The Geography of Talent and the potential development of a Learning Region

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1. Introduction

Spatial analysis of the 'Geography of Talent' is a way in which economists and regional scientists document and map the shifting sands of the location of credentialed and creative knowledge workers (R. Florida, 2022). The number of highly educated knowledge workers has steadily increased in Jacksonville, FL over the past decade. The purpose of this research is to analyze the geography of talent in the Jacksonville metropolitan statistical area (MSA) and begin to understand why Jacksonville has become a magnet for talented workers. The following sections in the paper will further describe, document, and discuss the findings addressing the Geography of Talent and the role played by public and private institutions to promote 'Institutional Thickness' (Storper, 1997) to develop a Learning Region.

2. Problem Statement

Create a Regional Economic Development Case Study for Northeast Florida to understand the growth of talented workers; the types of advanced activities and businesses that are drawing such workers to the region; and the role played by public-private initiatives to support regional economic development.

- How can creative and talented workers be measured and analyzed in the region?
- Which advanced activities and businesses are attracting talented workers?
- What types of public-private initiatives are promoting the increase in value-added activities in the region and the development of a Learning Region (Florida, 1998; Lukesch and Payer, 2005).

3. Previous Literature

Economic clusters of activities that bind producers, distributors, and consumers together in proximate locations have been theorized and applied many times since the seminal works of Alfred Weber (1909) and A. Marshall (1890, 1919). Marshall was the father of the economic principles leading to the theorization of industry, trade and the industrial revolution. Weber developed a

general theory of location addressing the application of least-cost processes, particularly for transportation costs using the Ruhr coalfields in Western Germany as the region of study. As manufacturing processes have evolved over time, current costs of labor have replaced the costs of transportation as the major factor influencing industrial location (Dicken, 2015; Gertler, 2018; Scott, 1998).

More sophisticated analysis of industrial location and site selection drawn from Weberian principles have resulted in identification of new places of successful value-added activities called Clusters. A business cluster is a geographic concentration of related firms, organizations, and institutions in a particular field (Harvard Business School). Clusters are present in different geographic locations and can be analyzed at different scales: local, state, national and multi-national. Clusters promote agglomeration economies which result in business process cost savings that occur with proximity of similar firms doing similar things. For example, De Marchi, et al, 2017, identifies the significance of modern manufacturing local clusters and their connection to the global value chain and identifies the tension between "pace-based variables and global drivers of change". Foster, et al. (2015) show that proximity and agglomeration economies still reinforces the Hollywood movie industry. In addition, Martin, and Coenen(2015) apply cluster theory with an empirical study of the biogas industry in Sweden.

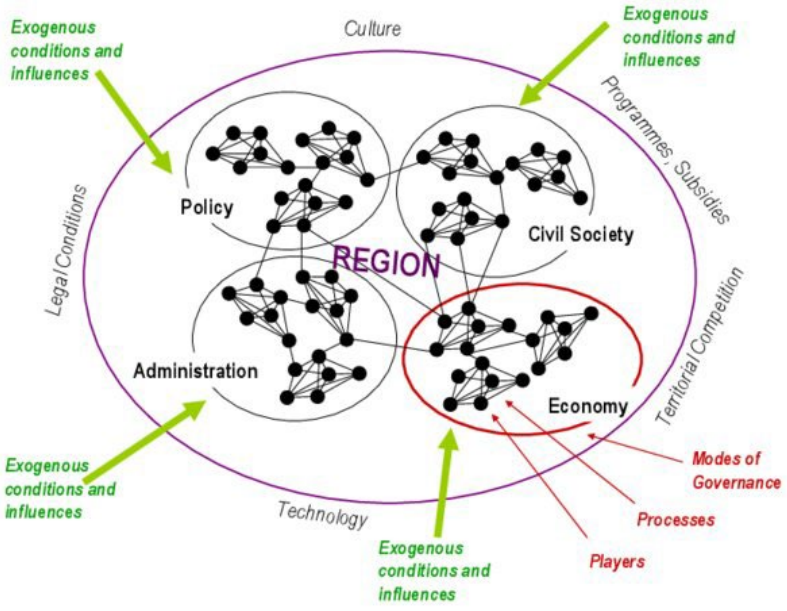
But, how do modern post-Weberian and post-Marshallian theories and empirical applications further the understanding of Regional Economies and the strategic alignment of value-added activities for particular places? Regional scientists and policy makers recognize that local economic development provides a new way to promote 'place' and have recognized Learning Regions (Florida, 1998). Fig 1 (below) conceptualizes the complexity of the geographical and the institutional actors found in the formation of a learning region. Asheim (2009) argues that theoretical interpretations of Learning Regions grew from the 1990s in the efforts to further understand the rapid growth of specific regions such as Silicon Valley and Little Italy. Farrell (2009) identifies the role of supranational organizations such as the EU to promote issues of global and regional learning. Further theoretical development of the 'New Regionalism in Advanced capitalism' is advanced by Jones (2009) and the importance of Technology, smart systems, and

regional development was further theorized by Howells (2009). Furthermore, recognition of regional networks and the connection with the global economy was presented by Grabher (2009).

So, how does 'Talent' fit within the Learning Region? Fig. 1 shows that an element of the Learning Region is the Economy and a part of the economic puzzle is 'Players' which can be seen in the bottom right of the model and can be interpreted as workers, or labor force, and a sub-set of labor is talented labor. Florida (2002) defines talent as individuals with high levels of human capital, measured as the percentage of the population with a bachelor's degree or above. Abd argues that talent is attracted by diversity, defined as low barriers to entry for human capital. Florida concludes that "talent and high-technology industry work independently and together to generate higher regional incomes. In short, talent is a key intermediate variable in attracting high-technology industries and generating higher regional incomes" (p.740).

Fig 1

The Learning Region



From: Lukesch and Hagen 2005

4. Methodology and Data

The project uses two data sets: JaxUSA www.jaxusa.org and BLS data for the Jacksonville Metropolitan Statistical Area (MSA) https://www.bls.gov/oes/.

Qualitative Analysis: to analyze meaning of Advanced Manufacturing and Advanced Services activities, classify firms based on the Jax USA dataset and theorize the synergies that occur between the two types of advanced activities.

Advanced manufacturing occurs where firms use new innovative technologies in both product and process with the aim of productivity enhancement and increased value-added (Sambasivarao & Deshmukh, 1995). Example of product innovation: Use of composite materials to enable specific cocktails of metals, ceramics, glass, plastics. Example of process innovation: Smart Factories using highly digitized processes through connected systems using, for example, Cyber-Physical systems and Augmented Reality.

Advanced Services are high speed, switched, broadband, wireline telecommunications capability that enables users to originate and receive high-quality, voice, data, graphics or video. Also, may incorporate the use of digital technologies such as AI, VR, cloud computing, 3D printing, and data analytics. Furthermore, may incorporate customized product delivery and support from the manufacturer to the customer, sometimes called Servitization, (Bigdeli, et. al., 2017).

Quantitative Analysis: to compile descriptive statistics using firm data from JaxUSA and occupational employment and wage statistics from BLS (OEWS) and analyze patterns using the Location Quotient statistic. The JAXUSA Partnership is the private, nonprofit division on the Jacksonville Chamber of Commerce (https://jaxusa.org). JAXUSA compiles the economic development efforts of seven counties in Northeast Florida (Baker, Clay, Duval, Nassau, St Johns, Flagler, Putnam). The JAXUSA region is larger than the Jacksonville MSA with the addition of Flagler and Putnam to the south (Fig. 2)

Figure 2

JAXUSA has a robust Data Dashboard to present economic data by geography (the 7 counties) as well as nationwide by zip code (https://jaxusa.org/tools-resources/data-dashboard/)

For this project, data analysis is concerned with advanced activities, firms, and labor. Table 1 shows the number and type of advanced firms as defined by JAXUSA with more than 2000 employees. The (*) identifies a Headquarters (HQ) firm. Table 1 also shows the Location Quotient statistic which has mixed values for the region with 4 categories that are above 1. (Table 4 gives further detail on specific occupations in order to illuminate some of the scores shown in table 1.)

A **location quotient** is a measure of the prevalence of an occupation in an area relative to the US average. It is the ratio of the share of an occupation's local area employment to its share of U.S. employment. A location quotient greater than one indicates the occupation has a higher share of employment in the area than average, and a location quotient less than one indicates the occupation is less prevalent than average. https://www.bls.gov/cew/about-data/location-quotients-explained.htm.

Table 1

Advanced firms	**# >2000 employees**	**Location Quotient**
Manufacturing	2*	1.04
Transportation & Logistics	4**	1.12
Financial	7	1.21
Health & Biomedical	8	1.11
IT & Innovation	2*	0.83
Other	2*	

https://www.bls.gov/oes/current/oes_abo.htm

Table 1 shows large firms in all sectors classified by the JAXUSA project, and HQ functions in Manufacturing, two HQ for Transportation and Logistics, and 1 HQ for IT, and Other (which is loosely interpreted as Retail). The greatest number of large firms are found in the Financial and Health sectors. The LQ statistic shows all values above 1 except IT and innovation. The Finance sector has the highest LQ value

Table 2 presents the number of firms that are 1000-2000 employees and exhibits similar breadth and depth with more firms and more HQ functions. Together, Tables 1 and 2 show a strong footprint regionally and a healthy footprint nationally when looking at the LQ statistic.

Table 2

Advanced firms	**# >1000 employees**
Manufacturing	4
Transportation & Logistics	5**
Financial	10**
Health & Biomedical	3*
IT & Innovation	1
Other	2*

Using JAXUSA data and following the thinking of Florida (2002, and 2022), Table 3 shows population and economic data; a diversity measure; and a created composite statistic called 'talent' which shows the percentage education levels from some college to grad school. The values for the region are compared to the state and the nation.

The Diversity Index summarizes racial and ethnic diversity of the region. The index shows the likelihood that two persons, chosen at random from the same area, belong to different race or ethnic groups. The index ranges from 0 (no diversity) to 100 (complete diversity). The diversity index for the region shows a lower value than for the state and nation. The talent measure shows

higher value than the state and the nation, and the cost of living indices show mixed results when compared to the state and the nation.

Table 3

Descriptive Stats		**State**	**U.S.**
Population	1,814,131	22,000,000	332. 403,640
pc income $	34,921	32,917	35,106
diversity	59	67	65
median HH income	$64,489	$58,462	$64,730
labor force	896,009	10.562,000	163,449,000
avg HH size	3	3	2.58
median home price	$325,000	$410,000	$353,600
apartment rent	$1,313	$1,291	$1,218
cost of living	91	91	100
talent*	64%	60.40%	62.10%
* some college to grad degree (MSA)			

5. **Further Findings**

Table 4

Classification	Occupation	LQ
Business & Financial	Claims adjusters	1.56
	Insurance appraisers	2.27
	Compliance officers	1.26
	Management analysts	1.25
	Property appraisors	1.37
	Personal financial advisors	1.29
	Financial specialists	1.27
Architecture & Engineering	Aerospace engineers	1.34
	Marine engineers	1.7
	Aerospace technicians	3.74
Healthcare	Registered nurses	1.23
	Cardiologists	1.31
	Surgeons	1.56
	Nuclear Medicine Technologists	1.54
	MRI Technologists	1.41

	Psychiatric technicians	2.01
	Health information technologists	2.2
Installation & repair	Avionics technicians	1.74
	Aircraft maintenance	1.71
	Motorboat mechanics	2.71
	Medical equipment repairers	1.36
	Commercial divers	3.01
	Maintenance & Repair	1.82
Production	Fiberglass laminators & fabricators	2.96
	Dental lab technicians	1.28
	Ophthalmic lab technicians	1.53
Transport	Aircraft cargo handling supervisors	1.89
	Commercial pilots	1.99
	Captains & pilots of water vessels	1.61
	Motorboat operators	2.51
	Ship engineers	1.64
	Bridge & Lock tenders	4.79
	Aircraft service attendants	1.72
	Traffic technicians	2
	Dredge operators	1.86
	pump operators	1.59

Table 4 presents further analysis for the higher LQ values shown in Table 1. The JAXUSA and the BLS Occupational data are not congruent, but the values shown above are illuminating and paint a picture of what is good in the region with respect to talented qualified workers. These findings will be further discussed in section 6.

6. **Conclusions and Discussion: Incentives, Amenities, and Synergies**

Initial data analyses show that something is going on to foster the development of a learning region and the attraction of talent in Northeast Florida. Traditional regional development (SWOT) analysis considers the good and the bad of a place, and further consideration of the good and bad is worthy of further discussion.

Table 4 shows high LQs for Insurance Appraisers in the Business and Finance group; Aero space Technicians in the Engineering group; Health Information Technologists in the Healthcare

group; Commercial Divers in the Installation and Repair group; Fiberglass laminators and fabricators in the Production group; and Bridge and Lock tenders in the Transport group. These relatively diverse occupations lend support to the initiatives recognized by the JAXUSA institution and the exogenous conditions and influences found in the Learning Region (Fig.1).

The region is well endowed with physical amenities (sun, sand, water, and ocean); transportation infrastructures (St. Johns River, and JaxPort, Interstate highways, railroads, and airports. Longstanding ties to military establishments, military workers, and retired military personnel promote well credentialed and talented workers. Northeast Florida educational institutions are numerous including public and private universities and are home to new training initiatives to promote economic development. The region is part of a state that has a relatively small individual and company tax burden. Moreover, local incentives and initiatives aimed at promoting business formation and support are present.

Most Chamber of Commerce professionals throughout the state, country, and even the world would argue that local incentives could provide an attraction tipping point for footloose industries, but can these initiatives be continued as technology, businesses, and related worker-credentials need to be improved also? Can the local region achieve institutional thickness by promoting local synergies in order become a bigger and stronger learning region?

7. Future work

This project identified some of the local 'good,' but what about further analysis of the 'bad' and even the 'ugly?

Future analysis should interrogate the small LQs within the local classification groups in order to provide a new classification of underserved value-added activities based on existing firm and other institutional synergies. Future work could broaden data compilation and analysis for the whole of Florida in order to understand the position this region has when compared to other regions in the state.

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