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The High Tech Sector and International Entrepreneurship in the Greater Los Angeles Area

An Exploratory Study of Economic Impacts

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The purpose of this study is to analyze the high tech sector in the Greater Los Angeles Area (GLA) to discover opportunities for global entrepreneurs to boost economic growth and development. International players have a significant role in bringing fresh new ideas, more competition, and a strong labor force to make this region more valuable and prosperous. In addition, entrepreneurs from other countries will benefit from investing in the GLA because it would give them a chance to thrive in a location that has an emerging high tech sector and a healthy economy. This will lead to the creation of thousands of jobs and billions in capital flow as more international players decide to invest or trade in this region. This report explores current trends and developments in Los Angeles County and provides a thorough analysis of the high tech sector. Additionally, this report includes key suggestions and recommendations for how international entrepreneurs can have a major impact on the economy and culture. Understanding and analyzing the high tech sector in the GLA is vital for preparing and creating an economically stronger future for the region. With the fast-paced rate of globalization and advances in technology, it is important for the GLA to adapt and compete effectively in order to remain ahead in the global economy.



Introduction

The Greater Los Angeles Area (GLA) is located in Southern California and is the second largest urban region in the United States behind the New York Metropolitan area. According to the US Census Bureau, the GLA is defined as the five counties of Los Angeles, Ventura, Orange, San Bernardino and Riverside. In its entirety, the area is also referred to as “Los Angeles- Long Beach- Riverside, CA” and is one of the most rapidly growing regions in the United States. Among the five counties that make up the GLA, Los Angeles County is the most populous. In fact, Los Angeles County is the most populated county in the entire nation and is home to 10,019,365 people as of 2013. This county will continue to remain far ahead of the other counties as the population projection in figure 1 of the demographic profile of Southern California shows. The population breakdown of Los Angeles County as of 2013 is 49.0% Hispanic, 27.0% white non-Hispanic, 13.7% Asian-Pacific Islander, 8.0% African American, and 2.2% other races. The majority of the population has a high school diploma, roughly 76.4%, and 29.5% has a bachelor’s degree or higher. Overall, higher education is a strong component of Los Angeles County with over 113 four-year public and private colleges and universities (Kleinhenz, Ritter-Martinez, Mendendez, 2013).

Figure 1. Population Projection for Southern California (All figures in millions)

\County Year \	San					LA 5-County Area	San Diego	
	Los Angeles County	Orange County	Riverside County	Bernardino County	Ventura County		County	California
2010	9.82	3.02	2.19	2.04	0.83	17.90	3.10	37.31
2015	10.08	3.14	2.35	2.14	0.85	18.57	3.23	38.80
2020	10.44	3.20	2.59	2.27	0.87	19.37	3.33	40.64
2025	10.72	3.25	2.82	2.43	0.89	20.11	3.43	42.45
2030	10.95	3.29	3.05	2.63	0.91	20.82	3.53	44.28
2035	11.12	3.31	3.26	2.81	0.94	21.45	3.64	46.08
2040	11.24	3.32	3.46	2.99	0.96	21.98	3.75	47.69
2045	11.34	3.32	3.64	3.14	0.98	22.42	3.86	49.11
2050	11.43	3.32	3.83	3.25	1.00	22.83	3.97	50.37
2055	11.51	3.33	4.03	3.34	1.01	23.22	4.07	51.55
2060	11.56	3.33	4.22	3.43	1.03	23.58	4.15	52.69

Source: State of California, Dept. of Finance, benchmarked on Census 2010

The Gross Domestic Product (GDP) is a strong indication of the size of an economy as it

measures total output. Solely based on GDP, Los Angeles County would be larger than Sweden, Norway, Poland and Belgium and has about a \$544 billion annual output (Kleinhenz, Ritter-Martinez, Guerra, 2013). Figure 2 breaks down the GDP values for the Greater Los Angeles Area in pairs of different counties and compares it to the GDP of the GLA area as a whole. Los Angeles County and Orange County have the highest GDP of all counties in the GLA.

In addition, international trade is a driving factor of the GLA economy with roughly \$414.8 billion passing through the Los Angeles Customs District in 2013. As of 2012, the leading industry clusters include local health services, local commercial services, local hospitality, real estate, construction and development, and trade. The “new economy” is primarily technology driven and encompasses bio-medical, digital information technology, and environmental technology. Los Angeles County, along with the rest of the GLA, is a ripe location for innovation and creativity making it ideal for high technology, which will be a main driving force for the economy because it heavily impacts how people live (Kleinhenz, Ritter-Martinez, Mendendez, 2013).

Figure 2. Gross Product of the Greater Los Angeles Area and Other Related Areas

\Area Year \	Los Angeles- Orange County	Riverside-San Bernardino	Ventura County	Los Angeles Five-County	San Diego County	State of California	United States
2001	578.8	85.5	26.8	691.1	127.0	1,473.9	11,365.1
2002	591.0	88.3	27.4	706.6	133.6	1,502.6	11,559.8
2003	608.4	93.4	29.4	731.2	138.8	1,549.6	11,809.0
2004	638.4	99.5	31.4	769.3	145.9	1,620.8	12,199.5
2005	660.5	105.2	32.7	798.4	151.4	1,688.9	12,539.1
2006	685.7	108.4	33.5	827.6	154.7	1,745.4	12,875.8
2007	688.5	107.1	33.9	829.4	156.4	1,763.5	13,103.3
2008	692.2	101.7	31.4	825.2	155.1	1,756.1	13,016.8
2009	650.4	93.8	31.5	775.8	148.2	1,667.2	12,592.7
2010	643.4	95.7	32.5	771.5	147.6	1,672.5	12,897.1
2011	650.9	95.9	33.4	780.1	150.7	1,692.3	13,108.3
2012	671.0	97.5	33.6	802.1	154.9	1,751.0	13,430.6

Source: Bureau of Economic Analysis (2013)

The high tech sector in Los Angeles County is quite extensive and diverse which can

make it hard to define. A technologically advanced sector invests in human capital and research and development focused on scientific, engineering, and technical knowledge that will be able to drive efficiency and innovation within the region (Cooper, Mitra, Sedgwick 2014).

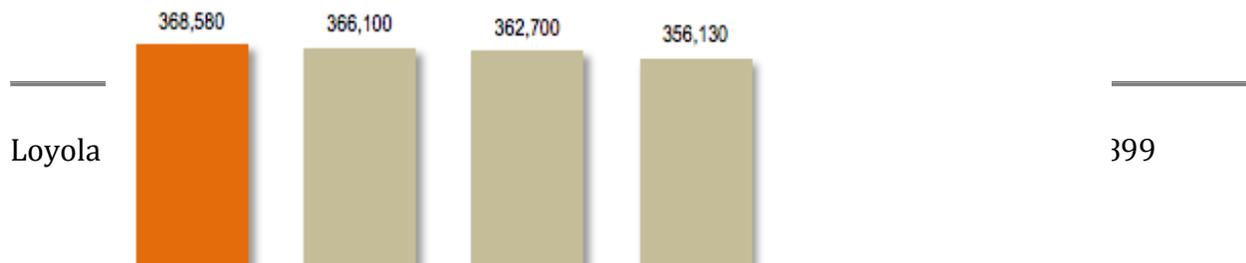
To begin, it is important to define high technology, commonly abbreviated as “high tech,” to create a common understanding for this report. According to “High Tech in LA: Its Employment and Economic Contribution,” a high tech industry can be defined as those with a larger percentage of high tech workers than the average industries (Cooper, Mitra, Sedgwick 2014). This definition is based upon the work done by Daniel E. Hecker along with the Office of Occupational Statistics and Employment Projections at the Bureau of Labor Statistics who state, "high technology industries are engaged in the design, development and introduction of new products and/or innovative manufacturing processes through the systematic application of scientific knowledge (Cooper, Mitra, Sedgwick, 2014).” In general, an industry that constitutes itself as high tech has a larger workforce made up of scientific, technical, and engineering professionals.

Furthermore, according to globalEdge, the high tech industry is comprised of companies that specialize in the production of electronic components, scientific, and technical instruments, computer hardware and software, and computer services. These companies typically have a fast-paced environment because the high tech sector is constantly adapting to new technological innovations. Innovation is the main driver of success and reinforces why research and development is crucial to this industry as it helps in the process of finding new discoveries. The primary profitability drivers in this industry include developing and marketing new products, gaining expertise in a specific field of knowledge, achieving access to capital, and creating a faster time to market process (globalEdge).

Within the last 10 years, there have been immense changes in technology as new products and processes are introduced and replacing old ones. In 2003, around 40 percent of tech sector employment was in manufacturing industries, however by 2013, manufacturing made up less than a third of high tech employment (Cooper, Mitra, Sedgwick, 2014). This reflects the national trend of declining manufacturing employment and a gradual shift toward services. This shift is due to many reasons such as globalization, technological changes and consumer behavior. In addition, the majority of human resources jobs are now outsourced to companies that specialize in the field. The size of the high tech sector grew at a quick rate, moving from a production-based industry to a service-oriented industry (Cooper, Mitra, Sedgwick, 2014). Nonetheless, the high tech sector is experiencing exponential growth and this shift sheds light on where the sector is headed.

High tech is unique in the sense that it is broad and spans across a number of different industries. The Bureau of Labor Statistics shows that employment in the high tech sector of Los Angeles County employed 368,580 people, larger than other prominent sectors such as manufacturing as shown in figure 3. High tech employment in LA is shown to surpass that of Boston-Cambridge, which was a close second with 361,380 jobs. Behind Boston-Cambridge is the Santa Clara Valley, home to Silicon Valley, with 313,260 jobs. Along with payroll employment, there is a significant portion of the workforce that is self-employed. As of 2012, there were 59,500 workers who identified as self-employed in the high tech sector bringing in \$3 million in earnings and making up about 6% of all self-employed workers in Los Angeles county, which is more than an 18% increase since 2012 (Cooper, Mitra, Sedgwick, 2014).

Figure 3. High Tech Employment Compared to Other Sectors in LA



Source: High Tech in LA: It's Employment and Economic Contribution, 2013

This boom in the Los Angeles tech scene is especially evident in the Westside region known as “Silicon Beach,” an area that is home to over 800 tech startups and accelerators. This location is known as “The home of the LA Tech and start up community,” according to the official Silicon Beach website (Silicon Beach LA). In the past few years, Silicon Beach, which includes Santa Monica, Venice, Playa Vista and El Segundo, gradually became the ultimate tech hub as companies like Google, Microsoft, Facebook and YouTube opened offices in the area. This region is home to a number of startups such as Hulu and Snapchat that have now become common household names. In fact, Snapchat turned down a \$3 billion acquisition from Facebook in 2013 indicating just how lucrative and popular some of these companies are (Pickert, 2015). Snapchat emerged simply to keep up with the Southern California culture, which was built to give the younger generation an easier way to interact online. According to *Business Insider*, more than 700 million messages are received on Snapchat everyday revealing just how popular this application is and how it has changed the culture of how people interact with one another (Shontell, 2015).

Silicon Beach has an advantage because it is emerging in a culturally-rich area that is filled with talented and creative people. Even celebrities are utilizing this emerging tech scene. For example, actress Jessica Alba co-founded The Honest Company, an e-commerce business that sells eco-friendly baby and household products. The City of Los Angeles is adapting to these changes and hired its first Chief Technology Officer in 2014. This position serves the function of overseeing new tools and technologies across the Los Angeles city government to better solve problems for residents and to have City Hall work more effectively with current trends (Nakashima and Liedtke, 2015). This new role created by the mayor is centered on his belief that technology is critical for securing a strong economy for the future. As the tech scene continues to develop, similar changes will be made in order for the region to maintain its elite status.

Regional Impacts & Potential for Development

The high tech sector spans across a wide range of industries from service to manufacturing in the North American Industry Classification System, otherwise known as NAICS, which officially compiles the economic data and analysis of each industry. Currently there are 34 industry groups at the four-digit NAICS level identified as high tech industries, but of course some use technology more than others. The Los Angeles high tech sector is responsible for creating 9% of all jobs in Los Angeles contributing more than \$108 billion through the regional GDP in 2013 (Cooper, Mitra, Sedgwick, 2014). The largest industries in the high tech sector in Los Angeles County are aerospace products, wholesale activities, engineering services and research development, consulting services, and computer services (Cooper, Mitra, Sedgwick, 2014).

Aerospace Products

Aerospace products accounted for 17.5% of the total representation of high tech employment in Los Angeles. The top NAICS codes in this category are aerospace products and parts manufacturing (NAICS 3364) and electronic instrument manufacturing (NAICS 3345). The top industry, NAICS 3364, filled the majority of the total employment in the aerospace cluster with 39,520 jobs in Los Angeles County in 2013. On top of that, the average annual wages in aerospace are much higher than the county average due to the high-skilled work required in this cluster (Industry Clusters in Los Angeles County, 2012).

This aerospace products and parts manufacturing industry thrives in Los Angeles and is comprised of companies that manufacture aircraft, missiles, satellites, and other space vehicles. This includes companies that manufacture and distribute parts and components. The demand is primarily created by military and civil requirements that depend on the strength of the domestic

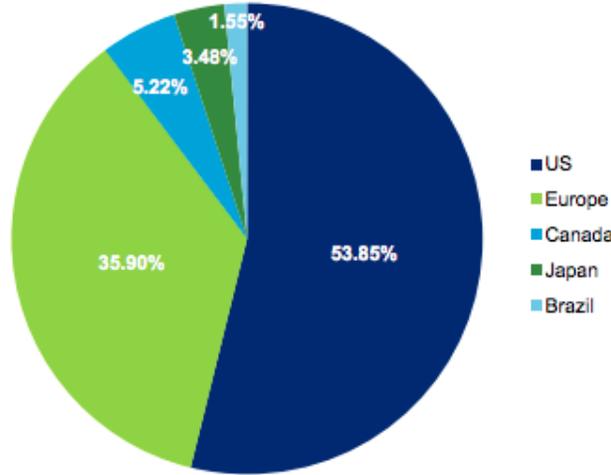
and emerging economies that have a quickly growing middle class. The U.S military budget and the budgets of foreign buyers of U.S. aerospace products make up majority of the audience for this segment. This industry is crucial to the regional and national economy as it provides a large number of high paying jobs to highly-skilled professionals in the GLA as shown in figure 4. In addition, it positively contributes to the U.S. trade balance as evident through President Obama's National Export Initiative goal of doubling U.S. exports. The aerospace manufacturer sector is internationally competitive and is the highest trade surplus of all U.S. manufacturing industries (Kleinhenz, Ritter-Martinez, De Anda).

Furthermore, NAICS 3364 reached imports of \$4,444,857,806 and exports of \$9,425,115,325 in February 2015 as shown in figure 5 below. The top five U.S. imports are from France, Canada, Germany, Japan and the United Kingdom. The top five exports are to China, Germany, France, Canada and the United Kingdom. Overall, California has the second highest aerospace products and parts exports to the world right behind Washington (Export.gov). China is the number one trading partner for the Los Angeles Customs District and the number three export market for the Greater Los Angeles Area. China is also one of the largest sources of foreign direct investment into Los Angeles County. There is a lot of growth potential for Chinese investment into the Greater Los Angeles area, which would eventually create more jobs and boost the economy (World Economic Trade Outlook).

According to *The Aerospace and Defense Industry in the U.S.* report released in 2012, the U.S. aerospace and defense industry is the largest in the world, comprising roughly 53.9% of the total revenues as shown in figure 4. The U.S. is the largest industry market in the world, mainly due to the U.S. government and high demand from the general aviation community. In addition, this industry contributed 2.23% to the national GDP in 2010, which is a significant impact on the

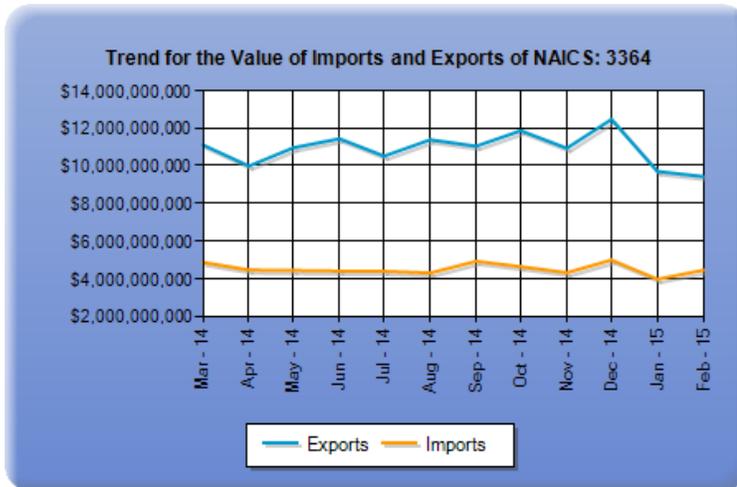
U.S. economy. This industry is the largest net exporter and the largest contributor to gross exports to the nation (Deloitte).

Figure 4. Distribution of Aerospace & Defense Revenues by Country/Region



Source: Aerospace and Defense Industries Association of Europe; Deloitte Analysis (2012)

Figure 5. Trend for the Value of Imports and Exports of NAICS: 3364

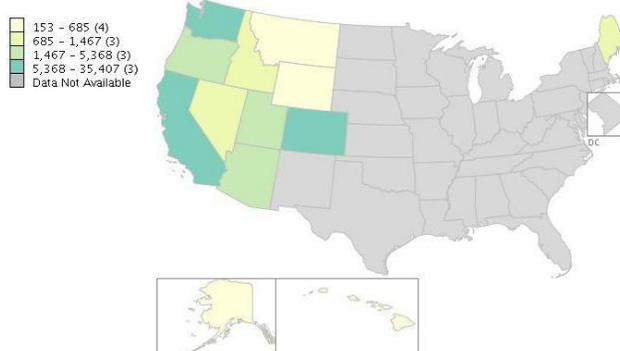


Source: U.S. Census Bureau in the Merchandise Trade dataset (2015)

Wholesale Activities Related to High Tech

The second largest segment, wholesale activities related to the high tech, made up 15.7% of the total representation of high tech employment in Los Angeles County as of 2013. The industries with the highest employment and highest average annual average wages are electronic shopping and mail-order houses, NAICS 4251, and commercial goods merchant wholesalers, NAICS 4234. This segment includes high tech products that are sold in large quantities to shopkeepers who then sell to the public at cheaper prices. The electronic shopping and mail-order houses had the largest share of employment with 21,700 jobs and the commercial goods merchant wholesalers had the second highest with 15,850 jobs in Los Angeles County in 2013. The graph in figure 6 also shows California as one of the states with the highest number of establishments for this industry. This industry, along with the rest of the segment, brings numerous jobs to Los Angeles County and shows the economical impact through the high number of establishments. The average annual wage for NAICS 4251 is \$68,216 and NAICS 4234 is \$73,439 as of 2013 representing the high wage value for the skill level in this industry. With the creation of new jobs in this area, more people are attracted to working and earning the high wages paid in this segment (Cooper, Mitra, Sedgwick, 2014).

Figure 6. 2012 Number of Establishments



Source: 2012 United States Economic Census

Engineering

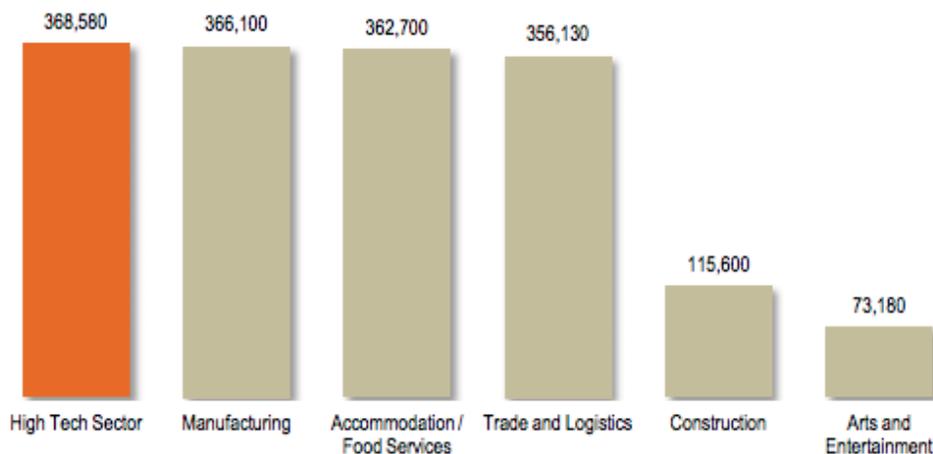
Services & Research and Development

The third largest segment - architectural and engineering services and research and development – accounts for 14.7% of the total high tech employment in Los Angeles County. Engineering services mainly focuses on the application of physical laws and the principles of engineering in the design, development, and utilization of machines, materials, systems, and processes. These tasks include evaluation of engineering processes, provision of technical services during construction, technical advice, and other related activities (Epipeline, 2007). This includes NAICS 5413, architectural, engineering and related services, which has 37,150 jobs for high tech workers in 2013 in Los Angeles County. Also, this includes NAICS 5415, computer systems design and related services, which is the design of computer systems that integrate computer hardware, software, and communication technologies. NAICS 5415 has 28,840 jobs for high tech workers as of 2013 in Los Angeles County (Cooper, Mitra, Sedgwick, 2014).

On the other hand, research and development describes more of the experimental development and research in learning and enhancing fields such as computers, medicine, mathematics, or health (Epipeline, 2007). The largest buyer of these services is typically the Department of Defense who spends a great portion of money on research and designing to remain ahead with a top notch Army, Navy and Air Force. This includes NAICS 5417, Scientific R&D services which has 16,480 jobs for high tech workers in 2013. Research and development is especially crucial when it comes to high tech because it requires a very innovative, creative, and scientific knowledge when producing disruptive products that will ultimately change the way the world is run (Cooper, Mitra, Sedgwick, 2014).

Overall, as of 2013, the top five segments accounted for more than 75 percent of high tech employment in Los Angeles County and was roughly equivalent to 278,100 jobs (Cooper, Mitra, Sedgwick, 2014). There is a broad range of jobs within the high tech sector, which can include positions such as human resource professional or accountant. Although these positions may not require firsthand high tech skills, these jobs support and help the high tech sector run smoothly. The high tech sector is larger than the manufacturing sector, the accommodation and food services sector, trade and statistics, construction, and the arts and entertainment sector. The graph below in figure 7 shows the specific differences in high tech employment when compared to other sectors in Los Angeles County.

Figure 7. High Tech Employment Compared to Other Sectors in the Los Angeles County



Source: High Tech in LA: It's Employment and Economic Contribution

The wages paid in high tech industries are, on average, higher than those in other industries. The sector pays wages almost 70% percent higher than wages in other industries, accounting for 17% or about \$32 billion worth of wages paid by employers (Cooper, Mitra, Sedgwick, 2014). With technology and innovation increasing at an aggressively rapid rate in Los

Angeles, thousands of new high tech sector jobs are arising, and as a result, are changing the leading industries. The high tech sector in Los Angeles is becoming vital to the economy and is just as important as the manufacturing and entertainment sectors.

In general, individuals employed in the high tech sector are typically more skilled, educated, and tech savvy than other workers. The jobs in the high tech sector are more valuable and desired because higher skill levels yield greater wages for the labor. To put this into perspective, the average wage paid to all employees in the high tech sector was around \$86,934, which is roughly 68% higher than the average wage paid to employees not in the high tech sector, which is \$51,778. The wage range is quite vast and high. The highest average annual wage to employees was in architectural and engineering services and R&D, with an annual average of \$108,506 (Cooper, Mitra, Sedgwick, 2014).

The economic contribution of the high tech sector is large and affects many different people in the region, which includes not only direct activity but indirect and induced activity. In its entirety, high tech supported 763,600 jobs in Los Angeles County in 2013. This number includes the indirect impact, which are all jobs supported by high tech industries through the purchase of goods and services from local businesses that are not necessarily a part of the high tech industry. Also included are jobs supported by the high tech ecosystem through the household spending of employees in high tech industries and their supply chain, which are the induced impacts. Induced impacts do not include spending on high tech industries and are related to personal expenses such as health care, education, or retail services (Cooper, Mitra, Sedgwick, 2014).

In addition, the total labor income earned by the total employment in Los Angeles County was \$58.7 billion, which is comprised of wages and benefits for all indirect and direct

workers of the high tech sector. The main economic contribution that high tech industries made to Los Angeles County is the billions of dollars toward goods and services from regional vendors. Along with this, the high tech sector uses billions of dollars every year toward wages and benefits for its employees and contract workers. A portion of the income is used on everyday items such as groceries, healthcare and other expenses that help circulate the money and stimulate a healthier economy.

Furthermore, \$21.8 billion was generated in tax revenues in 2013 for federal, state and local governments. Employees who work in high tech sectors pay income tax on their earnings or property taxes on their homes, which accumulate together and add to the overall economic contribution. Los Angeles County collected \$2.6 billion and the city governments collected \$1.1 billion.

In terms of competitiveness, the Los Angeles County high tech industry is an emerging asset and is very distinct from the entertainment sector that the city is known for. The high tech sector is discussed in a positive light as Mayor Eric Garcetti states, “Our diverse population, talent pool, great universities, Pacific Rim location, and innovation makes L.A. the ideal city to foster new ideas and businesses (Ungerleider).” According to the semi-annual Los Angeles Startup Ecosystem Report, published by incubator Be Great Partners with the assistance of Los Angeles’s city government, there is a lot of talent in Los Angeles, but not as much venture capital supporting the new ideas, which makes it hard for a lot of startups to get funded and advance quickly. This area has attracted over \$1.3 billion in venture capital since 2011 according to a report from PricewaterhouseCoopers and the National Venture Capital Association (Pickert, 2015). In contrast, Silicon Valley brought in \$3 billion in venture capital in 2013 alone. Furthermore, in 2012, Los Angeles received 6.2 percent of total venture capital and in

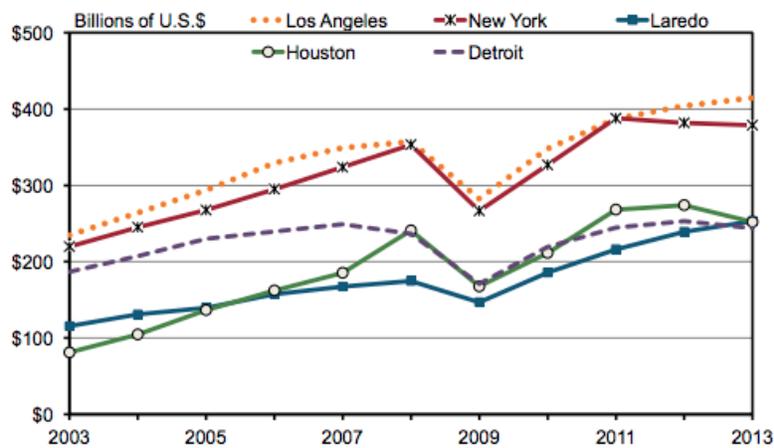
comparison the San Francisco Bay Area received 40.4 percent (Pickert, 2015). This may partly be due to the lifestyle differences in Los Angeles versus the Bay Area. Los Angeles County is rooted in creativity and sourcing the money right away is part of the mindset. In Silicon Valley, most startups have no real design to make profit until the app actually picks up and attracts more attention.

California has more high tech jobs than any other state, followed by Texas and New York. The number and diversity of high tech industries in the Greater Los Angeles Area, Silicon Valley, San Diego, and San Francisco make California an attractive place to invest (CA.gov). The revenue generated from technology companies is a strong indication of how successfully California adapts to change. As of March 2015, the yearlong revenue of technology companies in the state was \$715 billion, which is 52% of technology company sales in the United States. The second state behind California is New York with 11%, followed by Washington with 7%, and Massachusetts with 4% (Winkler, 2015).

On a global scale, according to the U.S. Department of Commerce, the United States is the largest recipient in the world for foreign direct investment. California is the number one state for foreign direct investments and venture capital. It employed around 561,000 workers, which is about 4.6% of the total private industry employment of the state (International Trade Outlook 2014-2015). Moreover, the value of two-way trade going through the Los Angeles Customs District (LACD) reached a record of \$414.8 billion in 2013. The LACD ranks first in the nation in terms of two-way trade values, surpassing other major states such as Texas, New York and Michigan shown in figure 8. The international trade flow in Los Angeles County experienced a growth rate of 2.7% exceeding the national rate of 0.6% indicating its strong relationship with

other countries. The total LACD two-way trade value is expected to increase in the coming years due to strong relationships with top trading partners China, South Korea, Taiwan, Vietnam, Thailand, India, Australia and Indonesia, who are forecasted to experience immense economic growth (International Trade Outlook 2014-2015).

Figure 8. Value of International Trade at Nation’s Leading Customs Districts



Source: U.S. Dept. of Commerce, U.S. Bureau of the Census

Developing the High Tech Sector in GLA

The high tech sector is mainly comprised of aerospace, business products, mobile services, and biotech. Be Great found that the seven main hubs for the tech industry are “Silicon Beach,” West Los Angeles, the South Bay, Orange County, Downtown Los Angeles, Pasadena, and Culver City (Fast Company, 2013). This varies from other prominent tech hub locations such as the Bay Area, New York, or Boston because there is no centralized tech hub in Los Angeles. Due to this, problems such as no primary central location filled with people who share the same interest and passion for tech to collaborate and spark innovation. Los Angeles’ high tech sector is fragmented into a bunch of different locations, which makes it harder to create that startup culture that similarly exists for the entertainment industry in Hollywood (Fast Company, 2013). However, this could be seen as an advantage as more people enter Los Angeles County and are able to find others who have similar interests and goals. International entrepreneurs from other countries can enter the space, invest in the region, and would have a high chance of finding qualified people interested in working in high tech positions.

The tech scene in Los Angeles is unique and attractive because the area has great weather and relatively cheap rent, which means recruiting people from around the world is not as challenging. The tech startups are influenced by the culture and a majority of the applications are created in response to that. The video economy is especially huge with Hollywood in the region, and digital video content and production is a huge area for growth in this sector. The large amount of video-related startups in Silicon Beach are a result of the number of experts in television and movie production who want to express their creativity through applications to allow the rest of the community to join them. For example, there is a company called Makers

Studios in Culver City that makes custom YouTube videos for clients. Other well-known companies including BuzzFeed, Amazon, and YouTube took advantage of expanding new offices to LA to grow the company's online-video content (Pickert, 2015).

A trend found in Los Angeles County is that the majority of Silicon Beach companies that target the mass-market experience greater success. In Los Angeles, startups with products designed for consumers outnumber those marketed to other businesses by a ratio of four to one. In contrast, in Silicon Valley this ratio is two to one probably due to the fact that there is a heavier concentration of software companies in that area. The trend to target the mass market encourages people to be as creative and open with their ideas when creating a new product because the target is so wide and there is a greater chance that this product can apply and be used by more people. When developing products and choosing to invest in this region, it is important to be aware of the trends that work better in this market and fit the culture.

Conclusion

All in all, the high tech sector in the Greater Los Angeles Area is a location filled with extremely creative and innovative people who will push this region successfully into the future as the tech scene emerges and further develops. Adapting to the changes in technology is crucial in terms of building a strong, profitable, and booming economy that will be able to compete effectively on a national and global scale.

The GLA is in healthy economic condition and has experienced a rising GDP over the past few years. Los Angeles County and Orange County in particular have a much higher GDP

than the rest of the counties in the GLA, and will cater to the tech startups that are entering the space. Los Angeles County, in particular, is on the rise for becoming a hub for technology and already has hundreds of tech startups and accelerators in the area. Silicon Beach, which is quickly growing in popularity, includes renowned companies such as Google, Facebook, and YouTube that have impacted the way people live on a daily basis. As the tech scene flourishes in this region, changes will be made to accommodate the growth of this sector such as the creation of new roles in the city specifically focus on technology. The mayor, Eric Garcetti, has spoken countless times about the importance of the tech scene and how the GLA is a phenomenal location with a diverse population, strong talent pool and healthy economy.

In general, Los Angeles is well known all around the world and is a very attractive place for people to move to, especially with the great weather, strong industries, and prestigious universities. It would be advantageous for entrepreneurs from other countries who are looking to invest and contribute to the high tech sector to seek out the GLA. The economic contribution of the high tech sector is high and is predicted to experience rapid exponential growth. The high tech sector in Los Angeles County employed more people than any other metro region in the nation indicating the immense talent that already exists in this region. The value of the wages paid by the high tech sector is, on average, higher than all other sectors, which is beneficial in boosting the economy and attracting new talent from other parts of this world.

As the rate of technology advances and globalization increases, it is imperative that the GLA focus on and further develop the high tech sector. International entrepreneurs should invest in the GLA because it is thriving and there is access to an abundant amount of resources, talented individuals, and inspiration for creativity and innovation. People all around the world who are

seeking to work in a high tech position should consider moving to this region as it is on the rise and will be the ultimate tech hub as it continues to grow and develop. Lastly, global companies that are looking to import quality high technology should focus on this region to obtain valuable products and resources that are worth the price.

Bibliography

Cooper, Christine, Shannon M. Sedgwick, and Somjita Mitra. *High Tech in LA: Its Employment and Economic Contribution in 2013*. Rep. Institute for Applied Economics / JPMorgan Chase & Co., Oct. 2014. Web.

Garcetti, Eric. "L.A. County: High-tech Capital of the Country?" *Office of Los Angeles Mayor Eric Garcetti*. N.p., 8 Oct. 2014. Web. 20 Apr. 2015. (EG)

Industry Clusters in Los Angeles County. Rep. Los Angeles: Los Angeles County Economic Development Corporation, 2012. Print.

Kleinhenz, Robert A., Kimberly Ritter-Martinez, and Dymphna Menendez. *L.A. Stats*. Rep. Los Angeles: LAEDC Kyser Center for Economic Research, 2014.

Kleinhenz, Robert A., Kimberley Ritter-Martinez, Ferdinando Guerra, and George Entis. (n.d.): n. pag. Los Angeles County Economic Development Corporation, 2015. Web. 27 Apr. 2015.

Kleinhenz, Robert A., Kimberly Ritter-Martinez, and Ferdinando Guerra. *2013-2014 Economic Forecast & Industry Outlook*. Rep. Los Angeles: Los Angeles County Economic Development Corporation, 2013.

Kleinhenz, Robert A., Kimberly Ritter-Martinez, and Rafael De Anda. *The Aerospace Industry in Southern California*. Rep. Los Angeles: Los Angeles County Economic Development Corporation, 2012. Print.

Pickert, Kate. "Silicon Valley Goes to the Beach." *Time*. Time, 10 Apr. 2014. Web. 21 Apr. 2015.

"NAICS 541712." NAICS Code 541712 Research and Development Physical, Engineering, Life Sciences. N.p., 8 Nov. 2007. Web. 21 Apr. 2015.

Nakashima, Ryan, and Michael Liedtke. "'Silicon Beach' Brings Tech Boom to Los Angeles." *Inc.com*. N.p., 23 Oct. 2014. Web. 20 Apr. 2015.

Shontell, Alyson. "5 Months After Turning Down Billions, Snapchat's Growth Is Still Exploding With 700 Million Photos Shared Per Day." *Business Insider*. Business Insider, Inc, 02 May 2014. Web. 21 Apr. 2015.

The Aerospace and Defense Industry in the U.S.: A Financial and Economic Impact. Rep. N.p.: Deloitte Development LLC, 2012. Print.

"Technology: Introduction." *Technology globalEDGE: Your Source for Global Business Knowledge*. N.p., n.d. Web. 21 Apr. 2015.

"The Home of the LA Tech & Start Up Community." *Silicon Beach LA*. N.p., n.d. Web. 21 Apr. 2015.

Ungerleider, Neal. "Analysis Finds L.A.'s Tech Scene Outgrowing Hollywood." *Fast Company*. N.p., 21 Oct. 2013. Web. 20 Apr. 2015.

"Why CA." *Why CA*. Governor's Office of Business and Economic Development, 2012. CA.gov Web. 27 Apr. 2015.

Winkler, Matthew A. "Best State for Business? Yes, California." *BloombergView.com*. N.p., 12 Mar. 2015. Web. 27 Apr. 2015.