

# **The Impact of Local Government Economic Development Programs on City-Level Entrepreneurial Activity: Evidence from Southern California**

## **Abstract**

This paper examines the relationship between government economic development programming and entrepreneurial activity in Southern California cities. While the complex relationship between government programming and entrepreneurship is well understood with respect to countries and states, significant questions remain about the influence of local government economic development programs on entrepreneurial activity. This study uses regression analysis of data from all 215 Southern California cities to decompose some of the complex relationships between development programming and different types of entrepreneurial activity. Results suggest that higher levels of economic development programming do influence outcomes, though in not necessarily expected ways, including being significantly correlated with higher average firm size, especially when direct assistance through tax incentives are facilitated, and lower levels of female ownership, especially when promotional programming is employed.

[127 Words]

**Keywords:** Entrepreneurship, Economic Development Strategies, Local Government, Southern California, Regression Analysis.

## **Evidence for Practice**

- Higher levels of economic development programming appear to influence entrepreneurial activity levels, though in not necessarily expected ways.
- Economic development programming levels are higher in larger cities with higher levels of employment and the presence of colleges. This finding suggests a role for county or state governments or regional government councils to provide further support to disadvantaged cities.
- Cities with more economic development programs, especially when providing direct assistance through tax incentives, appear to have larger average firms. This finding suggests cities might do more to focus on facilitating the development of smaller firms.
- Cities with more economic development programs, especially when providing promotional programming, appear to have fewer female-owned firms. Given the higher performance levels of female firms and boardrooms with female executives, this finding suggests cities might consider focusing their efforts towards the promotion of female-owned companies.
- Cities would benefit from further research into the relative effectiveness of different economic development programs and best practices.

## **Introduction**

This paper examines the relationship between government economic development programming (GEDP) and entrepreneurial activity in Southern California cities. Entrepreneurial activity is critical to local economic development. Entrepreneurs are innovators, provide disruptive forces, devise new technologies, discover new products, and develop new markets, all of which lead to net economic gains for other local businesses, residents and public institutions. While most city governments engage in economic development activities, fewer support entrepreneurial activity, and little is known about the impact of these programs on the local economy.

Entrepreneurship is viewed as a crucial component in the process of economic growth and development (Audretsch and Keilbach 2004a; Baumol 1993). Through the startup of new firms, entrepreneurship serves as a mechanism to transfer advances in knowledge, especially technological and organizational innovations, into economic growth (Acs et al. 2009; Acs et al. 2018). Entrepreneurial activity increases economic output by both enhancing competition and increasing the variety of firms in a jurisdiction (Audretsch and Keilbach 2004a). The existing scholarship seems to confirm this perspective, as scholars provide evidence to suggest that entrepreneurship may significantly influence growth at national and local levels (e.g., Aparicio et al. 2016; Audretsch and Keilbach 2004a; Audretsch and Keilbach 2008; Audretsch et al. 2008; Bjørnskov and Foss 2013; Glaeser et al. 1992; Hessels and van Stel 2011; van Stel 2006).

Based on the recognition of entrepreneurship's role in shaping economic growth, state and local governments have been more focused in pursuing development programs to promote entrepreneurial activity (Audretsch et al. 2007; Kreft and Sobel 2005). While some observers argue that development tools (Wolman 1988), including those specifically directed at businesses

— e.g., tax incentives — are not only expensive to government but also have little or no effect on business location decisions (Florida 2017) and economic development (Dewar 1998), local leaders continue to use these tools in an attempt to encourage entrepreneurial activity and thus enhance the welfare of citizens (van Stel et al. 2007). In recent years, local governments have used a combination of tax increment finance districts and tax abatements (Reese and Sands 2012; Zheng and Warner 2010) directed at reducing the costs of doing business (Reese 1992). Local governments have also pursued activities, such as infrastructure investment, promotional and marketing materials, streamlined zoning and permitting processes, business surveys and calls on individual businesses, and collaboration between local governments and chambers of commerce (Reese and Sands 2012; Zheng and Warner 2010), where they have taken a more active role in the identification of markets and the creation or expansion of firms (Reese 1992).

Despite their widespread use in local governments, research assessing the potential effectiveness of economic development tools in fostering entrepreneurial activity in cities remains relatively underdeveloped. The little research that exists has mainly emphasized the role of place-based tax incentives in fostering local economic growth (e.g., Hanson and Rohlin 2011; Harger and Ross 2016; Givord et al. 2013, 2018; Reese 2014). Beyond this, existing scholarship has mainly investigated the influence of government institutions and economic policy in encouraging the emergence of entrepreneurship at country or state levels (see, Bjørnskov and Foss 2016, for discussion). For example, Kreft and Sobel (2005) and Sobel (2008) find that a higher degree of economic freedom — i.e., the absence of a large government, intrusive regulations or high taxes, and the protection of property rights — positively influences entrepreneurship across 48 U.S. states. In addition, Bjørnskov and Foss (2008) find that the quality of monetary policy positively influences entrepreneurship in 29 countries; they also find

that the size of government — i.e., the extent of government intervention in the economy through consumption, redistribution, public investment, and marginal taxation — is negatively associated with entrepreneurship (p. 324). Further, Nyström (2008) finds that a small government, better legal structure, secure property rights, and less regulation of credit, labor and business increase entrepreneurial activity in 23 OECD countries.

Given the aforementioned and the need for additional research considering the effect of institutions on entrepreneurship (Urbano et al. 2018), opportunities exist for scholars to focus on GEDP and their potential efficacy in fostering entrepreneurial activity, particularly at the city level. In an effort to contribute to the literature, the present study uses data on all 215 Southern California cities to answer the following research question: do local government economic development programs foster the emergence of entrepreneurial activity in cities?

Answering this question is important for a few reasons. Considering the dearth of scholarship assessing the effect of GEDP on entrepreneurship, evidence is needed to illuminate scholars and practitioners' understanding of the potential efficacy of such programs to stimulate entrepreneurial activity in cities. Such evidence is needed to address a gap in the literature, as scholars have done little systematic work on entrepreneurship in cities (Glaeser et al. 2010a) — for exceptions, see e.g., Glaeser et al. (1992), Glaeser et al. (2010b), and Audretsch et al. (2015). Scholarship focusing on GEDP and their impact on entrepreneurial activity in cities is important, as entrepreneurs may be significantly influenced by conditions in their local environment (Glaeser et al. 2010a), including government policies and procedures, which may create an appropriate environment or impose restrictions for entrepreneurs (Urbano et al. 2018).

Further, taking into account that public officials and administrators are responsible for ensuring effective and efficient use of government resources, it is critical to obtain evidence on

the potential effectiveness of GEDP in fostering entrepreneurial activity. Given the potential for local leaders to over-promote economic development programs for electoral reasons (Feiock and Kim 2000), such evidence is needed, as it may help inform local decisions to strategically invest scarce development resources in programs that are more likely to attract and nurture entrepreneurial activity. This might benefit local communities in the short, medium and long terms, as there is evidence to suggest that government actions promote economic growth because such actions promote entrepreneurial activity (Kreft and Sobel 2005), which in turn may positively influence cities' economic growth (Glaeser et al. 1992; Glaeser et al. 2010b) and development (Audretsch et al. 2015).

The article proceeds as follows. First, it reviews relevant literature providing insight into the relationship between GEDP and entrepreneurship in cities. Second, it discusses the research method. Third, it discusses the results from the statistical analyses. Last, it discusses the implications and limitations of the study, and offers suggestions for future research.

## **Theoretical Framework**

### **Entrepreneurship**

Entrepreneurship has been defined in different ways. While entrepreneurship as a function is likely as old as the institutions of barter and exchange (Hébert and Link 2006a), the term entrepreneur did not appear until the 18th century when Richard Cantillon introduced it in 1730 (Hébert and Link 2006b; Sobel 2008). Cantillon viewed the entrepreneur as a key figure in the market who bears the risks associated with decisions about production and distribution of goods and services (Hébert and Link 2006b). In 1787, Jeremy Bentham emphasized the role of the entrepreneur as an agent of economic progress who takes risk and innovates in the pursuit of profit (p. 592). Later, in his 1848 book, *Principles of Political Economy*, John Stuart Mill

emphasized the role of the entrepreneur as someone who assumes both the risk and management of a firm (Sobel 2008).

In the 20th century, scholars like Joseph Schumpeter (1934 [1911], 1942), Israel Kirzner (1973, 1997), and Frank Knight (2006 [1921]) conceptualized the entrepreneur in different ways. Schumpeter emphasized the entrepreneur as an innovator, a disruptive force, who devises new technologies, discovers new products, and develops new markets, which together account for the short and long cycles in the marketplace (Hébert and Link 2006b). Contrary to Schumpeter, Kirzner did not view the entrepreneur as a disruptive force, but rather as a force of equilibrium, who recognizes new economic opportunities and acts on them (Sobel 2008). Building on the ideas of Cantillon and Mill, Knight noted that the entrepreneur exercises judgment in dealing with uncertainty about the future, not with risk (p. 643).

Based on the above discussion, entrepreneurship can be defined as the process of recognizing new economic opportunities, introducing new ways of seizing such opportunities into the market, and bearing the burden of uncertainty related to the market process (Bjørnskov and Foss 2008; Sobel 2008).

### **Institutions and Entrepreneurship**

There is an agreement in the literature that entrepreneurs are both enabled and constrained by the institutions in their environment (Bruton and Ahlstrom 2003; Scott 2014). Institutions are the formal rules — e.g., property rights, political structure, regulations, and contracts — or informal constraints — e.g., cognitive dimensions, social norms and culture, and belief systems — (North 1990, 2005) devised “to create order and reduce uncertainty in exchange” (North 1991, p. 97). Together with the traditional constraints of economics, intuitions

define the set of choices and determine transaction and production costs and thus the profitability and feasibility of engaging in a particular economic activity (North 1991).

Institutions may encourage or prevent entrepreneurial activity by developing an appropriate environment or imposing restrictions (Bruton et al. 2010; Scott 2014; Urbano et al. 2018). Through the reward and incentive structure they create for entrepreneurs, institutions influence entrepreneurial activity (Baumol 1990). As Baumol's theory posits, depending on the rates of return entrepreneurs perceive, they may either pursue wealth creation in the private sector — i.e., productive entrepreneurship — or wealth redistribution through the political/legal process — i.e., unproductive entrepreneurship (Sobel 2008). In jurisdictions where institutions provide secure property rights, a fair and balanced judiciary, contract enforcement, and effective limits on government's ability to redistribute wealth through taxes and regulations, the rate of return to unproductive entrepreneurship is lower, and thus, the incentive structure makes it more likely for entrepreneurs to engage in productive entrepreneurship (Sobel 2008). In the presence of weak, inefficient institutions represented by corruption, for example, the rate of return to unproductive entrepreneurship is higher, and entrepreneurs are more likely to engage in it (Douhan and Henrekson 2010; Sobel 2008). In other words, in the absence of good institutions, individuals are not only less likely to engage in productive entrepreneurship but also more likely to direct their entrepreneurial efforts toward activities that reduce aggregate productivity and social welfare (Douhan and Henrekson 2010), such as rent-seeking (Baumol 1990).

The existing evidence seems to confirm these claims. On one hand, scholars find that the absence of a large government, intrusive regulations or high taxes, and the protection of property rights, for example, positively influence entrepreneurship at the state level (Kreft and Sobel 2005; Sobel 2008). Also, they find that a small government, better legal structure, secure

property rights, less regulation of credit, labor and business, as well as the quality of monetary policy, for instance, positively influence entrepreneurial activity at the country level (Aparicio et al. 2016; Bjørnskov and Foss 2008; Nyström 2008). On the other hand, scholars find that a larger government — measured as the extent to which it intervenes in the economy through consumption, redistribution, public investment, and marginal taxation — negatively influences entrepreneurial activity at the country level (Bjørnskov and Foss 2008). They also find that weak institutional environments, represented by high government regulation and corruption, negatively influence the emergence of productive entrepreneurship in countries (Dreher and Gassebner 2013; Fadahunsi and Roda 2002).

### **Local Economic Development Programs and Entrepreneurship**

While scholars have provided evidence to suggest that the actions of governments at state and country levels play a significant role in either fostering or hindering entrepreneurship, there is a dearth of systematic work investigating the effect of government programs on entrepreneurial activity at the city level. Particularly, despite local governments' widespread use of GEDP to promote entrepreneurial activity, research investigating their potential efficacy in fostering entrepreneurship in cities remains underdeveloped. Thus, the authors point to the literature on government regulation and GEDP to develop a framework for the present study. While such literature may not directly investigate the relationship between GEDP and entrepreneurship, it sheds light on the mechanisms through which such programs may influence entrepreneurial activity in cities.

### ***Supply-Side Economic Development Programs***

The increasing awareness of entrepreneurs' role in promoting economic growth has resulted in local government development efforts more heavily directed toward fostering

entrepreneurial activity (Audretsch et al. 2007; Kreft and Sobel 2005). For example, local government leaders have used supply-side development programs (Eisinger 1988) focusing on reducing the financial constraints that entrepreneurs face (Kreft and Sobel 2005). The primary justification for doing so comes from location theories, which suggest that firms choose locations where they can minimize costs (Zheng et al. 2010). Thus, assuming that economic growth results from the attraction or expansion of mobile firms, cities who are in constant competition with each other, choose to minimize the costs of doing business in order to attract as many firms as possible (Reese 1992).

In recent years, local leaders have mainly used tax increment finance districts and tax abatements (Reese and Sands 2012; Zheng and Warner 2010) as supply-side tools directed at attracting business or expanding existing ones. These tax incentives have mostly targeted large businesses in particular industry sectors. The justification for doing so comes from the assumption that such large enterprises may have high multiplier or other spillover effects, such as increasing jobs in local communities, as a result of the concentration of related activities in a particular geographic location (see, Bartik 2017, for discussion).

While critics argue that tax incentives do very little to change the location calculation of most enterprises (Florida 2017), local governments continue to use them. According to experts, in 2015, state and local governments gave \$45 billion in incentives to export-based industries (Bartik 2017). Thus, while economic development professionals may be increasingly abandoning the use of tax incentives in favor of development programs to promote entrepreneurial activity (Edmiston 2007), the evidence suggests that many local governments continue to rely on such incentives as they pursue development goals for their jurisdictions. A likely consequence, however, is that by giving tax incentives to large businesses, local leaders may be creating

conditions that keep small, entrepreneurial activity from emerging in their cities. The assumption here is that entrepreneurs in a particular location — realizing that higher transaction and operation costs, compared to those faced by businesses (usually large) receiving tax incentives, may not allow them to effectively compete in the marketplace — are likely to avoid starting a business altogether or may choose another location for doing so.

The existing evidence on the effectiveness of supply-side development programs offers mixed results. Hanson and Rohlin (2011) find that location-based tax incentives positively influence firm location in the retail and service industries across U.S. census tracts; they also find that tax incentives negatively influence firm location in the transportation, finance, insurance, and real estate sectors. Harger and Ross (2016) find that tax incentives positively influence retail firm startup and negatively influence firm formation in wholesale, finance, insurance, real estate, transportation, and services industries across U.S. census tracts. Also, they find that tax incentives increase employment at new and existing businesses in the retail industry. Further, they find that such incentives only increase employment in existing businesses in the manufacturing sector. Givord, Quantin, and Trevien (2018) evaluate the first round of the French enterprise zone program implemented in 1997 to increase firm startups through place-based tax incentives. They find that tax incentives positively influence employment and firm location across French enterprise zones in the short term. Also, they find that tax incentives fail to promote economic development, as after five years, the early increase in firm locations are offset by more frequent firm discontinuations. Givord, Quantin, and Trevien (2013) evaluate the second round of the French enterprise zone program implemented in 2004 and find that tax incentives increase new firm startup and employment across French enterprise zones. Also, they find that preexisting firms do not benefit from tax incentives. Gurley-Calvez and Bruce (2013)

find that cuts in relative tax rates faced by entrepreneurs increase entrepreneurial activity in the United States.

### ***Demand-Side Economic Development Programs***

State and local government have also used demand-side development programs designed to encourage and foster the development of new firms (Eisinger 1988). Their focus has been on taking a more active role in identifying markets and helping in the creation or expansion of new businesses (Reese 1992). Some of the most common demand-side tools used include: infrastructure investment, promotional and marketing materials, streamlined zoning and permitting processes, business surveys and calls on individual businesses, and collaboration between local governments and chambers of commerce (Reese and Sands 2012; Zheng and Warner 2010).

Two main justifications exist for a more active government role in business startup. The simple one is that because small and medium-sized enterprises are important sources of job creation, innovation, and competitiveness in the market, governments need to promote their creation to enhance the welfare of citizens (van Stel et al. 2007). Another justification comes from market failure theory. That is, governments intervene when market failures take place, such as is the case when imperfect information exists on the private benefits of starting a firm or the private benefits of receiving external advice to do so (Storey 2003). Thus, in light of signaling theory (Spence 1973), it is plausible to suggest that when governments provide assistance to entrepreneurs by streamlining permitting processes, for example, they not only correct market failures but also send positive signals to entrepreneurs that may actually encourage entrepreneurs to start a small business.

The evidence on the potential effectiveness of demand-side development tools in fostering entrepreneurial activity is limited. To the authors' best knowledge, in recent years only a few studies have been reported in the literature that, while not specifically about demand-side development tools, still shed light on the potential effect that these tools may have on entrepreneurship. For example, van Stel et al (2007) examine the relationship between government regulation and entrepreneurship across 39 countries. They find that administrative requirements for starting a business, such as time, cost, or number of procedures required, are not related to the rate of entrepreneurship, measured as the rate of nascent and young business. Similarly, Levie and Autio (2010) find that less regulation, including regulation for starting a new firm, is associated with a higher rate of strategic entrepreneurial activity in 54 countries.

Based on the foregoing discussion, the authors expect that GEDP may influence entrepreneurial activity in cities in different ways. Thus, they propose the following hypotheses:

**H1.** Supply-side GEDP positively influence large, entrepreneurial activity in cities.

**H2.** Supply-side GEDP negatively influence small, entrepreneurial activity in cities.

**H3.** Demand-side GEDP positively influence small, entrepreneurial activity in cities.

## **Methods**

### **Sample and Data Gathering Procedure**

OLS regressions are run to explore whether variability between Southern California cities with respect to local GEDP influences entrepreneurial activity, having controlled for various relevant demographic and geographic factors. Publicly available data on all 215 Southern California cities were collected with respect to dependent variables representing the level of entrepreneurial activity, the key independent variables representing the level of economic development programming provided by city governments, such as city information

and promotion and incentives for new and emerging businesses, and further independent control variables representing city-level characteristics commonly identified in the literature review. To enhance and validate the publicly available quantitative data, interviews were requested from all 215 cities. Interviews were conducted with City Managers and Economic Development Managers for 40 of the 215 cities, representing a response rate of 18.6 percent.

This paper defines Southern California as the 6 counties of Los Angeles, Orange, San Diego, San Bernardino, Riverside, and Ventura. It is important to note that not all businesses and residents are represented by city-level governments in the region: 11.5 percent of Southern California residents live in unincorporated areas (SCAG 2017; San Diego County 2014).<sup>1</sup> This 6-county Southern California region had a population of over 22 million in 2017 (U.S. Census 2018) and a GDP of \$1.414 Trillion (CCSCE 2018), approximately the size of the South Korean economy, which is currently the 11<sup>th</sup> largest across numerous international rankings. Reflecting this size, the Southern California region is a highly dynamic economy that is diverse in terms of industry sectors.

Southern California is also a particularly entrepreneurial region, especially with respect to the age and size of firms. As shown in Table 1, Southern California has a disproportionately large number of small and young firms compared to the national average. Such entrepreneurial activity is reflected within specific industry sectors. For example, recent years have seen the emerging of the so-called “Silicon Beach”, including the areas of Santa Monica, Venice, Playa Vista, and El Segundo, which houses over 500 technology company start-ups and numerous incubators and accelerators (KCET 2018).

[Table 1 about here]

## **Dependent Variables**

Data from the U.S. Census, Survey of Business Owners, was used to select four different indicators of entrepreneurial activity (U.S. Census Bureau 2016). Entrepreneurial activity can be defined with respect to numerous types of businesses, including small, new, minority-owned, female-owned and emerging sector firms.

One indicator of firm size is the percentage of self-employed residents in the city; a percentage is used to control for population size. This indicator captures a specific type of economic activity within each city that may or may not interact with economic development programming. On the one hand, self-employed individuals are pure entrepreneurs: they are small companies with the potential to create flexible and innovative businesses (Romero and Martinez-Roman 2012). The popular narratives of major companies being started by entrepreneurs in their garage highlights the growth potential for this group, and would fit the incubator/accelerator models pursued by many cities, universities, and private companies. On the other hand, many self-employed individuals are contractors for larger firms, and are a growing phenomenon in the “gig economy” (Alton 2018), and may either commute or telecommute. Either way, those individuals’ connections to the city may be primarily as a resident rather than as a business in the sense of paying business taxes, acquiring permits, or engaging with city-level economic development programming or networks in a meaningful manner.

A second indicator of firm size is the number of sales per firm. While this indicator provides insights into the average size of firm within each city with respect to the value of sales, it does not capture the full distribution of firm sizes; a city with many small, entrepreneurial firms and one large firm could have an equal average firm size to a city with fewer small firms and more medium sized firms. There is an extensive literature of firm size distribution, and it is

generally accepted that U.S. firms follow the Zipf distribution, which is concave to the origin and is skewed to the right (Axtell 2001). In other words, the majority of firms are small, and there are fewer large firms as the number of employees or value of sales increases. While there is evidence to suggest that the sample size of the dataset matters (Segarra and Teruel 2012), the stability of firm size distributions over large samples suggests that within the Southern California region, which has a large and dynamic economy, the average sales by firm is likely to be a meaningful indicator of average firm size, and hence a useful indicator of entrepreneurial activity.

The percentage of female owned-firms provides insights into particular types of businesses. Women are underrepresented in entrepreneurial-level businesses and in the boardrooms of major companies. There is evidence to suggest that firms with more female leadership are more successful than those with less (Gordon 2017). Female-owned businesses are another indicator of entrepreneurial activity. Female-owned firms have grown at a rate 50 percent faster than other small businesses over recent years, and are particularly prominent in the Western United States (Leadem 2016). In terms of international economic development, the level of female ownership and entrepreneurial activity have been shown to improve development outcomes, and a key factor whether comparing across societies is the cultural acceptance of female leadership roles within societies and communities. While the Southern California region is within an advanced democratic nation and a state with progressive politics and programs promoting gender equality, the region is also very diverse and a melting pot of cultures, making comparisons of different cities both interesting and highlighting the need to control for the demographics of residents in the regression analysis.

The percentage of Minority Owned-Firms in the general geographic/census tract area for each Southern California city. Minority-owned businesses can be an indicator of entrepreneurial

activity, especially in a region as diverse as Southern California. For example, a recent study found that the number of Hispanic-owned businesses increased by 750,000 between 2012 and 2015, at a rate 15 times the national average (Geoscape 2016). The region is home to a particularly diverse demographic population with relatively large numbers of Asian, Latino, and African American populations compared to both California and national averages. It is notable that this diversity is present throughout the region, rather than being clustered in a particular area, as often observed in other major metropolitan areas (Evans 2012). This diversity is likely related to the high levels of entrepreneurial activity, given that numerous studies have found such activity to be more prevalent among minority populations within the United States.

### **Independent Variables**

The research study focused on nine types of city-level economic development programming in Southern California. These programming types were developed through a literature review of academic (Fleischmann et al. 1992; Green and Wise 2006), policy-oriented work (ICMA 2014; PPIC 2009),<sup>2</sup> and local economic development plans (e.g. City of Santa Ana 2016; City of Los Angeles 2018), alongside pilot interviews with local economic development managers. To be included in the regression analysis, each one of those city-level programs were coded as dichotomous variables (1 if the program existed in a particular city and 0 otherwise). Correspondingly, the GEDP measure adds up the values of all nine city-level program variables.

To provide further insight on the city-level economic development programming potential impacts on entrepreneurial activity on a more specific level, and based on the literature, distinct clusters were constructed that classified all nine economic development program variables into five clusters. Similar to the GEDP measure, each cluster represents the sum of individual city-level program variables. The five clusters considered are:

1. *Redevelopment (1 variable)*. This area focused on downtown and business redevelopment and public works projects. Data collection in this area relates to the question: Does the city have a website(s) that provides current information on Downtown revitalization, projects in progress, or completed in districts or special areas of the city? This also includes information on ongoing or recently completed public works and infrastructure improvements.
2. *Economic Support (2 variables)*. This area focused on whether the city has an economic development department, and if so what is the quality of the economic development office culture. Data collection in this area relates to the following questions: Does the city have a department specifically designated for Economic Development or addresses Economic Development as a key initiative of the city? Does the city have a perception for being pro-businesses with information such as business licensing, business assistance and business resources listed on its website(s)? Does the City work with Inter-Governmental Organizations, Non-Profit Organizations or Private Networks in related ED activities?<sup>3</sup>
3. *Promotional (3 variables)*. This area focused on the ways in which the city promotes local businesses, through information on local events, promotional or informational websites, and business assistance. Data collection in this area relates to the following questions: Does the city have a website(s) that provides information on local events or current city calendar of events that occur within the city or within city limits? Does the city or its regional partners have a marketing-focused website(s) that has information for visitors that promotes its Downtown district, tourism or encourages participation in local events and cultural activities

(e.g. Discover Torrance or Visit Coachella Valley)?

4. *Indirect Assistance* (2 variables). This area focused on the ways in which the city facilitates indirect assistance to local businesses, through economic development or business-related incentives (provided by other government agencies), sponsors or supports new, small or niche-sector businesses, or sponsors or supports minority, foreign, or international trading businesses by providing access to indirect programming. Does the city have a city-supported website(s) that provides resources, business guides or contact personnel focused on programs for new, small and niche businesses to startup in the city? Does the city have a city-supported website(s) that provides resources, business guides or contact personnel focused on programs for minority and foreign/international businesses to startup in the city? Does the city have sufficient resources (such as employees, webpages, documents and forms) dedicated for potential entrepreneurs to start a business in the city?<sup>4</sup>
5. *Direct Assistance* (1 variable). This area focused on whether the city facilitates tax incentives. Data collection in this areas was guided by the question: Does the city have a website(s) that provides information about specific tax incentives or subsidies available in the city?

Multiple web searches over the course of five months starting in November of 2017 were completed to account for any updates made on the Southern California city's website(s) and other related websites. It is expected that each of these variables will positively impact on entrepreneurial activity within the cities.

Numerous other variables are included in the regressions as control variables, including

the following:

1. *Economic variables.* These include the percent of city residents in industries such as manufacturing; retail and wholesale trade; transportation, warehousing, and utilities (TWU), government, the city total population, and the percentage of the population employed.
2. *Demographic variables.* These include indicators of racial and age demographics, like the percentage of population classified as White and Youth (U.S. Census 2017).<sup>5</sup>
3. *Locational/Residential.* These variables include whether or not the city is a coastal community, the median square foot value for 2017 (Zillow 2018), property crime levels (SCDJ 2018), whether or not the city is located in Los Angeles County, and the distance to the San Pedro ports.
4. *Developmental.* These variables include whether or not the city houses private or public business incubators and accelerators, venture capital firms (LAEDC 2018), and colleges or universities.<sup>6</sup>

### **Verification Approach**

There is a possibility that some Southern California cities do in fact engage in economic development, but may not document the information publicly. Some potential explanations are that the information online is outdated or updates are done infrequently, a specific economic development program measured in the research may be a new or recent policy initiative, or local public administrators feel publicizing particular programs, businesses, or entrepreneurial activities may not be a priority, focusing instead on emphasizing information activities and events focused on resident stakeholders. All that said, based on the 40 cities interviewed, the

web-based research for the city-level government entrepreneurship programming matched responses 99 percent of the time.

### **Endogeneity of Local Economic Development Programs**

Econometrically speaking, there might be some problems when trying to assess the impact of city GEDP on entrepreneurial activity. As mentioned before, the GEDP variable is constructed as the sum of dichotomous variables that relate to nine government activities tied to entrepreneurship and economic development at the city level. Accordingly, the source of the problem lies on the possibility that some or all of those government activities depend on some unobservable variable or that those GEDP and entrepreneurship are in fact simultaneously determined by an unobservable variable.

If the former is true, the estimated impact of GEDP on entrepreneurship from OLS will be biased, and the bias will not disappear as the sample size is increased. If the latter is true, OLS regression estimates will also be biased and inconsistent. In either case, it will become impossible to obtain clean estimates of the impact of GEDP on entrepreneurial activity.

### **Instrumental Variables**

The cleanest solution to these potential problems is the inclusion of the omitted variable in question, but such measures might be unobservable due to complete unavailability. An alternative is then to utilize another measure, an instrument, to extract the “clean” impact of GEDP on entrepreneurial activity at the city level. The required conditions are that this instrument does not suffer from the same dependence on the unobservable measure as the original variable, but it has to be significantly correlated with the local GEDP measure.

In this research project, the percentage of workers employed by government at the city level and the average value of the GEDP measure for neighboring cities within a 20 and 10

kilometers radius were considered as potential instruments for the GEDP measure. The intuition for the first potential instrument is that a city with a large proportion of employment in the public sector might be more likely to engage also in some or most of the activities considered in the GEDP measure. The intuition for the second potential instrument is that a city surrounded by other cities with a high level of the GEDP measure might be more likely to engage in some of the same activities in order to stay competitive or to remain a cohesive part of an economic area.<sup>7</sup> Endogeneity tests in Stata (Durbin-Wu-Hausman) were performed using different specifications of the GEDP measure and the instruments and all of them led to similar conclusions that OLS estimates using the local GEDP measure as an exogenous variable are appropriate.<sup>8</sup>

## **Results**

### **Descriptive Statistics**

Table 2 presents the descriptive statistics for the GEDP measure and the clusters, the entrepreneurship activity measures from the U.S. Census, Survey of Business Owners, and the control variables used in the different regression specifications.

On average, cities in Southern California are engaged in about 6 of the 9 government activities. Among the cluster activities, Cluster # 4-Indirect Assistance has the lowest relative measure. This cluster considers indirect business support and sponsorship activities by cities in Southern California.

Minority owned firms represent on average 50 percent of all firms, while female owned firms represent about 37 percent. The unincorporated self-employment rate for Southern California (2.8%) is slightly lower than the rate for California (3.2%) and lower than the rate for the United States (3.7%).<sup>9</sup>

[Table 2 about here]

## **OLS Results**

The first set of results in Table 3 consider the determinants of the GEDP measure and the five clusters. The results suggest that larger cities, cities with a higher percentage of employed population, and cities with a community college or university tend to be engaged in more economic development programs. The estimate for the distance to the port, on the other hand, suggests that cities farther from the San Pedro ports tend to have more economic development programs.

Considering the redevelopment cluster, which only considers redevelopment activities, results show that having a higher concentration of manufacturing firms, a younger population, a higher employed population rate, and a venture capital firm increases the probability of having a city involved in redevelopment activities. The results for indirect assistance cluster, which includes business sponsorship and support, indicate that larger cities, cities with larger property crime rates, and cities with a college are more likely to engage in this type of government-supported activities. Finally, the results of the direct assistance cluster, which includes only the measure of direct economic development and business related incentives, suggests that cities with a smaller White population, cities located farther from the San Pedro ports, and cities with a college are more likely to engage in direct economic development and business incentives activities.

[Table 3 about here]

The set of results in Table 4 present the OLS estimates of the determinants of four measures of entrepreneurial activity from the U.S. Census, Survey of Business Owners, including the GEDP measure. For the firm sales specification, estimates suggest that the percentage of manufacturing firms, the percentage of employment in government, and the GEDP measure are positively correlated with the amount of sales by firms. However, higher levels of property crime are also associated positively with sales by firm. In terms of the percentage of minority-owned firms, the second specification, the results show that the LA county indicator, the percentage of firms in manufacturing, trade, and TWU are positively correlated with minority ownership. However, a higher proportion of employment in government, a higher White population, a higher employed population rate, and a higher property crime rate are all negative associated with minority ownership. The GEDP measure is statistically insignificant.

[Table 4 about here]

The third specification, female ownership, shows that a higher proportion of employment in government, a higher White population, a higher property crime rate, and a higher employed population percentage are all negative correlated with female ownership. In addition, the presence of local GEDP is negatively correlated with female ownership. Finally, estimates for the last specification, the percentage of unincorporated self-employed individuals, are all statistically insignificant.

Table 5 considers the same specifications as in Table 4, but it replaces the GEDP variable with the individual clusters. The results suggest that direct business assistance is positively correlated with higher firm sales levels and statistically unrelated to minority and female

ownership, as well as the percentage of self-employed residents. Therefore, the results only confirm H1, while failing to provide evidence for H2. On the other hand, the promotional assistance cluster, which includes promotion of local businesses through information on local events, promotional or informational websites, is negatively correlated with female business ownership and statistically unrelated to minority ownership and percentage of self-employed individuals. This finding partially rejects H3.

[Table 5 about here]

## **Discussion and Conclusion**

Despite local governments' widespread use of development programs to promote entrepreneurial activity (Audretsch et al. 2007; Kreft and Sobel 2005), scholarly work assessing their relative effectiveness in encouraging entrepreneurship in cities is limited. Existing studies mainly focus on place-based tax incentives and their impact on economic growth (e.g., Hanson and Rohlin 2011; Harger and Ross 2016; Givord et al. 2013, 2018; Reese 2014). Studies also investigate the influence of government programs in fostering entrepreneurial activity at country or state levels (see, Bjørnskov and Foss 2016, for discussion). In light of this and considering the need for additional research investigating the effect of institutions on entrepreneurship (Urbano et al. 2018), the present study sought to contribute to the literature by empirically investigating the influence of local development programs on entrepreneurial activity in cities. As such, this study sought to address a gap identified in the literature, as little scholarly work exists on entrepreneurship at the city level (Glaeser et al. 2010a).

Another contribution of this study is highlighted by the complex nature of the relationship between GEDP and entrepreneurial activity. It is of course important to control for the possibly confounding variables that might influence entrepreneurship, ranging from the presence of educational facilities, incubators/accelerators, and venture capital firms, to the geographic, demographic, and industrial contexts of each city. However, to dig deeper into the relationship between GEDP and entrepreneurship, this study attempted to shed some light on the relative effectiveness of different economic development programs with respect to multiple indicators of entrepreneurial activity. As such, the analysis was able to provide insights into multiple levels: the factors influencing the presence of GEDP across cities, the extent to which GEDP influences different indicators of entrepreneurial activity across cities, and the extent to which different types of GEDP influence different indicators of entrepreneurial activity across cities.

The findings in this study provide empirical support to suggest that local economic development programs may influence entrepreneurial activity, but in ways that may not be expected for cities. At the broader level, cities with more GEDP seem to have larger firms on average. By implication this suggests that there are fewer smaller, entrepreneurial firms within these cities. Digging deeper, the results suggest that tax incentives are particularly influential here, which is consistent with previous findings on firm location (Hanson and Rohlin 2011; Harger and Ross 2016; Givord et al. 2013). Still, this suggests that cities might do more to facilitate the development of smaller firms if they wish to promote entrepreneurship within their localities.

Results at the broader level also suggest that cities with more GEDP appear to have fewer female-owned firms. Contrary to previous findings (Levie and Autio 2010; Stel et al. 2007), the

results in the present study shows that cities using development programs directed at entrepreneurs appear to have fewer female-owned firms. Looking more closely here, the presence of more promotional GEDP appears to be negatively correlated with the level of female-owned firms. Indeed, a similar finding is observed with respect to the relationship between promotional GEDP and minority-owned firms. Both findings are curious given that there is no obvious connection between the level of promotional planning and female business ownership. That said, it is possible that city governments are focusing resources on promoting economic development in general rather than discriminating in their support for particular groups. Either way, city governments may consider undertaking such efforts to promote female-owned or minority-owned businesses within their communities, especially given findings from the literature that such businesses tend to out-perform other businesses (Gordon 2017) and are likely to be the future of industry within the US.

While this study has focused on the influence of GEDP on entrepreneurial activity, when controlling for other factors, other interesting correlations came to light. For example, it appears that GEDP levels are higher in larger cities with higher levels of employment and the presence of colleges. This finding suggests a role for county or state governments or regional government councils to provide further support to disadvantaged cities.

Taken together, the findings highlight the importance of further research into the relative effectiveness of different economic development programs and best practices. This is particularly important, as evidence on their potential efficacy may help inform local decision-making to strategically invest limited tax resources in programs that are more likely to stimulate the emergence of small firms.

## **Limitations and Future Research**

There are numerous opportunities for further research around this specific topic and context, as well as the broader issue area. This study has the standard limitations of a cross-sectional dataset, which constrains analysis to variations around the averages of city-level characteristics, and limits the ability to make strong causal claims about the relationships between GEDP and entrepreneurial activity. Further research might consider using panel data of GEDP and entrepreneurship across cities in order to build a richer and potentially causal picture of the impact of changes over time. To provide deeper insights into the impact of particular programs or policy changes on entrepreneurial activity, researchers may also consider conducting qualitative interviews with economic development program managers and entrepreneurs alike to explore the extent to which GEDP plays a role in the location and success of small, minority-owned, female-owned, and emerging-sector firms.

Beyond such methodological advancements, future research should consider ways to improve the quality of the data used in this analysis. There are limitations with the data used for the entrepreneurial activity indicators. Ideally, these data would also capture changes over time — e.g., growth rates — to get a sense of the dynamics of entrepreneurial activity. Ideally, data on new and small firms would be available for each city; instead, such data is only available from the U.S. Census at the regional level.<sup>10</sup> Moreover, examining the number of firms within emerging sectors such as hi-tech, biotech, or cannabis, all of which are likely to have high rates of entrepreneurship, would provide significant additional insights.

The indicators currently employed to capture the presence of new and small firms could be more accurate.<sup>11</sup> Average firm size is a somewhat crude estimate; if a city has a legacy of large firms, then that would skew the average firm size even if the city was working actively to bring in smaller firms. This issue also raises questions about the direction of causality, especially

in the light of ideas of regulatory capture. Are larger firms leading to more GEDP or vice versa? The statistical analysis attempts to control for this with the use of an instrumental variable to test for endogeneity concerns. However, further analysis of this issue would help to address such concerns.

While indicators for GEDP were shown to be reliable when compared against interview data, it is of course difficult to capture fully the extent of programming. By using binary dummy variables to characterize the presence or not of different types of GEDP, this study is implicitly ignoring the heterogeneity of economic development programs among cities in Southern California. Two cities may both have similar types of programs, yet they may devote resource and implement them in very different ways. Also at the city government level, an indicator capturing the relative level of business licensing and fee costs would provide significant insights to future analyses.

## Notes

1. The proportions vary significantly across counties. Only 4 percent of Orange County residents live in unincorporated areas, while over 18 percent of San Diego County residents live in unincorporated areas.
2. The International City/County Management Association conducted in 2004, 2009, and 2014 an economic development survey (see ICMA 2014: pp. 5-6). This survey has been widely used by researchers to measure economic development activities in cities. Also, Max Neiman and Daniel Krimm, fellows at the Public Policy Institute of California, conducted a study in 2009 in which they measured 53 economic development activities and clusters them based on a factor analysis (2009: pp. 15-23).
3. Examples include Chamber of Commerce regional ED organizations and universities. This data was collected on the basis of at least 2 web searches over a 4-month period: City has a local Chamber of Commerce, regional ED agency or intergovernmental organization based within the City.
4. On the converse, a city lacking contact information and general information on what the city requires for a business to operate in the city and is lacking business forms to review and download from the local Southern California city website.
5. Percentage of population that self-identify as white, and percentage of population aged between 18 and 24, respectively.
6. This includes 2-year and 4-year colleges located in the city.
7. Increasing the radius will likely weaken the suggested positive correlation, but decreasing the radius will reduce the working sample significantly due to missing observations.

8. IV 2SLS was performed along with robust SE. In all different specifications, the authors fail to reject the null hypothesis that GEDP is exogenous.
9. Labor Force Statistics from the Current Population Survey and the Self-employment in the United States report (2016).
10. One alternative here would be to generate city-level data based on a national prediction model of firm age and size, and then use that bootstrapped data as the dependent variable. Such an approach would provide insights in spite of obvious limitations.
11. Further insights here could be generated by comparing models with and without the City of Los Angeles, which is a significant outlier in terms of size, and may be skewing the results.

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**Table 1.** Southern California Share of Total U.S. Small Firms, by Firm Age and Employee Number, 2014

Firm Age	US Firms	SoCal Firms	All Firms	a) 1 to 4	b) 5 to 9	c) 10 to 19	d) 20 to 49
a) 0	403,902	34,147	8.45%	8.45%	8.56%	7.83%	8.81%
b) 1	312,580	25,356	8.11%	7.91%	8.38%	8.76%	8.21%
c) 2	275,656	21,789	7.90%	7.91%	7.81%	7.83%	7.79%
d) 3	241,573	19,101	7.91%	7.78%	7.93%	8.01%	7.79%
e) 4	206,460	16,169	7.83%	7.84%	7.56%	7.91%	7.71%
f) 5	197,997	15,483	7.82%	7.84%	7.71%	7.71%	7.68%
g) 6 to 10	944,579	72,876	7.72%	7.68%	7.65%	7.60%	7.60%
h) 11 to 15	654,165	48,788	7.46%	7.17%	7.49%	7.41%	7.87%
i) 16 to 20	490,393	31,048	6.33%	5.94%	6.12%	6.18%	7.35%
j) 21 to 25	355,308	22,427	6.31%	6.08%	5.68%	6.06%	6.72%
k) 26+	603,400	40,234	6.67%	6.29%	5.69%	5.91%	6.59%
l) Left Censored	374,320	23,589	6.30%	4.71%	4.01%	4.28%	5.48%
m) ALL	5,060,333	371,007	7.33%	7.26%	6.83%	6.78%	7.11%

Authors' calculations based on [https://www.census.gov/ces/dataproducts/bds/data\\_firm.html](https://www.census.gov/ces/dataproducts/bds/data_firm.html)

**Table 2. Summary Statistics**

Government Entrepreneurship Activities	Mean	Std. Dev.
GEDP	6.3	1.6
Cluster 1: Redevelopment	0.8	0.4
Cluster 2: Economic Support	1.6	0.5
Cluster 3: Promotional	2.6	0.6
Cluster 4: Indirect Assistance	0.8	0.6
Cluster 5: Direct Assistance	0.5	0.5
<b>Dependent Variables</b>		
Firm Sales	\$1,064	\$1,699
Minority Owned	50.24	24.02
Female Owned	36.59	7.26
Self-Employed	2.76	12.17
<b>Independent Variables</b>		
Manufacturing (%)	9.96	3.97
Trade (%)	14.97	2.82
Transp, Wareh, Utilities (%)	5.21	2.64
Government Employment (%)	4.39	2.93
Total Population (1,000's)	91.09	284.94
White Population (%)	44.30	14.47
Youth Population (%)	9.52	3.00
Coastal Community (dummy)	0.15	0.36
Distance to San Pedro Ports (Km)	82.18	66.99
SqrFt Housing Price Median	\$377	\$193
Property Crime Rate per 1,000	63.32	391.10
Los Angeles County (dummy)	0.40	0.49
Employed Population (%)	44.63	6.97
Bus Incubator/Accelerator (dummy)	0.28	0.45
Venture Capital (dummy)	0.24	0.43
College (dummy)	0.36	0.48
Mean econ_dev 20 km radius	6.44	0.88
Mean econ_dev 10 km radius	6.40	1.19

**Table 3. OLS Estimates of GEDP and Individual Clusters**

	GEDP	Clusters				
		Redevelopment	Economic Support	Promotional	Indirect Assistance	Direct Assistance
Manufacturing	0.011 (0.29)	0.018 (2.08)*	-0.002 (0.16)	-0.016 (1.19)	0.002 (0.11)	0.014 (1.16)
Trade	0.033 (0.68)	0.021 (1.72)	0.002 (0.12)	0.011 (0.60)	-0.007 (0.34)	-0.001 (0.04)
TWU	0.010 (0.19)	0.006 (0.46)	0.003 (0.17)	0.008 (0.40)	0.003 (0.15)	-0.004 (0.26)
Government	0.030 (0.67)	-0.001 (0.08)	0.012 (0.82)	0.041 (2.45)*	-0.029 (1.56)	0.015 (1.04)
Population	0.001 (2.29)**	0.000 (0.34)	0.000 (1.50)	0.000 (0.88)	0.000 (2.20)*	0.000 (1.48)
White_pop	-0.011 (1.12)	0.001 (0.29)	-0.004 (1.27)	-0.000 (0.08)	-0.001 (0.25)	-0.007 (2.15)*
Youth_pop	0.037 (0.86)	0.024 (2.27)*	0.004 (0.25)	0.000 (0.03)	0.019 (1.05)	-0.010 (0.68)
Coastal Community	0.260 (0.70)	0.017 (0.21)	0.008 (0.08)	0.264 (2.07)*	-0.044 (0.29)	-0.011 (0.10)
Port Distance	0.005 (1.72)*	0.001 (2.18)*	-0.000 (0.40)	-0.001 (0.73)	0.001 (1.30)	0.002 (2.66)**
Median SqrFt Price	-0.001 (0.92)	0.000 (1.42)	-0.001 (1.99)*	-0.000 (1.17)	-0.000 (0.46)	-0.000 (0.20)
Property Crime	0.000 (0.56)	-0.000 (0.66)	-0.000 (0.32)	0.000 (0.94)	0.000 (1.99)*	-0.000 (1.16)
LA County	-0.054 (0.19)	-0.006 (0.09)	-0.088 (0.92)	-0.127 (1.17)	0.096 (0.80)	0.059 (0.62)
Employed_pop	0.067 (3.37)***	0.015 (3.01)**	0.015 (2.36)*	0.019 (2.55)*	0.006 (0.68)	0.012 (1.92)
Incubator/Accelerat	0.181 (0.67)	-0.008 (0.12)	0.018 (0.20)	0.188 (1.87)	-0.005 (0.05)	-0.015 (0.18)
Venture Capital	0.153 (0.53)	0.147 (2.13)*	-0.060 (0.64)	0.075 (0.71)	0.058 (0.49)	0.039 (0.42)
College	0.718 (2.96)***	0.117 (1.99)*	0.139 (1.75)	0.081 (0.91)	0.202 (2.02)*	0.170 (2.18)*
_cons	2.119 (1.36)	-0.913 (2.42)*	1.196 (2.34)*	1.648 (2.87)**	0.402 (0.63)	-0.118 (0.23)
R <sup>2</sup>	0.22	0.19	0.15	0.19	0.12	0.13
N	206	214	214	211	209	214

\*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$

**Table 4.** OLS Estimates for Entrepreneurial Activity Measures

	Firm Sales	Minority Owned	Female Owned	Self-Employed
Manufacturing	82.4 (2.1)**	0.825 (3.39)**	-0.133 (0.84)	-0.101 (0.30)
Trade	-45.0 (0.9)	1.440 (4.62)**	-0.201 (1.00)	-0.266 (0.61)
TWU	-4.5 (0.1)	2.016 (5.22)**	0.644 (2.54)*	0.714 (1.32)
Government	137.8 (2.4)**	-1.276 (3.46)**	-0.554 (2.29)*	-0.286 (0.55)
Population	-0.3 (0.8)	0.000 (0.14)	0.001 (0.65)	0.000 (0.15)
White_pop	9.9 (1.0)	-1.013 (16.03)**	-0.202 (4.94)**	0.126 (1.44)
Youth_pop	-2.6 (0.1)	0.216 (0.71)	0.003 (0.02)	-0.342 (0.81)
Coastal Community	316.4 (0.8)	-1.432 (0.61)	2.215 (1.43)	-0.720 (0.22)
Port Distance	-2.2 (0.7)	0.115 (5.85)**	0.024 (1.86)	0.021 (0.75)
Median SqrFt Price	-0.5 (0.6)	0.006 (1.06)	0.003 (0.88)	-0.006 (0.83)
Property Crime	2.3 (9.0)***	-0.006 (3.56)**	-0.005 (4.86)**	-0.001 (0.40)
LA County	439.6 (1.6)	7.773 (4.32)**	-1.818 (1.54)	2.536 (1.00)
Employed_pop	20.4 (1.0)	-0.356 (2.69)**	-0.254 (2.94)**	0.176 (0.95)
Incubator/Accelerator	299.6 (1.1)	-2.827 (1.70)	0.536 (0.49)	-1.816 (0.78)
Venture Capital	37.8 (0.1)	-2.157 (1.21)	-0.496 (0.42)	-2.194 (0.88)
College	-136.5 (0.6)	1.941 (1.26)	0.880 (0.87)	-2.416 (1.11)
GEDP	161.5 (2.2)**	-0.388 (0.84)	-0.605 (2.00)*	-0.277 (0.43)
GEDP-20km Radius	-26.0 (0.2)	-0.117 (0.13)	-0.094 (0.16)	-1.222 (0.99)
_cons	-1,867.8 (1.0)	63.769 (5.55)**	61.766 (8.21)**	6.356 (0.39)
R <sup>2</sup>	0.43	0.88	0.41	0.06
N	187	194	195	195

\*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$

**Table 5.** OLS Estimates for Entrepreneurial Activity Measures Using Clusters

	sales_firm	minority_owned	female_owned	selfemp_firms
Manufacturing	87.397 (2.20)**	0.842 (3.41)**	-0.181 (1.14)	-0.166 (0.48)
Trade	-41.135 (0.83)	1.498 (4.76)**	-0.176 (0.88)	-0.286 (0.66)
TWU	5.004 (0.08)	1.987 (5.14)**	0.700 (2.80)**	0.666 (1.23)
Government	110.200 (1.86)*	-1.184 (3.13)**	-0.625 (2.55)*	0.007 (0.01)
Population	-0.298 (0.84)	0.000 (0.00)	0.001 (0.44)	0.000 (0.13)
White_pop	10.382 (1.04)	-1.004 (15.82)**	-0.196 (4.83)**	0.129 (1.47)
Youth_pop	9.802 (0.20)	0.228 (0.75)	0.003 (0.01)	-0.436 (1.03)
Coastal Community	329.623 (0.88)	-1.054 (0.44)	2.603 (1.70)	-0.441 (0.13)
Port Distance	-1.758 (0.54)	0.120 (5.90)**	0.019 (1.42)	0.018 (0.62)
Median SqrFt Price	-0.360 (0.41)	0.007 (1.34)	0.003 (0.71)	-0.007 (0.84)
Property Crime	2.298 (8.79)***	-0.006 (3.55)**	-0.005 (4.82)**	-0.001 (0.39)
LA County	473.357 (1.66)*	7.693 (4.23)**	-2.277 (1.94)	2.124 (0.83)
Employed_pop	22.763 (1.04)	-0.341 (2.55)*	-0.235 (2.74)**	0.172 (0.93)
Incubator/Accelerator	298.400 (1.13)	-2.528 (1.51)	0.880 (0.81)	-1.454 (0.62)
Venture Capital	76.797 (0.27)	-1.776 (0.99)	-0.540 (0.47)	-2.270 (0.90)
College	-84.691 (0.35)	1.805 (1.16)	0.719 (0.71)	-3.000 (1.38)
Clusters:				
Redevelopment	-333.647 (1.06)	-1.720 (0.87)	-1.572 (1.23)	3.367 (1.22)
Economic Support	164.682 (0.71)	2.158 (1.48)	-1.633 (1.74)	1.677 (0.83)
Promotional	317.096 (1.52)	-2.353 (1.80)	-1.675 (1.98)*	-3.510 (1.92)
Indirect Assistance	43.459 (0.24)	0.582 (0.51)	0.310 (0.42)	1.227 (0.77)
Direct Assistance	381.051 (1.68)*	-1.318 (0.91)	1.357 (1.45)	-2.281 (1.13)
GEDP-20km Radius	-16.303 (0.12)	-0.379 (0.43)	-0.157 (0.27)	-1.431 (1.15)
_cons	-2,361.589 (1.25)	63.748 (5.39)**	65.537 (8.57)**	11.196 (0.68)
R <sup>2</sup>	0.44	0.88	0.44	0.10
N	187	194	195	195

\*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$