditures towards local enterprises. The Fond du Lac Ojibwe band's Black Bear casino in northern Minnesota was built on an interstate freeway between the Twin Cities and Duluth, aimed at tourists. But a very large portion of its growing patronage over the years has come from Ojibwe and non-Indian people living in surrounding county who enjoy the activity, sociability, and good food available at the casino, an alternative to the sour-smelling bars and greasy spoon restaurants in their small towns. People who would otherwise drive farther, to Duluth for instance, to shop at malls and spend their discretionary incomes on purchases of durable goods such as new TVs, autos, and other household items, are instead deferring consumption of such imports to spend more time and money at the casino, often multiple times a week. They may not spend much per visit, but it adds up.

Gambling is a very labor-intensive service activity, employing many people and, at least for this casino, lifting Native Americans out of poverty. With their profits, the Fond du Lac band has built a beautiful community college that serves both Indian and non-Indian people, a K-12 school, three community centers, senior care facilities, and a state-of-the-art healthcare clinic that has purchased and displays the work of contemporary Ojibwe artists. It is diversifying into gas stations and buying up land the reservation lost in former decades to questionable land deals.

Arts and cultural facilities play a similar role in other large and small communities. Live theater and music performances, local art fairs, and opportunities to take lessons in art forms or rent space to do art work can increase the share of the local dollars that go into artists' and art organization's bank accounts, substituting for DVDs,

CDs, and non-arts-related purchases of commodities and services from elsewhere. In New York Mills, Minnesota, a visual artist, John Davis, moved to an abandoned farmhouse outside of this declining Finnish farming community three-and-a-half hours northwest of the Twin Cities (Markusen and Johnson, 2006: 91-94; Cuesta, Gillespie, and Lillis, 2005: 36-40). He started an artist's retreat, believing that visiting artists would bring creative ideas into the region while the idyllic rural atmosphere would enhance their work. Davis then sought out "the artist in every person in the county" in a campaign to convince community leaders, the city council, and a local landowner to renovate an 1885 brick building on Main Street as the New York Mills Regional Cultural Center. He found farmers whose oil portraits were stashed away in their barns, and people who had never considered choir singing as art work—many such people came to support the development of the Center, which opened in 1992.

By the mid-2000s, the center hosted six to eight gallery exhibitions a year, some showcasing emerging local artists or historic community photos, and many performances. Visiting and area poets, authors, and storytellers share their work through readings and workshops. Traveling theater, music, and dance groups perform in the gallery. The center helps local artists overcome the disadvantages of working far from a major city. A monthly forum brings together area artists to network and critique each others' work. In addition, the Center works with other organizations to educate artists about the business side of the arts. Visiting artists offer events such as jazz improvisation workshops, build public sculptures with community members, and interact with community youth. People travel from miles around to attend events and participate in workshops.

A little over a decade later, the New York Mills Cultural Center acts as a community and tourist hub. A tractor emblazoned on the New York Mills water tower heralds the town's identity as “cultivating the arts.” By the year 2000, the tiny town’s population had grown to 1200, twice its pre-center size. Between 1992 and 1997, 17 new businesses opened and employment increased by 40%. The downtown landscape has changed dramatically, with a new medical clinic and renovated storefronts replacing the abandoned buildings. Thus a local commitment of development dollars has resulted in a facility that captures local and regional consumer expenditures as well as enabling local artists to develop their careers.

Other consumption activities are candidates for job creation. The construction of nursing homes and senior apartments in smaller cities has stemmed out-migration of the aging to other communities. Fostering local healthcare clinics may achieve the same result, raising demand for related retail services such as pharmacies (Markusen, 2007; Wenzl, 2003). In larger cities, these same dynamics are at work – they are just harder to see. Expanded arts, entertainment, and healthcare capacity help consumer dollars stay in town. Recent “buy local” sentiments, motivated by environmental concerns (heavily polluting production in countries lacking regulation and energy-intensive trans-shipment), may result in import substitution as well.

These cases show how new investments in local consumption-serving activities can meet latent demand for new types of goods and services, a demand that would be effective if the opportunity to participate were offered. This form of local consumption-focused growth can be accommodated within the export base model by expanding the notion of import-substitution, though in our view, this is an unnecessarily cumbersome

way of dealing with the phenomenon. We prefer to make the argument more simply: that selective local-serving capacity investments can capture local consumer dollars and create jobs and multiplier effects on their own merits, without reference to the export/import divide.

Macro, Equity, and Fiscal Dimensions of Consumption Base Expansion

The potential for some local consumption sectors to generate added jobs and incomes is not confined to the simple shift of consumer spending from imported to local goods and services. The expanded local activities may in turn have higher multiplier effects and/or superior equity outcomes. The impact hinges on what the business owners and workers in the local consumption sectors are in turn doing with their incomes. This is also the case with export-oriented local production, and good export base models figure such effects into their multiplier calculations.

Workers in some occupational groups may be more likely to spend their incomes locally than are others. Some consumption (and export) base activities may employ people with a strong preference for goods and services with low local content, while others may employ those with high local content spending patterns. Professional athletes and performing artists make an interesting comparison. The mounting of professional sports event, a mixed locally-oriented (ticket sales) and export-oriented (advertising revenue) activity, involves fewer direct employees and more indirect and often external-to-the-region expenditures--for trainers and training camps, transportation services, and personnel and hotel services at out-of-town games. In contrast, with the exceptions of travelling Broadway plays and Hollywood/Nashville-based music acts, most artists who

perform in a metropolitan region live there as well. They are apt to spend more incomes locally, including on ongoing music, dance, and visual art lessons and space.

Furthermore, performing artists are well known to be significant patrons of other arts activities, so that larger shares of their incomes are cycled through a mainly local arts economy.

The labor intensity of added consumption base activity is also important, as is its potential to displace other local employment. Citizens often read in the newspapers about the numbers of new jobs created by large, publicly subsidized retail outlets, clearly consumption-based. But these are often not accompanied by a forecast for induced demand or an appreciation for the employment they will displace at other local retailers. For instance, a new Bass Sports or Cabellas may appear to employ a large number of retail workers, albeit at modest wages, but much of what the consumer spends there immediately leaks out to pay for the merchandise imported from outside the region, much of it from low wage countries. The induced effect is very small. Furthermore, these stores, aided by subsidies, may out-compete existing small sports shops whose job losses must be subtracted from the apparent gross job creation. In addition, while small sports store owners respnd much of their net earnings in the region, the owners of Bass and Cabellas do not.

Other locally-consumed services such as health care support, home care, and child care are quite labor intensive, so that a large portion of the consumer dollar spent on these activities goes directly into local wallets. For instance, consider a suburban community deciding between a new Walmart and a comparably sized, locally-owned, for-profit nursing home on a particular site. The nursing home spends a larger share of its revenues

(some of which come from public sector entitlements or external asset income) on labor and employs a larger share of professional staff (especially nurses), and profits from its operations stay in the community, while the Wal-Mart operation spends its revenues on low paid local sales workers and external shipping costs, commodities, advertising, logistics, and higher end management from outside of the community. Furthermore, its profits flow to outside owners. Wal-Mart workers are also more apt to spend a larger share of their incomes on Wal-Mart products, dollars that in turn flow to outside commodity producers, shippers, and owners.

Local versus export-oriented development strategies also have income, equity, and fiscal implications. For instance, new restaurant and consumer practices (like buying greens, mushrooms or free range chicken grown by local farmers) recycle local income to bolster middle class incomes. The slow food movement, in which people favor unique locally-owned restaurants and savor their food at a leisurely pace instead of patronizing fast food franchises, supports more local entrepreneurs and tipped wait staff compared to the low wages paid to fast food workers and outflow of expenditures to multi-national corporations and suppliers of frozen food stocks from far away. Many communities are realizing that the low wages paid by multi-national retailers, often heavily subsidized via tax incentives and other subsidies, are further drawing down on state budgets because these working poor qualify for food stamps and the earned income tax credit (Dube and Jacobs, 2004; Mattera and Purinton, 2004).

The complex ways that various economic development projects affect overall urban employment and livelihoods is akin to the employment effects debated by economists around minimum wage hikes. Despite the predictions of micro-economic

models that a higher minimum wage will result in lower employment, in every case of either national or state increases over the past two decades, economists have not observed a decline in employment, all other things accounted for (Pollin et al, 2008). This is because standard micro-economic models fail to take into account the specific consumption behavior of low wage workers, who spend more of their wage increments quickly and locally, creating new demand that makes up for the slight negative movement back up the conceptual demand curve (Markusen, Ebert, and Cameron, 2004a, 2004b). Similarly, rural residents have been found to have a high propensity to spend non-employment income locally (Kendall and Pigozzi, 1994). To date, empirical evidence on differential consumer spending patterns of people by occupation or community type has not been harnessed to the projection of overall employment effects of economic development alternatives.

Accurate multipliers forecasting total employment effects of new economic development projects, whether export or local-serving, must account for activity-specific induced effects, occupation-specific consumption patterns, compensating employment displacement effects elsewhere in the city or region, and differential fiscal impacts from subsidies and welfare entitlements spent on low wage workers. Without these, base multipliers are unreliable for evaluating prospective projects and trade-offs.

Dynamic Evolution from Local-oriented to Export Activity

Few theorists have treated local consumption sectors as a source of longer-term growth and diversification, although Jane Jacobs' (1984) vision of early urban development contains the seeds of such a view. In the contemporary practice of export-

oriented economic development, the focus is almost wholly on attracting new branch operations that will export goods and services and retaining those existing businesses whose viability is in question. Even programs aimed at entrepreneurship use screening criteria that tend to eliminate new businesses aimed at local markets. Such conventions are short-sighted.

In an original argument about the Portland economy, Cortright (2002) points out that distinctive local consumption preferences sometimes help nurture new products and services that later bloom into export-oriented sectors. He offers as an example the evolution of a taste for distinctive microbrewed beer, at first developed by small breweries serving local customers (and likely substituting for imports of Millers and Budweiser). Over time, as strong local demand enabled them to move through experimentation and developmental stages, these brewers were able to devote more resources to marketing and logistical investments to reach consumers farther afield. These and other local consumption-oriented enterprises have been able to use nearby residents as test-beds for innovation.

Local innovations can propel a community into export-based services as well. Cultural and entertainment industries often pioneer their offerings to locals and then parlay their expertise and scale into attracting tourists and new skilled residents. Many Broadway shows originate in works created by regional theatre groups. The Ozark town of Branson, Missouri, now calls itself, somewhat wishfully, the live music capital of the world. It began its entertainment trajectory in the mid-1930s with Ralph Foster's *Ozark Jubilee*, an exceptional program on local KWTO radio that gained a regionally widening audience. A small resort town that had already attracted a modicum of artists,

craftspeople, and retirees, Branson town leaders harnessed these skills to build a huge, lighted Adoration Scene on the city's bluff in 1949; in the same year, a local couple bought a cave and began hosting square dances. A decade later, the first live music show, the Baldknobbers Hillbilly Jamboree, opened, as did several other theatres and stages (Branson, 2007). For its first few decades, these served mainly a regional population, but in the 1980s, as several celebrity country and western musicians relocated there permanently, Branson became a nationally-known tourist destination.

Most retailing and wholesaling empires first relied on a local consumption base. For instance, using his mother's recipe, struggling entrepreneur Howard Johnson in 1925 produced an ice cream with butterfat content high above any marketed at that time. He sold it at stands along the Massachusetts shore, making enough profit to begin building ice cream shops and then restaurants in the region and elsewhere (Wells, 2007). Borders Books was founded by two brothers, Tom and Louis Borders, who opened an 800-square-foot used bookstore in Ann Arbor, Michigan, a book-loving academic community, in 1971. They figured out an inventory system that could be tailored to local patron's purchasing patterns and began building branch stores in the region. Soon after, they founded a sister company, Book Inventory Systems, to be a wholesaler to other independent bookstores, offering them the advantages of their customized inventory system. Eventually, they brought in new management to build stores nationally (Borders Group, 2007). These firms, subsequently major retailing giants, started by catering to a distinctive local market and used that experience to learn and amass capital to expand into export markets. While much of their current corporate employment is elsewhere, their home communities retain central management operations that employ many people.

Consumption Base Enhancement as Resident and Business Recruiter

One of the great ironies of urban economic development practice is its showcasing of urban cultural, environmental, and recreational attributes in promotional literature, but its tight-fistedness when it comes to investing resources in such amenities. Companies trying to recruit talented employees from elsewhere or convince local university graduates to join their ranks often hand them the city's top weekly arts and culture magazine, take them to the an area theater, jazz performance, or professional sports event, and tour them along their new riverside bike paths. Cities bidding for companies do the same in their brochures and pitches to location specialists and firm managers.

Although the significance of these amenities as deal-makers is well understood in the economic development world, there is little hard evidence to demonstrate just how important they are in practice. Surveys of people's preferences for long lists of amenities generate wildly different rankings. For instance, respondents to quality-of-life polls rank clean air and clean water much higher symphony orchestras and professional sports teams. But there is no common methodology for such surveys, certainly none that would enable us to translate such rankings into verifiable gains in establishments, employment, and incomes on a city-by-city basis.

Economists and geographers have recently stressed the significance of living preferences of skilled workers as an important determinant of economic development (Lloyd and Clark, 2001; Florida, 2002; Markusen 2004; Storper, 2006). Demographers studying migration and differential growth patterns have generally assumed that people follow jobs rather than vice versa, despite the elegant posing of the "chicken or egg"

question by Muth (1971) decades ago. As a result, only firm industrial location has been considered important for understanding regional competitiveness, not worker location (Markusen and Schrock, 2008, Ch. 7).

In the longer run, there may be simultaneity in the relationship between the nurturing of distinctive local consumption capacity and location decisions by managers and workers. Certain consumption-based activities may also be skewed across metro areas because of large minimum economies of scale in their production. Professional sports, opera, and elegant restaurants, for instance, involve activities that require a fairly large concentration of consumers to cover their fixed costs – see, for instance, Blau (1989) on why opera is concentrated in the largest cities. Only possible in larger urban centers, these high minimum-scale activities in turn attract residents for whom their products and services are valued quality-of-life factors. Glaeser et al (2001) argue that cities are efficient loci of consumption activities and that their roles as centers of consumption are understudied. They point to higher rents paid by people of equivalent wage levels in high amenity cities than in lower amenity cities, a phenomenon they infer to be evidence for the significance of the consumption sector.

Interest by city and small town leaders in putting forward a distinctive face is growing. It was not long ago that many smaller towns bragged that they had what every other town has--an interstate freeway interchange, a hospital, a Best Western and a Wal-Mart, for instance. For larger cities, it would have been a chamber music orchestra, a modern art museum, state-of-the-art sports stadiums, and a convention center. But increasingly, cities are trying to distinguish themselves as special places to live, work, and

visit – the distinctive character of Nashville and Branson, for instance. This theme of distinctive identity creation is explored at greater length in Markusen and Schrock (2008).

Distinctiveness in Local-serving Activities

Is the local consumption sector a significant producer of distinctive job concentrations? To explore job growth in both secular (i.e. ubiquitous) and distinctive local-serving sectors over the past two Census periods, we looked at changes in employment by occupational group for the fifty largest US metros over a 20 year period, revisiting data we had used to identify distinctive cities elsewhere (Markusen and Schrock, 2006b). Using occupation rather than industry to analyze employment has the virtue of exploring what workers do rather than what they make (Thompson and Thompson, 1985; Feser, 2003) and highlighting human capital development strategies (Markusen, 2004). Occupational analysis, especially when used with industry analysis, produces important insights into regional productive structure (Barbour and Markusen, 2007; Markusen et al, 2008). We use the coefficient of localization (Isard, 1960: 252-54), indexed across the twenty-year period, to distinguish occupations that are heavily skewed across the metro set from those that are relatively evenly spread. This is a spatial distribution measure, not to be confused with the distribution of occupations by industry. In our former paper, we presumed the heavily skewed to be export-oriented, as is the convention, and the rest as local serving. In this analysis, we drop this assumption in favor of a qualitative assessment.

We consider those occupational groups whose coefficients of localization exceed 1.5 to be highly skewed across the metro set and thus evidence of distinctiveness in regional economies (Table 1). This involves a judgment call. We found a gap that could

be used as a breaking point between relatively high and low COLs, tempered by qualitative knowledge of regional demand patterns. Occupations thus assigned to the distinctive group include the traditional primary and secondary activities (farming, fishing, forestry, and production occupation), the high tech (science and computing), legal, engineering and architecture, and arts/design/entertainment/sports/media occupations. In addition, we include in the distinctive group the healthcare support and protective service occupations. (In Markusen and Schrock (2006b), these were inferred to be consumption base occupations.) In the empirical analysis that follows, tagging health care support and protective services occupations one way or the other does not result in major differences, although it does modify absolute differentials size. In particular, because these two occupational groups are so large, placing them in the distinctive set moderates the US employment growth rate differential between the two groups.

Possession of direct evidence on sales to local versus non-local markets is the only way to determine the extent to which over-representations of employment by either occupation or industry betokens export or local orientation. Some of the occupations we have identified as distinctive are clearly export-oriented, for example, primary (resource-related) and secondary (manufacturing) activities. Although some regional agriculture and fishery activity supplies vegetables and milk to area consumers, generations of studies and inter-regional trade data reveal most resource-based products are shipped to consumers outside of the region. Similarly, we know from existing analysis that the work of scientists, mathematicians and computer specialists is tied to regional exports of high tech, defense, manufacturing and software output (Markusen et al, 1986; Henry and Oliver, 1987; Markusen and Yudken, 1992, Ch. 6).

Others distinctive occupational groups are engaged in a complex mix of export and local-serving activities, including legal, engineering and engineering/architectural and protective services. In all cities, legal workers serve local consumers and businesses and are co-located with state and local justice systems, legislatures, and offices. In places like New York and Chicago, legal workers also serve the far-flung corporate operations in manufacturing, service and finance activities (Mollenkopf, 1987; Sassen, 1989). We would expect these latter functions to explain most of the skewness in the ranks of lawyers across metros, unless one believes that some urban and regional cultures are more litigious than others. Some states encourage class action suits, for instance, while others ban them, and conservative industry lobbyists and legal theorists rank states according to tort conditions and reforms.¹² Architects are highly concentrated in larger cities, though many are serving their immediate hinterlands and work for a mix of clients, some external, some local. Protective service workers may be more highly concentrated in newer, sprawling western cities where gated communities are common and where large shopping complexes require more private security service guards. Or they may be associated with certain concentrated export-oriented business service or military activities. The extent of local-serving activity in this occupation remains to be tested.

Occupations where local consumption patterns may explain a considerable portion of inter-metropolitan distinctiveness include the arts/design/entertainment/sports/media group and the healthcare support sectors. The arts economy literature offers excellent studies, historical and contemporary, that find strong and quite variable local consumption roles in arts and culture. Many US cities very early developed distinctive arts and cultural offerings oriented to local populations (Blau, 1989: Ch. 1). Blau notes that while New

York and Philadelphia had theatres, Boston's Puritan ethics suppressed them, and while Southern cities were precocious in several forms of live entertainment, they did not support museums and galleries. Immigrant cities became centers of cultural entertainment that did not require education, while cities with wealthy elites supported high culture. This pattern continued despite the rise of mass culture technologies. By the early 1970s, the variation among large urban places with respect to fairs, festivals, sporting events, and radio stations was greater than expected, less so for dance, drama, and musical events (Liu, 1976). Studies from the same era show that southerners were less likely to patronize the arts than people in other regions (Gastil, 1975; Marsden et al, 1982; Blau and Quets, 1987).

From 1970 into the 1990s, the emergence of the National Endowment for the Arts and the state arts programs that it spawned dramatically decentralized arts and cultural activity in the US by funding sustained investments in artists and cultural capacity across the US, chiefly oriented to local consumption. Shares of artists and cultural production in the largest cities like New York fell through the early 1990s (Heilbrun and Gray, 1993, Ch. 15). With the implosion of NEA funding during the politics of art crisis in the early 1990s, the increased significance of cultural industries reconcentrated artists thereafter through widening inter-regional migration rates (Markusen and Schrock, 2006a, Tables 2, 4). The export base portion of the cultural sector, then, became more important for artists in general and in cities like Los Angeles and New York over this period.

Often, city efforts on behalf of the arts are heavily targeted to tourists (connoting, again, exports), as if local patrons are not important. Yet tourism scholarship confirms the joint consumption of local entertainment (gambling, music, theater, sports, and other attractions) by visitors and locals alike, for both large urban and small rural places

(Fainstein and Gladstone, 1999; English, Marcoullier, and Cordell, 2000). Recent studies have generated hard data on the characteristics of attendees to large cultural institutions and art centers that distinguish visitors from locals. In separate studies on Los Angeles County (KPMG Peat Marwick, 1994), the Seattle Center (Beyers and GMA Research Corporation, 2006), and New York City's Museum of Modern Art (Audience Research & Analysis, 2006), researchers attempted to determine how many people attending cultural events came from outside the metro or state, how many came expressly to attend the particular public event or venue, and how much each party spent on average during its visit. The share of external cultural tourists in each study fell in the 10% to 20% range. Even these are over-estimates, because in some cases, attendees from surrounding counties were considered to be out-of-town visitors. Though the researchers found that out-of-town tourists spent about twice as much as local residents when they visit a cultural destination, the overwhelming share of visits are made by local residents or by visitors who came to the city for other reasons (conventions, family) and are as likely to stay with family and friends as at a hotel.

Do local cultural consumption patterns vary among cities and regions? Using national expenditure data, Beyers (2008) finds that US regions remain highly distinct in leisure time consumption. Survey data reveal that contemporary public arts participation rates vary among similarly-sized cities (Americans for the Arts, 1999; Schuster, 2000). For instance, ballet attendance rates ranging from 5% in the Philadelphia metro to 10% in Boston; for art museums, 38% in Detroit to 48% in Boston; for theater, 16% in Los Angeles to 21% in New York (Americans for the Arts, 1998: Table 31). These imply patronage differentials of 25 to 50%, which can make large differences to workers in

creative occupations. Thus although we do not have direct data on the extent to which metros' arts and cultural offerings are exported, it is probable that very large shares are locally consumed and that variations in output and employment among regions are explained in considerable part by differences in area consumption patterns.

What about the health care support sector? Could its skewed distribution across metros reflect export orientation? Our cautious answer is no. It is interesting that health care practitioners – doctors, nurses and technicians – are more ubiquitously spread among the major metros than are health care support workers (Table 1). The latter group contains large numbers of nursing aides, home health aides and aides to occupational and physical therapists whose services may be in much higher demand in metros with larger shares of retirees, while metros everywhere will likely have relatively comparable shares of surgeons, pediatricians, nurses, and other health care professionals since most people use highly local health care (Dartmouth Atlas of Health Care, 1996). Metro populations are becoming increasingly age-distinctive, with large numbers retirees choosing to live in places free of employment concerns and in response to particular amenities such as mild climate and affordability (Plane and Jurjevich, 2007). They bring with them their Medicare benefits and social security earnings, large shares of which are spent on health support activities. Spatial concentrations of retirees, in both large cities and small towns, may be explained in part by conscious strategies among urban planners and economic developers who understand the local-spending, job-creating power of this group's purchasing power.

Certain occupations identified in our analysis as local-serving may be surprising. Managers are an example. Managers, as associated with businesses, surely include many people who are associated with export-oriented activity. Yet the distribution of managers

across these 40 largest metros is surprisingly closely correlated with overall employment, less skewed even than personal care and food preparation and service workers. This is because of huge retail and wholesale activities in each metro—every small café, hardware store, gas station, beauty shop, and so on has at least one manager, and large grocery and building supply stores have many. Yet just as we have argued that some of the skewed occupations reflect mixes of local and export orientation, we add this caution, too, for occupations groups like managers and business and financial operations.

Distinctive Export and Local-serving Occupations over Time

Have the distinctive occupations that are in large part local-serving, as determined by the secondary and qualitative evidence presented above, posted job growth over the past couple of decades that is as robust as job growth in the clearly export-oriented sectors? Have their rates of skewness increased, revealing growing distinctiveness? The distinctive occupations that we have interpreted of mixed local and export orientation grew rapidly over the two decades, in excess of 60% of the national rate (Table 2, arrayed by distinctiveness and export/local mix and within these, by change in skewed distributions). Only the clearly export-oriented computer/mathematical and legal occupations grew more rapidly. While the metro distribution of the arts and entertainment occupations became only slightly more concentrated, the skewed distribution of health care support workers increased substantially, twice as fast as for other distinctive occupations.

More remarkable, however, is that fact that employment in the non-distinctive occupations grew much faster than in the distinctive occupations. With a few important exceptions (healthcare professionals, building and ground maintenance workers and

managers), non-distinctive occupations became even less distinctively distributed over the period (Table 2). Demand, and therefore jobs, expanded much more rapidly in non-distinctive occupations associated with residential goods and services (restaurant meals, child care, professional healthcare service, and household services) supplied principally by people working locally than in the distinctive occupations. These findings confirm the precocious case made by Joseph Persky and Wim Wievel (1994) of the “growing localness” of world cities. Much of this growth can be attributed to secular changes that affected the entire nation: changing paid vs. household work patterns for women (Markusen, 1979), secular changes in consumption patterns as incomes rise, and lower productivity growth rates in services compared with manufacturing and high tech sectors (Markusen and Schrock, 2006b). Our occupational finding parallel the industry analyses performed by Porter (2003) for the period from 1990 to 2000. He found that industries serving primarily local markets account for 67% of total US employment in 2000 and showed faster employment growth than traded industries – 2.8% versus 1.7%.

A larger share of the metro workforce is now engaged in local-serving occupations than previously. Remarkably, between 1980 and 2000, the lion’s share of non-distinctive occupations remained at relatively low or declining levels of specialization across the fifty largest US metros (Table 2). This means that despite the competitiveness rhetoric, large metros are unequivocally more alike in their employment composition in 2000 than they were in 1980. Conflicting forces are operating on the consumption base, some homogenizing consumption on a national and even global basis and others enhancing differentiation, often the product of household choices and affinities. However, among the clearly export-oriented distinctive occupations, the gains in employment logged in high

tech occupations only just compensated for the losses in primary and manufacturing activity. Similarly, the tendency towards greater specialization in contested metropolitan export-oriented activities was offset by a homogenizing trend in the much larger consumption base. Because employment in the clearly export-oriented occupations grew more slowly, the latter trumped the former.

This finding does not negate the importance of a region's export base. Incomes generated by traded output are cycled through the residentiary sectors and shape the overall growth of the region. Permanent losses in an exporting sector ripple through local-serving sectors and can result in large overall employment losses, even in the largest US metros. Consider the dramatic downturn of the Los Angeles economy in the early 1990s following the implosion of its aerospace industry with post-Cold War defense cuts (Oden, et al, 1996). It was seven years before employment in the Los Angeles economy returned to 1991 levels. Similarly, the dot.com and telecommunications bust in the Bay Area resulted in a drop of overall employment in the region of 13% between 2000 and 2003 (Dardia and Barbour, 2004). Economic development advocates are right to include the export base in a strategy for creating well-paying and durable jobs. But occupational analysis highlights the growing significance of aggregate job growth in local-serving activities and the potential for certain local-serving sectors to serve as job generators and diversifiers of regional economies. More to the point, it suggests that the export/consumption base distinction may be less useful for shaping economic development practice than has been assumed, since some key growth sectors appear to be heavily mixed in their orientation.

Implications for Urban Analysts and Economic Developers

We have argued that occupations that are heavily skewed across large metros may reflect both export and local consumption orientation, that some occupations presumed export-oriented such as arts and entertainment may be more driven by changes in local consumption, and that some apparently local-serving sectors may be grounds for sustained employment growth by capturing larger shares of residents' expenditures. Changes in degrees of skewness enable us to detect where occupational activities are becoming more or less distinctive over time. Industry employment distributions can be analyzed with similar measures, revealing potential local growth potential.

Urban analysts can use an occupational lens to detect distinctiveness in a particular city or region's local-serving sectors as well as those that are clearly export-oriented or relatively non-distinctive. To demonstrate, we explore the changing over- and under-representation for detailed occupations in the Twin Cities metro (Table 3). The table shows only those we presume to be local-serving on the basis qualitative knowledge--the region also has an admirably diversified mix of occupations clearly associated with export activity. At the top of the table are six local-serving occupations that were over-represented in the region in 1989 and increased their edge by 1998. Some of these are associated with amenities. For instance, the strong showing among urban and regional planners signals a public sector committed to good land use, transportation and recreational services, and environmental quality. Ample childcare capability reflects strong support for families with working parents, a phenomenon that both facilitates and reflects high rates of women's labor force participation (Warner, 2006).

The profile also highlights a number of Twin Cities' local-serving occupations with low and declining levels of distinctiveness. Education-related occupations are surprisingly

under-represented and increasingly so, as are several construction-related occupations, revealing a relatively low residential construction rate. Under-represented also are the set of healthcare occupations that reflect the absence of a large elderly population, rather than poor healthcare services. The indicators used here do not reveal the causes of high and low, or increasing and decreasing distinctiveness, but they pose questions about the nature of the local economy and where local-serving specializations might be nurtured.

How does this approach help urban economic developers think about the potential of local-serving activities? We can use health care as an example. Almost every contemporary city and state views healthcare as a major growth and job-creating sector. Indeed, both groups of healthcare occupations in the analysis above have grown at rates almost three times that of overall large metro employment. It is easy to mistake their fast growth as a sign of export activity. Of course, many larger cities do serve their hinterlands, especially for specialized treatments. Governor Pawlenty of Minnesota is fond of saying that Minnesota has the healthiest people in the nation, but this is due almost entirely to the thin presence of retirees in the state's population, not to superior healthcare services or personal lifestyles. Despite superior healthcare coverage and a history of outstanding healthcare institutions, the density of healthcare practitioners in Minnesota is significantly below the national norm, because disproportionate expenditure on healthcare are serving elderly populations who have migrated to the sunbelt. The attraction and retention of retirees accounts for significant growth in relatively low wage healthcare support jobs for hosting cities.

Some might argue that this residential care phenomenon constitutes a kind of export base strategy. Accounts of rural development that use incomes rather than

employment as the metric have treated retiree incomes as a component of the region's export base, since these income streams originate outside of the region (Nelson, 1997; Nelson and Beyers, 1998; Vias, 1999; Nesse, 2006). Attracted to retirement cities, consumers with high personal care consumption patterns use their social security, Medicare, and personal savings generated elsewhere to create jobs in these occupations. In large part, such work is paid for with externally generated dollars. The economic development strategies of many sunbelt cities from California through Arizona and Texas to Florida target the creation of residential communities for retirees, as do lake-, shore-, and mountain-rich counties in relatively rural areas. But it is simpler and more elegant to acknowledge that healthcare support activities are fundamentally local-serving rather than exporting in nature. Successful economic development strategies will emphasize the provision of age-specific amenities in targeting this group.

Health care also provides opportunities for export-oriented growth. Though health care professionals were, in 2000, quite ubiquitously distributed across large metros, their ranks became markedly more skewed over the prior twenty years and continue to grow rapidly. As digital technologies are enabling diagnoses and even treatments to be conducted and delivered without promixity, doctors and other health care technicians may be able to develop and market specializations that will deepen a region's expertise and jobs. Top-rated hospitals and specialists may increasingly draw patients from elsewhere, as the Mayo Clinic in Rochester, Minnesota, has for decades, although branching by medical service companies may instead bring services to target populations (possibly setting off recruitment bidding and displacing other local health care providers). Mayo, for instance, has expanded to Arizona, Florida and Dubai.

Conclusion: Rethinking the Export versus Consumption Base Divide

The examples we have explored – culture and health care -- suggest a softening of the hard analytical line drawn between the consumption base and export-oriented activity. Economic developers cannot assume that skewed distribution of employment in an industry or occupation is attributable to external demand alone. Considerable distinctive local consumption demand may be hidden in the apparent export base, as we have shown in the cases of arts and culture and health care support. Our analysis, including the secondary and qualitative evidence marshaled, challenges the widespread use of specialization metrics, specifically the location quotient, to distinguish export from consumption base activity. A region may host large proportions of jobs in particular occupations or industries because it is exporting the results of this activity and/or its own residents spend larger shares of their incomes on these goods and services than do residents elsewhere.

Furthermore, export specializations tend to grow from initial entrepreneurial experiments in local consumption offerings, as Cortright (2002) has illustrated for Portland. Over the longer term, a new product or service that garners a large local following may enable the entrepreneur to parlay his/her business into export markets, either through marketing outside of the region or attracting tourists. Quite a few apparently local-serving activities rely on a mix of local and external patronage and may feed a dynamic where distinctive offerings draw new consumers and residents from elsewhere, enabling producers to ratchet up scale economies and make investments in business improvements that amplify this process. Once New Orleans, Nashville, Branson,

and Austin became distinctive music venues, based initially on local markets, they were able to draw patrons from farther away and attract new residents, both musicians and music-lovers. Distinctive consumption activities, more so than export base activities, form the heart of many cities' efforts to shape an identity through branding exercises.

We have also argued that judicious investments in distinctive local-serving capacity may create long-term job growth and stability by capturing residents' spending and diverting it from imports, either of similar goods and services or new opportunities. It is a challenge to identify such activities. There is consensus that most retail, such as big box stores that sell the same things as smaller stores but compete on efficiency, advertising, and price, are not good candidates for subsidies because they do not increase consumer spending overall but simply shift it among businesses in the region (Leroy, 2005). Unfortunately, metropolitan fragmentation and reliance on poor tax instruments such as sales and property tax often induce localities to offer large subsidies for such retail establishments. In depressed inner city areas with excess capacity, the shoring up of retail can preserve the economic value of the sense of place. In these communities, a strong case can be made for support to small retail businesses (Bolton, 1992). Yet it is more likely that enduring consumption base distinctiveness lies in goods and services for distinctive life styles and ethnic traditions, especially in the arts, culture, sports, recreation, and entertainment, but also in age-specific services such as healthcare and child care. Such distinctiveness is subject to policy interventions and should be central to decisions made by cities for economic development.

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Table 3. Changing Local-serving Occupations in the Twin Cities, 1989-1998

Occupation	1998 LQ	LQ Chg 8998	Employment 1998
Over-represented occupations vis-à-vis the nation			
Brokerage clerks	2.48	1.88	2,269
Urban and regional planners	2.19	0.35	910
Real estate appraisers	1.67	0.60	931
Homemaker-home health aides	1.34	0.32	11,904
Child care workers	1.27	0.43	13,465
Social workers	1.20	0.07	8,584
Under-represented occupations vis-à-vis the nation			
Registered nurses	0.85	-0.11	21,146
Clinical lab technologists and technicians	0.84	-0.09	3,154
Electricians	0.83	-0.09	6,348
Postal mail carriers	0.82	-0.24	3,268
Plumbers, pipefitters, and steamfitters	0.77	-0.20	3,892
Drywall installers and finishers	0.77	-0.03	1,486
Radiologic technologists and technicians	0.76	-0.09	1,579
Therapists	0.71	-0.33	3,867
Adult and vocational education teachers	0.67	-0.14	4,398
Library assistants and bookmobile drivers	0.64	-0.42	970
Food service and lodging managers	0.61	-0.14	4,210
Counselors	0.53	-0.02	1,154
Education administrators	0.50	-0.05	2,693
Private household workers	0.37	-0.24	3,722

Source: Computations by the Project on Regional and Industrial Economics, University of Minnesota, from Minnesota's Employment and Economic Development data for 1989, 1998.

Note: Data do not include the self-employed.

¹ We are grateful to Elvin Wyly for this point.
