

# FOREIGN DIRECT INVESTMENT

IN SOUTHERN CALIFORNIA, 2017



**WORLD TRADE CENTER®**  
**LOS ANGELES**



# FOREIGN DIRECT INVESTMENT

IN SOUTHERN CALIFORNIA



# SPECIAL ACKNOWLEDGMENT

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**LOS ANGELES COUNTY**  
Center For International Trade Development

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## FOREIGN DIRECT INVESTMENT 2017

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# EXECUTIVE SUMMARY

Globalization and trade have recently reemerged as hot political topics in the US. Nonetheless, international trade and inbound foreign direct investment remain critical to the Southern California region.

In June 2016, the World Trade Center Los Angeles (WTCLA) and the Los Angeles Economic Development Corporation (LAEDC) released a study on the economic impact of foreign direct investment (FDI) on Southern California, focusing on the number of foreign-owned enterprises (FOEs) in the six counties that make-up Southern California (Los Angeles, San Diego, Orange, Ventura, San Bernardino, and Riverside).

This report builds upon an LAEDC analysis of foreign direct investment in Southern California released in 2016 by:

- Updating the contribution of foreign-owned enterprises to the region in terms of Jobs, Firms, and Wages.
- Analyzing changes over time, especially year-on-year changes between 2015 and 2016.
- Examining clustering by foreign-owned enterprises with respect to source nation and industry.
- Gaining insights into the perspective of foreign-owned enterprises through a survey.



## EXECUTIVE SUMMARY

# CONTRIBUTION OF FOREIGN-OWNED ENTERPRISES

As shown in Tables ES-1 and ES-2, there are now an estimated 9,964 foreign-owned firms in Southern California, representing 1.2% of all firms in the region. These firms have 439,101 employees, or 4.3% of the region's workers, and pay them \$27.4 billion in wages.

Japanese firms remain the largest contributor to Southern California, with 2,465 firms paying 87,247 workers a total of \$5.5 billion. UK, Canada, France and Germany complete the top 5 source nations.

Nearly half of these firms and jobs are located in Los Angeles County, with Orange County accounting for close to one quarter.

Retail and wholesale trade continue to be largest sectors for the number of foreign-owned firms – 2,351 and 1,695 respectively – with manufacturing the largest sector in terms of employment – 140,582 jobs – and total estimate wages – \$9.7 billion.

## CHANGES OVER TIME

Between 2015 and 2016, the number of foreign-owned enterprises in Southern California increased by 859, with total jobs increasing by 72,686 and the average number of jobs per firm increasing by 3.9.

Of the top 10 firms by employment in 2016, only Switzerland and the Netherlands declined in employment. Collectively, this demonstrates the strong and growing contribution of foreign-owned firms to the region.

## CLUSTERING ANALYSIS

Spatial agglomeration refers to the clustering of firms within a particular location. Firms locate nearby one another – for example car dealerships, jewelry or fashion districts, or furniture stores – for many reasons, including being attractive to customers and workers from similar firms, being close to supply chains, and to be in ethnically familiar neighborhoods. For Southern California, spatial agglomeration is higher when it is based on industrial sector than when it is based on country of origin. This suggests that firms might be more likely to locate close to another firm in the same sector than to another firm from the same country of origin.

For industries with a large number of firms, Financial Services and Professional and Business Services are the industries with the highest level of spatial agglomeration. When spatial agglomeration is measured with respect to the number of firms, Korea shows the highest levels in Southern California, followed

by Taiwan and Switzerland. When measure in terms of the number of employees, firms from Sweden, China, and Switzerland show the highest levels in Southern California.

Statistical correlation analysis reveals that cities with relatively high concentrations of FOs have statistically larger labor forces and lower unemployment rates. At the same time, FOs in these cities have statistically higher sales, more workers, and higher 3-year growth percentage in sales volume than FOs in cities with lower concentration. The statistical analysis also suggests that spatial agglomeration based on sector might have larger impacts on economic development and growth than spatial agglomeration based on country of origin. These findings suggest that Southern California might have more to offer to prospective FOs than has been previously identified in the academic literature.

# SURVEY ANALYSIS

The majority of respondents were positive about their business experiences within Southern California, reflecting findings from a similar survey conducted by LAEDC in 2009. In the 2017 survey, 81% of respondents reported their experiences within Southern California as “Good” or “Satisfactory”, while only 4% stated their experiences were “Poor” or “Unsatisfactory”.

In the 2009 report, greatest concern among respondents was the negative economic climate at the time. However, other areas of concern included housing affordability, public safety/crime, commercial and industrial prices and availability, energy supply and prices, labor costs, obtaining skilled employees, K-12 education quality, business taxes, and regulatory environment/permit procedures. The 2017 survey found that the most pressing risk factors in general for respondents were customer satisfaction/retention, labor and HR issues, political and regulatory uncertainty, currency volatility, and tougher competition. Specific to business within Southern California, respondents reported concern over trade and investment restrictions, delays for business visas for overseas visas, taxes, labor costs, and housing affordability.

Similar to the 2009 survey, when considering future investments, expansions of current facilities and growth into new facilities are the most popular. A larger proportion of respondents in 2017 appear to be considering relocation. In terms of potential for new investment, of those responding, most are considering Los Angeles County, followed by San Diego County, and Orange County. Within other areas of California, the Bay Area is the most popular response. Outside of California, investment potential is spread across the US, with a slight preference for the states of Texas, New York, Hawaii, Nevada, and Florida. Outside the US, Asian countries were significantly the most popular potential market, followed by Canada and Europe.

WTCLA and DHEI were keen to understand which key initiatives and programs state, regional, and local governments could implement to better support FOE in Southern California. The most popular regional programs were “Economic reports on local markets”, followed by “Public road network investment”, “Training and workshops on doing business in Southern California (export training, etc...)” and “Workforce development initiatives, such as job-training, layoff support”.

### TABLE ES-1

Top 10 Southern California FOE by Source Nation

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Japan	87,247	19.9%	2,465	\$5,513
2	United Kingdom	66,366	15.1%	1,089	\$3,747
3	Canada	39,798	9.1%	858	\$2,655
4	France	35,981	8.2%	689	\$2,369
5	Germany	34,141	7.8%	858	\$2,047
6	Switzerland	24,675	5.6%	387	\$1,843
7	Sweden	23,177	5.3%	121	\$1,021
8	Ireland	20,985	4.8%	203	\$1,368
9	China	11,221	2.6%	323	\$726
10	Netherlands	11,104	2.5%	216	\$727
	All Others	84,406	19.2%	2,755	\$5,412
	<b>Total</b>	<b>439,101</b>	<b>100.0%</b>	<b>9,964</b>	<b>\$27,428</b>

Source: Dun & Bradstreet, CA EDD; LAEDC analysis

### TABLE ES-2

Southern California FOE by Destination County

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	212,512	48.4%	4,682	\$13,248
2	Orange	114,001	26.0%	1,998	\$7,103
3	San Diego	58,076	13.2%	1,619	\$3,659
4	San Bernardino	21,596	4.9%	726	\$1,325
5	Riverside	16,211	3.7%	561	\$1,017
6	Ventura	16,705	3.8%	378	\$1,077
	<b>Total</b>	<b>439,101</b>	<b>100.0%</b>	<b>9,964</b>	<b>\$27,428</b>

Source: Dun & Bradstreet, CA EDD, DHEI Analysis

# INTRODUCTION

Political debates over trade and globalization have intensified in recent years. Nonetheless, the demand for presence in the U.S. market by foreign companies does not appear to have diminished, and international trade and inbound foreign direct investment remain critical to the Southern California region.

In June 2016, the World Trade Center Los Angeles (WTCLA) and Los Angeles Economic Development Corporation (LAEDC) released a study on the economic impact of foreign direct investment (FDI) on Southern California, focusing on the number of foreign-owned enterprises (FOEs) in the six counties (Los Angeles, San Diego, Orange, Ventura, San Bernardino, and Riverside).

This research project aims to inform policy makers and stakeholders related to foreign-owned enterprises in Southern California, and highlight the importance of these 9,000+ businesses to the regional economy. This report also aims to better-understand the motivations for foreign firms locating in Southern California, the experiences of foreign firms doing business here, and which factors encourage foreign firms to continue a presence the region.

## INTRODUCTION

# BACKGROUND

To understand Foreign Direct Investment, scholars often explore the motivations for, and impacts of, cross-border business investments. This could include foreign firms investing in the U.S. to gain market access, benefit from technology spillovers, or recruit high-skilled U.S. workers. The clustering or agglomeration of industries can also influence the location choices of businesses. Central to this issue is a tension between firms wanting to gain as much market coverage as possible – a Starbucks on every corner – and businesses locating close to one another – for example jewelry districts or car dealership clusters – to benefit from lower transaction costs for customers, and knowledge and technology spillovers between firms. This analysis can provide insight into the influence of clustering and agglomeration on investment decisions.

Why are firms choosing Southern California for their business investments?

Let us take the perspective of a foreign firm that has unique products or production techniques and has out-grown its domestic market. Southern California clearly offers a myriad of benefits for our foreign business seeking to gain a foothold in the lucrative U.S. market. Our firm has likely already gained some knowledge of the region by exporting through the largest twin ports in the U.S. (Fosfuri, Motta, and Ronde, 2001). Proximity to input material and transportation hubs available in Southern California is also important in location choices, particularly for those industries sensitive to transportation costs (see Rosenthal, 2001 and Shaver and Flyer, 2000).

Foreign investments are often located as close to home as possible (Halvorsen, 2012). If our firm is from a Pacific Rim nation, they are more likely to invest in Pacific Rim states such as California given lower international transport costs, greater cultural connections and more expats from Pacific Rim countries. Foreign firms also succeed more in regions where the proportion of foreign owned businesses are higher and invest a greater amount into productivity enhancing activities (Girma, et al., 2013). Firms have been found to locate initially closer to home, and later disperse throughout the whole country. Behind this dispersion effect are pull factors that draw foreign-owned firms away from California, such

as tax incentives, labor costs, costs of business, and regulatory environment.

Southern California is also appealing to our example firm because of the diverse and high-skilled workforce living in a region with obvious lifestyle benefits. Firms with more sophisticated technologies in place benefit from the spillover effects of agglomeration through improved access to educated workforce and proximity to input supply chains (Shaver and Flyer, 2000). Workers trained in new technologies retain their knowledge as they decide to remain in their current organization or choose to move to a local competitor (Girma, Gong, Gorg, and Lancheros, 2015). Rosenthal (2001) found that industries with a high reliance on skilled labor also have a higher propensity to cluster at all geographic levels. This all suggests that Southern California is particularly appealing to developed businesses.

This report is particularly interested in the benefits that foreign inbound investment can bring to Southern California. Many studies find positive impacts to host regions in terms of increased wages (Aitken et al, 1996), employment opportunities and the spillover effects of local companies learning from foreign producers located in the region (Gorg and Greenaway, 2004; Girma et al, 2015; Haskel, Pereira and Slaughter, 2007).

Although the determinants of FDI have been studied extensively in the academic literature (see Blomstrom, Kokko and Globerman, 2001 and Neilsen, Asmussen and Weatherall, 2017 for notable literature reviews), there has been limited research on the macroeconomic impacts of inbound FDI on U.S. regional economies. Moreover, there have been few studies of the economic impacts of inbound FDI in the U.S. (Mérette, Papadaki, Hernandez, & Lan, 2008 is a notable exception), and the authors could find no examples of analyses examining the economic impacts of inbound FDI on sub-national regions, such as the South Bay. Industry agglomeration is most notable at the state level and reduces in industry concentration at lower levels (Ellison & Glaeser, 1997), highlighting the scope for contribution to the literature by looking at the regional level.

## INTRODUCTION

# METHODS AND LIMITATIONS

This report explores numerous research questions, including many of the issues raised in the literature review:

- What is the contribution of F0Es to Southern California? This report updates the 2015 report FDI-related statistics in terms of number of firms, jobs, and wages. Dun & Bradstreet firm-level data retrieved in March 2017 is complemented with California Employment Development Department data on wages to estimate total wages for different categories. Dun & Bradstreet data only shows the ultimate ownership of firms above a ten percent threshold, and does not provide indication whether the F0E is the result of a merger or acquisition, a “greenfield” investment, or some other investment arrangement. As such, the jobs and wages described in this report are not necessarily created as a consequence of the inbound FDI, nor would they necessarily be lost if the FDI was removed.
- Has this contribution changed over time, and what does this tell us about future trends? This report analyzes the changes over time, including year-on-year changes for Southern California with respect to economic sectors, counties, and source nations and longer-term changes – between 2007 and 2016 – for Los Angeles County. Examining such trends provides indications about the future direction of inbound FDI in Southern California.
- Why are firms choosing Southern California for their business investments? Are they actively considering moving to other locations? What initiatives could Southern California develop to secure more FDI? This report

examines the motivations of F0Es through a number of methods.

- First, a survey of F0Es was administered, asking questions about motivations for entering and remaining in the region, plans for investment and relocation, business risks and concerns, connections to the region and other institutions, and which regional programs would be most beneficial. The response rate to the survey was 1-2%, which is not uncommon for large-scale business surveys, and the broad spectrum of respondents in terms of source nation and economic sector adds weight to the overall findings. Nonetheless, caution must be taken when generalizing the results of the survey.
- Second, agglomeration and clustering effects identify the locational connections between companies. The literature review highlighted the importance of understanding the intersection between inbound FDI and agglomeration effects, especially with respect to economic sector and source nation. The report studies agglomerations by examining clusters on maps, with respect to H-indices – which indicate the relative densities of clusters – and regression analyses based on firm-level data for the number of firms within a given distance and other locational economic indicators. This analysis reveals some relative economic benefits of clustering.

# SOUTHERN CALIFORNIA AND FOREIGN INVESTMENT

FOREIGN DIRECT INVESTMENT 2017

## SOUTHERN CALIFORNIA AND FOREIGN INVESTMENT

# FOREIGN INVESTMENT IN 2016

As shown in Table 1, there are now an estimated 9,964 foreign-owned firms in Southern California, representing 1.2% of all firms in the region. These firms have 439,101 employees, or 4.3% of the region's workers, and pay them \$27.4 billion in wages.

As shown in Table 2, Japanese firms remain the largest contributor to Southern California, with 2,465 firms paying 87,247 workers a total of \$5.5 billion. UK companies are the second most prominent, with 1,089 firms paying 66,366 workers a total of \$3.7 billion. Canada, France and Germany complete the top 5 source nations. Nearly half of these firms and jobs are located in Los Angeles County, with Orange County accounting for close to one quarter.

Retail and wholesale trade continue to be largest sectors for the number of foreign-owned firms – 2,351 and 1,695 respectively – with manufacturing the largest sector in terms of employment – 140,582 jobs – and total estimate wages – \$9.7 billion, followed by professional and business services, which pays 78,373 workers an estimated \$4.6 billion in wages.

**TABLE 1**  
Southern California FOEs by Destination County, 2016

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	212,512	48.4%	4,682	\$13,248
2	Orange	114,001	26.0%	1,998	\$7,103
3	San Diego	58,076	13.2%	1,619	\$3,659
4	San Bernardino	21,596	4.9%	726	\$1,325
5	Riverside	16,211	3.7%	561	\$1,017
6	Ventura	16,705	3.8%	378	\$1,077
<b>Total</b>		<b>439,101</b>	<b>100.0%</b>	<b>9,964</b>	<b>\$27,428</b>

Source: Dun & Bradstreet, CA EDD, DHEI Analysis

**TABLE 2**  
Southern California FOE's by Source Nation, 2016

Rank	Source Nation	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)	Employment Per Firm	Ave Wage Per Emp
1	Japan	87,247	19.9%	2,465	\$5,513	35.4	\$63,186
2	United Kingdom	66,366	15.1%	1,089	\$3,747	60.9	\$56,459
3	Canada	39,798	9.1%	858	\$2,655	46.4	\$66,724
4	France	35,981	8.2%	689	\$2,369	52.2	\$65,834
5	Germany	34,141	7.8%	858	\$2,047	39.8	\$59,971
6	Switzerland	24,675	5.6%	387	\$1,843	63.8	\$74,684
7	Sweden	23,177	5.3%	121	\$1,021	191.5	\$44,046
8	Ireland	20,985	4.8%	203	\$1,368	103.4	\$65,210
9	China	11,221	2.6%	323	\$726	34.7	\$64,695
10	Netherlands	11,104	2.5%	216	\$727	51.4	\$65,463
11	Taiwan	8,035	1.8%	257	\$551	31.3	\$68,602
12	Australia	7,569	1.7%	202	\$501	37.5	\$66,170
13	Republic Of Korea	7,464	1.7%	262	\$476	28.5	\$63,742
14	Spain	6,764	1.5%	116	\$441	58.3	\$65,255
15	Mexico	6,673	1.5%	254	\$405	26.3	\$60,623
16	Luxembourg	4,734	1.1%	332	\$230	14.3	\$48,632
17	Israel	4,495	1.0%	53	\$311	84.8	\$69,288
18	India	3,535	0.8%	108	\$237	32.7	\$66,928
19	Singapore	3,314	0.8%	71	\$227	46.7	\$68,502
20	Kazakhstan	3,298	0.8%	7	\$262	471.1	\$79,303
21	Italy	3,096	0.7%	152	\$153	20.4	\$49,430
22	Belgium	2,834	0.6%	72	\$184	39.4	\$64,860
23	Cayman Islands	2,745	0.6%	33	\$184	83.2	\$66,983
24	Hong Kong	2,286	0.5%	94	\$152	24.3	\$66,364
25	Rest of World	17,564	4.0%	742	\$1,099	23.7	\$62,562
	<b>Total</b>	<b>439,101</b>	<b>100.0%</b>	<b>9,964</b>	<b>\$27,428</b>	<b>44.1</b>	<b>\$62,465</b>

Source: Dun &amp; Bradstreet, CA EDD, DHEI Analysis



## SOUTHERN CALIFORNIA AND FOREIGN INVESTMENT

# CHANGES IN FOREIGN INVESTMENT 2015-2016

Tables 3-6 show changes between 2015 and 2016. During this period, the number of foreign-owned enterprises in Southern California increased by 859, with total jobs increasing by 72,686 and the average number of jobs per firm increasing by 3.9. German firms have seen the largest increase, 252 (+29%), followed by Canada, 115 (+13%) and Ireland, 50 (+25%). Canadian firms increased employment by the largest amount, 13,568 (+34%), followed by Sweden, 12,915 (+56%), and the United Kingdom, 11,456 (+17%).

It is notable that despite the UK, France and China decreasing in terms of the number of firms, the number of employees increased for firms from all three countries. In fact, of the

top 10 firms by employment in 2016, only Switzerland and the Netherlands declined in employment. Collectively, this demonstrates the strong and growing contribution of foreign-owned firms to the region.

Such growth is also reflected over longer time periods for most source nations. Between 2007 and 2015 for Los Angeles County, there were significant increases in the number of employees, with total employees of foreign-owned firms increasing by 41,427. However, there intervening years does appear to have seen a period of consolidation as the number of firms decreased for most source nations and by 254 in total.

**TABLE 3**  
**Change in FOE's by Source Nation, Between 2015-2016**

Source Nation	Change in Jobs	Change in % of All FOE Jobs	Change in Firms	Change in Jobs per Firm
Japan	+7,826	-1.83%	+25	+2.9
United Kingdom	+11,456	+0.11%	-46	+12.9
Canada	+13,568	+1.86%	+115	+11.1
France	+3,423	-0.71%	+83	-1.5
Germany	+1,547	-1.12%	+33	+0.3
Switzerland	-403	-1.18%	+17	-4.0
Sweden	+12,915	+2.48%	-8	+111.9
Ireland	+643	-0.82%	+50	-29.6
China	+4,771	+0.76%	-17	+16.3
Netherlands	-3,008	-1.37%	+19	-732.6
Taiwan	+788	-0.17%	+35	-1.3
Australia	-83	-0.38%	+11	-2.6
Republic Of Korea	-100	-0.40%	+29	-4.0
Spain	+2,588	+0.44%	+24	+12.9
Mexico	+1,286	+0.02%	+27	+2.6
Luxembourg	-136	-0.22%	+20	-1.3
Israel	+221	-0.18%	+8	-10.2
India	+653	+0.01%	+22	-0.8
Singapore	+1,323	+0.25%	+30	-1.9
Kazakhstan	N/A	N/A	N/A	N/A
Italy	+389	+0.01%	+2	+2.4
Belgium	+296	-0.05%	+20	-9.4
Cayman Islands	N/A	N/A	N/A	N/A
Hong Kong	+116	-0.08%	+12	-2.2
Rest of World	+9,580	+1.80%	+390	+1.0
<b>Total</b>	<b>+72,686</b>		<b>+859</b>	<b>+3.9</b>

Source: Dun & Bradstreet, CA EDD, LAEDC Analysis, DHEI Analysis

**TABLE 4**

Change in the Employment, Number of Firms, and Total Wages by Source Nation for Top-10 Foreign-Owned Businesses in Southern California, 2015-2016

2017 Employment Rank	Source Nation	Change between 2015 - 2016					
		Employment			Number of Firms		
		Rank Change	Level Change	% Change	Rank Change	Level Change	%Change
1	Japan	0	+7,826	+9%	0	+25	+1%
2	United Kingdom	0	+11,456	+17%	0	-56	-5%
3	Canada	+2	+13,568	+34%	+1	+115	+13%
4	France	0	+3,423	+10%	0	+83	+12%
5	Germany	-2	+1,547	+5%	-1	+33	+4%
6	Switzerland	0	-403	-2%	0	+17	+4%
7	Sweden	+2	+12,915	+56%	-6	-8	-7%
8	Ireland	-1	+643	+3%	+1	+50	+25%
9	China	+4	+4,771	+43%	-1	-17	-5%
10	Netherlands	-2	-3,008	-27%	0	+19	+9%

Source: DHEI analysis based on LAEDC (2016) and Dun & Bradstreet data

**TABLE 5**

Change in Firms, Jobs, and Wages by Sector, 2015-2016

Sector	2016			Change (2015-2016)	
	Jobs	Firms	Est. Wages (\$millions)	Jobs	Firms
Natural Resources	2,260	48	\$182.6	+433	+7
Construction	5,047	146	\$295.1	-527	+22
Manufacturing	140,582	1,481	\$9,714.2	+23,861	+165
Wholesale Trade	56,842	1,695	\$4,045.7	+8,229	+146
Retail Trade	40,253	2,351	\$1,229.7	+4,113	+238
Transportation, Warehousing and Utilities	22,749	489	\$1,234.3	+2,001	+29
Information	19,907	523	\$1,158.3	+2,163	+14
Financial Activities	43,496	1,168	\$3,767.5	+5,219	+19
Professional and Business Services	78,373	1,232	\$4,551.0	+27,151	+165
Education and Health Care	5,992	239	\$354.4	-701	+14
Leisure and Hospitality	15,339	309	\$473.4	-2,027	-15
Other Services	6,361	177	\$283.8	+2,414	+12
Public Administration	1,900	106	\$138.1	+357	+43
<b>Total</b>	<b>439,101</b>	<b>9,964</b>	<b>\$27,428.3</b>	<b>+72,686</b>	<b>+859</b>

Source: Dun &amp; Bradstreet, CA EDD, LAEDC Analysis, DHEI Analysis

**TABLE 6**

Change in Jobs and Firms by County, 2015-2016

County	Jobs	% of all FOE Jobs	Firms
Los Angeles	+35,085	-0.03%	+315
Orange	+29,859	3.00%	+186
San Diego	+3,333	-1.71%	+188
San Bernardino	+1,073	-0.68%	+72
Riverside	+213	-0.67%	+59
Ventura	+3,123	0.10%	+39
<b>Total</b>	<b>72,686</b>	<b>0.00%</b>	<b>859</b>

Source: Dun &amp; Bradstreet, CA EDD, LAEDC Analysis, DHEI Analysis

# FDI DESTINATION COUNTIES



# SOUTHERN CALIFORNIA

## FOREIGN-OWNED ENTERPRISES (FOEs)

### FOE JOBS

**439,101**

### FOE FIRMS

**9,964**

### ESTIMATED WAGES

**\$27.4B**

### FOEs BY SOURCE NATION

Rank	Source Nation	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Japan	87,247	19.9%	2,46	\$5,512.8
2	United Kingdom	66,366	15.1%	1,089	\$3,747.0
3	Canada	39,798	9.1%	858	\$2,655.5
4	France	35,981	8.2%	689	\$2,368.8
5	Germany	34,141	7.8%	858	\$2,047.5
6	Switzerland	24,675	5.6%	387	\$1,842.8
7	Sweden	23,177	5.3%	121	\$1,020.8
8	Ireland	20,985	4.8%	203	\$1,368.4
9	China	11,221	2.6%	323	\$725.9
10	Netherlands	11,104	2.5%	216	\$726.9
	All Others	84,406	19.2%	2,755	\$5,411.8
	<b>Total</b>	<b>439,101</b>	<b>100.0%</b>	<b>9,964</b>	<b>\$27,428.3</b>

Source: Dun & Bradstreet, CA EDD, DHEI Analysis

### FOEs BY INDUSTRY SECTOR

Sector	Jobs	Firms	Est. Wages (\$millions)
Natural Resources	2,260	48	\$182.6
Construction	5,047	146	\$295.1
Manufacturing	140,582	1,481	\$9,714.2
Wholesale Trade	56,842	1,695	\$4,045.7
Retail Trade	40,253	2,351	\$1,229.7
Transp, Warehousing, Utilities	22,749	489	\$1,234.3
Information	19,907	523	\$1,158.3
Financial Activities	43,496	1,168	\$3,767.5
Prof / Business Services	78,373	1,232	\$4,551.0
Education / Health Care	5,992	239	\$354.4
Leisure / Hospitality	15,339	309	\$473.4
Other Services	6,361	177	\$283.8
Public Administration	1,900	106	\$138.1
<b>Total</b>	<b>439,101</b>	<b>9,964</b>	<b>\$27,428.3</b>

Source: Dun & Bradstreet, CA EDD, LAEDC Analysis, DHEI Analysis



# LOS ANGELES COUNTY

## FOREIGN-OWNED ENTERPRISES (FOEs)

### FOE JOBS

**212,512**

### FOE FIRMS

**4,682**

### ESTIMATED WAGES

**\$13.2B**

### FOEs BY SOURCE NATION

Rank	Source Nation	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Japan	45,157	21.2%	1,233	\$2,813.9
2	United Kingdom	26,963	12.7%	491	\$1,621.3
3	Sweden	17,818	8.4%	54	\$756.1
4	Canada	17,710	8.3%	330	\$1,208.9
5	Germany	15,873	7.5%	369	\$945.6
6	Switzerland	15,672	7.4%	173	\$1,218.6
7	France	15,255	7.2%	358	\$990.0
8	Ireland	6,677	3.1%	60	\$450.1
9	Netherlands	5,473	2.6%	80	\$361.1
10	Australia	4,367	2.1%	105	\$283.7
	All Other	41,547	19.6%	1,429	\$2,598.3
	<b>Total</b>	<b>212,512</b>	<b>100.0%</b>	<b>4,682</b>	<b>\$13,247.5</b>

Source: Dun & Bradstreet, CA EDD, DHEI Analysis

### FOEs BY INDUSTRY SECTOR

Sector	Jobs	Firms	Est. Wages (\$millions)
Natural Resources	755	17	\$65.8
Construction	2,337	64	\$140.7
Manufacturing	44,823	514	\$3,097.3
Wholesale Trade	26,619	813	\$1,894.6
Retail Trade	17,190	1,012	\$525.2
Transp, Warehousing, Utilities	16,869	295	\$1,341.7
Information	22,657	287	\$935.0
Financial Activities	31,673	576	\$2,763.6
Prof / Business Services	32,762	656	\$1,834.7
Education / Health Care	1,219	111	\$82.6
Leisure / Hospitality	10,635	204	\$330.6
Other Services	3,972	82	\$177.2
Public Administration	1,001	51	\$58.5
<b>Total</b>	<b>212,512</b>	<b>4,682</b>	<b>\$13,247.5</b>

Source: Dun & Bradstreet, CA EDD, LAEDC Analysis, DHEI Analysis



# ORANGE COUNTY

## FOREIGN-OWNED ENTERPRISES (FOEs)

### FOE JOBS

**114,001**

### FOE FIRMS

**1,998**

### ESTIMATED WAGES

**\$7.1B**

### FOEs BY SOURCE NATION

Rank	Source Nation	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	United Kingdom	23,748	20.8%	202	\$1,181.2
2	Japan	22,806	20.0%	545	\$1,449.7
3	Canada	12,643	11.1%	166	\$837.3
4	France	8,257	7.2%	134	\$557.2
5	Germany	7,943	7.0%	181	\$495.3
6	Ireland	7,329	6.4%	54	\$510.9
7	China	5,959	5.2%	51	\$409.1
8	Switzerland	3,172	2.8%	90	\$219.2
9	Taiwan	2,858	2.5%	70	\$199.8
10	Israel	2,592	2.3%	13	\$178.3
	All Other	16,694	14.6%	492	\$1,065.1
	<b>Total</b>	<b>114,001</b>	<b>100.0%</b>	<b>1,998</b>	<b>\$7,103.2</b>

Source: Dun & Bradstreet, CA EDD, DHEI Analysis

### FOEs BY INDUSTRY SECTOR

Sector	Jobs	Firms	Est. Wages (\$millions)
Natural Resources	92	6	\$5.4
Construction	1,050	28	\$61.4
Manufacturing	18,373	376	\$1,307.7
Wholesale Trade	45,263	387	\$3,127.7
Retail Trade	9,976	445	\$304.8
Transp, Warehousing, Utilities	908	41	\$41.2
Information	3,068	72	\$178.5
Financial Activities	5,048	221	\$422.0
Prof / Business Services	25,389	286	\$1,430.3
Education / Health Care	2,054	42	\$78.9
Leisure / Hospitality	1,346	46	\$71.6
Other Services	764	34	\$46.0
Public Administration	670	14	\$27.7
<b>Total</b>	<b>114,001</b>	<b>1,998</b>	<b>\$7,103.2</b>

Source: Dun & Bradstreet, CA EDD, LAEDC Analysis, DHEI Analysis





# SAN DIEGO COUNTY

## FOREIGN-OWNED ENTERPRISES (FOEs)

### FOE JOBS

**58,076**

### FOE FIRMS

**1,619**

### ESTIMATED WAGES

**\$3.7B**

### FOEs BY SOURCE NATION

Rank	Source Nation	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Japan	11,848	20.4%	407	\$783.0
2	United Kingdom	10,231	17.6%	222	\$622.7
3	Germany	4,833	8.3%	145	\$296.1
4	Canada	4,576	7.9%	160	\$311.5
5	Ireland	4,404	7.6%	35	\$233.4
6	France	4,018	6.9%	96	\$264.4
7	Switzerland	3,196	5.5%	67	\$223.4
8	Netherlands	2,798	4.8%	49	\$177.2
9	Sweden	1,503	2.6%	16	\$67.5
10	Spain	1,285	2.2%	28	\$84.3
	All Others	9,384	16.2%	394	\$595.6
	<b>Total</b>	<b>58,076</b>	<b>100.0%</b>	<b>1,619</b>	<b>\$3,659.1</b>

Source: Dun & Bradstreet, CA EDD, DHEI Analysis

### FOEs BY INDUSTRY SECTOR

Sector	Jobs	Firms	Est. Wages (\$millions)
Natural Resources	389	4	\$28.4
Construction	1,201	18	\$32.8
Manufacturing	5,129	223	\$365.1
Wholesale Trade	24,892	284	\$1,720.0
Retail Trade	7,273	419	\$222.2
Transp, Warehousing, Utilities	1,680	57	\$99.8
Information	1,129	59	\$65.7
Financial Activities	6,971	195	\$509.7
Prof / Business Services	64,355	1,854	\$4,084.6
Education / Health Care	934	40	\$52.3
Leisure / Hospitality	888	43	\$50.5
Other Services	431	29	\$23.3
Public Administration	880	13	\$64.0
<b>Total</b>	<b>116,152</b>	<b>3,238</b>	<b>\$7,318.3</b>

Source: Dun & Bradstreet, CA EDD, LAEDC Analysis, DHEI Analysis



# SAN BERNARDINO COUNTY

## FOREIGN-OWNED ENTERPRISES (FOEs)

### FOE JOBS

**21,596**

### FOE FIRMS

**726**

### ESTIMATED WAGES

**\$1.3B**

### FOEs BY SOURCE NATION

Rank	Source Nation	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Japan	2,969	13.7%	133	\$172.2
2	Canada	2,619	12.1%	89	\$167.1
3	France	2,363	10.9%	40	\$152.4
4	Germany	1,646	7.6%	68	\$89.0
5	United Kingdom	1,148	5.3%	49	\$62.1
6	Mexico	1,040	4.8%	35	\$62.1
7	Sweden	979	4.5%	13	\$44.1
8	Switzerland	872	4.0%	28	\$59.5
9	Australia	865	4.0%	15	\$59.6
10	Ireland	740	3.4%	16	\$51.5
	All Others	6,355	29.4%	240	\$405.2
	<b>Total</b>	<b>21,596</b>	<b>100.0%</b>	<b>726</b>	<b>\$1,324.9</b>

Source: Dun & Bradstreet, CA EDD, DHEI Analysis

### FOEs BY INDUSTRY SECTOR

Sector	Jobs	Firms	Est. Wages (\$millions)
Natural Resources	102	2	\$6.5
Construction	166	7	\$9.0
Manufacturing	4,194	136	\$298.5
Wholesale Trade	7,537	142	\$520.8
Retail Trade	2,730	200	\$83.4
Transp, Warehousing, Utilities	599	23	\$47.4
Information	1,082	29	\$44.7
Financial Activities	2,167	54	\$106.6
Prof / Business Services	22,626	799	\$1,400.5
Education / Health Care	920	18	\$51.6
Leisure / Hospitality	265	21	\$15.4
Other Services	138	15	\$6.2
Public Administration	666	6	\$59.1
<b>Total</b>	<b>43,192</b>	<b>1,452</b>	<b>\$2,649.7</b>

Source: Dun & Bradstreet, CA EDD, LAEDC Analysis, DHEI Analysis



# RIVERSIDE COUNTY

## FOREIGN-OWNED ENTERPRISES (FOEs)

### FOE JOBS

# 16,211

### FOE FIRMS

# 561

### ESTIMATED WAGES

# \$1.0B

### FOEs BY SOURCE NATION

Rank	Source Nation	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Germany	2,353	14.5%	50	\$146.1
2	Japan	2,018	12.4%	94	\$125.8
3	United Kingdom	1,836	11.3%	71	\$101.7
4	Switzerland	1,645	10.1%	19	\$113.7
5	Canada	1,498	9.2%	73	\$89.7
6	Sweden	1,450	8.9%	13	\$77.7
7	Spain	1,088	6.7%	27	\$92.0
8	Ireland	808	5.0%	17	\$53.2
9	France	805	5.0%	33	\$44.8
10	Belgium	547	3.4%	7	\$37.6
	All Others	2,163	13.3%	157	\$134.2
	<b>Total</b>	<b>16,211</b>	<b>100.0%</b>	<b>561</b>	<b>\$1,016.6</b>

Source: Dun & Bradstreet, CA EDD, DHEI Analysis

### FOEs BY INDUSTRY SECTOR

Sector	Jobs	Firms	Est. Wages (\$millions)
Natural Resources	16,218	563	\$1,017.0
Construction	46	5	\$2.5
Manufacturing	1,326	82	\$94.4
Wholesale Trade	7,331	92	\$506.6
Retail Trade	1,722	177	\$52.6
Transp, Warehousing, Utilities	320	14	\$25.5
Information	542	17	\$29.0
Financial Activities	1,637	80	\$138.5
Prof / Business Services	1,382	45	\$62.1
Education / Health Care	277	15	\$17.6
Leisure / Hospitality	1,360	16	\$76.5
Other Services	95	11	\$4.2
Public Administration	166	5	\$6.9
<b>Total</b>	<b>32,422</b>	<b>1,122</b>	<b>\$2,033.2</b>

Source: Dun & Bradstreet, CA EDD, LAEDC Analysis, DHEI Analysis



# VENTURA COUNTY

## FOREIGN-OWNED ENTERPRISES (FOEs)

### FOE JOBS

**16,705**

### FOE FIRMS

**378**

### ESTIMATED WAGES

**\$1.1B**

### FOEs BY SOURCE NATION

Rank	Source Nation	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	France	5,283	31.6%	28	\$360.0
2	Japan	2,449	14.7%	53	\$168.2
3	United Kingdom	2,440	14.6%	54	\$158.0
4	Germany	1,493	8.9%	45	\$75.4
5	Ireland	1,027	6.1%	21	\$69.3
6	Canada	752	4.5%	40	\$41.0
7	Sweden	730	4.4%	8	\$34.3
8	Netherlands	587	3.5%	23	\$43.7
9	Republic of Korea	471	2.8%	5	\$30.9
10	Mexico	311	1.9%	13	\$21.9
	All Others	1,162	7.0%	88	\$74.2
	<b>Total</b>	<b>16,705</b>	<b>100.0%</b>	<b>378</b>	<b>\$1,077.0</b>

Source: Dun & Bradstreet, CA EDD, DHEI Analysis

### FOEs BY INDUSTRY SECTOR

Sector	Jobs	Firms	Est. Wages (\$millions)
Natural Resources	16,705	378	\$1,077.0
Construction	150	4	\$13.3
Manufacturing	10,736	62	\$741.9
Wholesale Trade	1,201	65	\$85.5
Retail Trade	1,362	98	\$41.6
Transp, Warehousing, Utilities	273	11	\$16.4
Information	191	19	\$11.1
Financial Activities	735	52	\$61.5
Prof / Business Services	1,444	41	\$80.5
Education / Health Care	134	7	\$7.2
Leisure / Hospitality	284	11	\$7.8
Other Services	164	5	\$8.9
Public Administration	31	3	\$1.4
<b>Total</b>	<b>33,410</b>	<b>756</b>	<b>\$2,154.0</b>

Source: Dun & Bradstreet, CA EDD, LAEDC Analysis, DHEI Analysis

## FDI DESTINATION COUNTIES

# COUNTY COMPARISONS

Tables 7-10 compare Southern California counties by the FOE rankings, job shares, and wages shares for source nations. While interesting in their own right, these findings also shed light on the agglomeration locations of firms by source nation in different counties. For 2015, Compared to the Southern California average, it is notable that Swiss-owned firms have a disproportionate presence in Los Angeles County, while Ireland, Israel, Taiwan and India firms are clustered in Orange County. San Diego is home to more UK, Irish and Dutch firms compared to the Southern California average, while Mexican and Canadian firms are particularly prominent in San Bernardino. For 2016, Swiss and Swedish firms stand out in Los Angeles County, while UK firms are prominent in Orange County, and Irish and Dutch firms are disproportionately represented in San Diego County much like 2015.

**TABLE 7**

Counties Compared to Southern California Source Nation Rankings, 2015

Rank	Southern California	Los Angeles	Orange	San Diego	San Bernardino	Riverside	Ventura
1	Japan	Japan	Japan	UK	Japan	Germany	France
2	UK	UK	UK	Japan	Canada	Japan	Japan
3	Germany	Switzerland	Ireland	Ireland	France	UK	Netherlands
4	France	Germany	Germany	Germany	Germany	Switzerland	UK
5	Canada	France	France	Canada	UK	Canada	Germany
6	Switzerland	Canada	Canada	Netherlands	Mexico	Sweden	Sweden
7	Ireland	Netherlands	Switzerland	France	Sweden	France	Canada
8	Netherlands	Ireland	Israel	Switzerland	Switzerland	Spain	Republic of Korea
9	Sweden	Sweden	Taiwan	Republic of Korea	Australia	Ireland	Belgium
10	Australia	Australia	India	Sweden	Ireland	Belgium	Mexico

Source: Dun & Bradstreet, LAEDC Analysis, DHEI Analysis. Highlighted boxed represent notable ranking changes compared to the Southern California average.

**TABLE 8**

Counties Compared to Southern California Source Nation Rankings, 2016

Rank	Southern California	Los Angeles	Orange	San Diego	San Bernardino	Riverside	Ventura
1	Japan	Japan	UK	Japan	Japan	Germany	France
2	UK	UK	Japan	UK	Canada	Japan	Japan
3	Canada	Sweden	Canada	Germany	France	UK	UK
4	France	Canada	France	Canada	Germany	Switzerland	Germany
5	Germany	Germany	Germany	Ireland	UK	Canada	Ireland
6	Switzerland	Switzerland	Ireland	France	Mexico	Sweden	Canada
7	Sweden	France	China	Switzerland	Sweden	Spain	Sweden
8	Ireland	Ireland	Switzerland	Netherlands	Switzerland	Ireland	Netherlands
9	China	Netherlands	Taiwan	Sweden	Australia	France	Republic of Korea
10	Netherlands	Australia	Israel	Spain	Ireland	Belgium	Mexico

Source: Dun & Bradstreet, LAEDC Analysis, DHEI Analysis. Highlighted boxed represent notable ranking changes compared to the Southern California average.

TABLE 9

All Counties Compared to Southern California by Source Nation: Rankings and Shares, 2015

SoCal Rank	Los Angeles County			Orange County			San Diego County		
	Rank Change	Jobs Share	Wages Share	Rank Change	Jobs Share	Wages Share	Rank Change	Jobs Share	Wages Share
Japan	0	52.9%	54.5%	0	23.6%	24.4%	-1	13.2%	12.8%
UK	0	47.4%	48.5%	0	23.5%	24.9%	1	20.2%	19.6%
Germany	-1	47.0%	47.0%	-1	23.7%	26.0%	-1	13.4%	13.4%
France	-1	46.0%	48.5%	-1	23.6%	25.3%	-3	10.0%	9.4%
Canada	-1	44.1%	47.2%	-1	20.8%	21.8%	0	16.5%	17.4%
Switzerland	3	64.2%	74.2%	-1	12.4%	10.2%	-2	12.7%	9.1%
Ireland	-1	28.2%	26.8%	4	38.7%	44.2%	4	24.0%	21.3%
Netherlands	1	47.3%	51.4%	N/A	N/A	N/A	2	23.6%	21.5%
Sweden	0	47.2%	45.0%	N/A	N/A	N/A	-1	17.3%	18.5%
Australia	0	55.4%	56.9%	N/A	N/A	N/A	N/A	N/A	N/A
<b>County Average</b>		<b>48.4%</b>	<b>50.6%</b>		<b>23.0%</b>	<b>24.2%</b>		<b>14.9%</b>	<b>14.2%</b>
SoCal Rank	San Bernardino County			Riverside County			Ventura County		
	Rank Change	Jobs Share	Wages Share	Rank Change	Jobs Share	Wages Share	Rank Change	Jobs Share	Wages Share
Japan	0	4.9%	3.5%	-1	2.7%	2.2%	-1	2.7%	2.7%
UK	-3	2.8%	1.9%	-1	3.2%	2.3%	-2	2.9%	2.9%
Germany	-1	4.8%	3.6%	2	6.6%	5.4%	-2	4.4%	4.5%
France	1	8.3%	5.9%	-3	3.2%	1.9%	3	8.9%	9.1%
Canada	3	10.6%	7.6%	0	6.1%	4.3%	-2	1.9%	1.7%
Switzerland	-2	3.4%	2.0%	2	6.6%	3.9%	N/A	N/A	N/A
Ireland	-3	3.4%	2.8%	-2	4.2%	3.3%	N/A	N/A	N/A
Netherlands	N/A	N/A	N/A	N/A	N/A	N/A	5	14.1%	12.7%
Sweden	2	8.9%	6.3%	3	14.5%	15.6%	3	6.6%	7.2%
Australia	1	10.0%	6.9%	N/A	N/A	N/A	N/A	N/A	N/A
<b>County Average</b>		<b>5.6%</b>	<b>3.9%</b>		<b>4.4%</b>	<b>3.4%</b>		<b>3.7%</b>	<b>3.6%</b>

Source: Dun & Bradstreet, LEADC Analysis, DHEI Analysis. Highlighted boxed represent jobs shares and wages shares that are notably higher than the county average. For rank change, please refer to Table 7 for current ranking

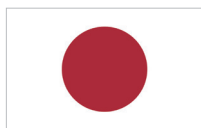
**TABLE 10**

All Counties Compared to Southern California by Source Nation: Rankings and Shares, 2016

SoCal Rank	Los Angeles County			Orange County			San Diego County		
	Rank Change	Jobs Share	Wages Share	Rank Change	Jobs Share	Wages Share	Rank Change	Jobs Share	Wages Share
Japan	0	51.8%	51.0%	-1	26.1%	26.3%	0	13.6%	14.2%
UK	0	40.6%	43.3%	1	35.8%	31.5%	0	15.4%	16.6%
Canada	-1	44.5%	45.5%	0	31.8%	31.5%	-1	11.5%	11.7%
France	-3	42.4%	41.8%	0	22.9%	23.5%	-2	11.2%	11.2%
Germany	0	46.5%	46.2%	0	23.3%	24.2%	2	14.2%	14.5%
Switzerland	0	63.5%	66.1%	-2	12.9%	11.9%	-1	13.0%	12.1%
Sweden	4	76.9%	74.1%	N/A	N/A	N/A	-2	6.5%	6.6%
Ireland	0	31.8%	32.9%	2	34.9%	37.3%	3	21.0%	17.1%
China	N/A	N/A	N/A	2	53.1%	56.4%	N/A	N/A	N/A
Netherlands	1	49.3%	49.7%	N/A	N/A	N/A	2	25.2%	24.4%
<b>County Average</b>		<b>48.4%</b>	<b>48.3%</b>		<b>26.0%</b>	<b>25.9%</b>		<b>13.2%</b>	<b>13.3%</b>
SoCal Rank	San Bernardino County			Riverside County			Ventura County		
	Rank Change	Jobs Share	Wages Share	Rank Change	Jobs Share	Wages Share	Rank Change	Jobs Share	Wages Share
Japan	0	3.4%	3.1%	-1	2.3%	2.3%	-1	2.8%	3.1%
UK	-3	1.7%	1.7%	-1	2.8%	2.7%	-1	3.7%	4.2%
Canada	1	6.6%	6.3%	-2	3.8%	3.4%	-3	1.9%	1.5%
France	1	6.6%	6.4%	-5	2.2%	1.9%	3	14.7%	15.2%
Germany	1	4.8%	4.3%	4	6.9%	7.1%	1	4.4%	3.7%
Switzerland	-2	3.5%	3.2%	2	6.7%	6.2%	N/A	N/A	N/A
Sweden	0	4.2%	4.3%	1	6.3%	7.6%	0	3.1%	3.4%
Ireland	-2	3.5%	3.8%	0	3.9%	3.9%	3	4.9%	5.1%
China	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Netherlands	N/A	N/A	N/A	N/A	N/A	N/A	2	5.3%	6.0%
<b>County Average</b>		<b>4.9%</b>	<b>4.8%</b>		<b>3.7%</b>	<b>3.7%</b>		<b>3.8%</b>	<b>3.9%</b>

Source: Dun & Bradstreet, LEADC Analysis, DHEI Analysis. Highlighted boxed represent jobs shares and wages shares that are notably higher than the county average. For rank change, please refer to Table 8 for current ranking





## NO. 01 JAPAN

### FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

87,247

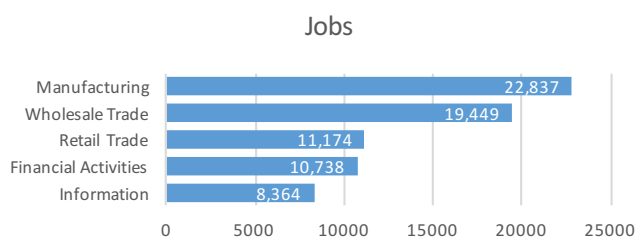
FOE FIRMS

2,465

ESTIMATED WAGES

\$5,512.8MM

#### JAPANESE FOE JOBS BY SECTOR



#### JAPANESE FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	45,157	51.8%	1233	\$2,813.9
2	Orange	22,806	26.1%	545	\$1,449.7
3	San Diego	11,848	13.6%	407	\$783.0
4	San Bernardino	2,969	3.4%	133	\$172.2
5	Ventura	2,449	2.8%	53	\$168.2
6	Riverside	2,018	2.3%	94	\$125.8
<b>Total</b>		<b>87,247</b>	<b>100.0%</b>	<b>2,465</b>	<b>\$5,512.8</b>



## NO. 02 UNITED KINGDOM

### FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

66,366

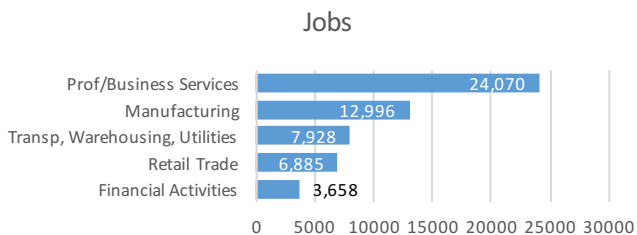
FOE FIRMS

1,089

ESTIMATED WAGES

\$3,747MM

#### UK FOE JOBS BY SECTOR



#### UK FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	26,963	40.6%	491	\$1,621.3
2	Orange	23,748	35.8%	202	\$1,181.2
3	San Diego	10,231	15.4%	222	\$622.7
4	Ventura	2,440	3.7%	54	\$158.0
5	Riverside	1,836	2.8%	71	\$101.7
6	San Bernardino	1,148	1.7%	49	\$62.1
<b>Total</b>		<b>66,366</b>	<b>100.0%</b>	<b>1,089</b>	<b>\$3,747.0</b>



**NO. 03**  
**CANADA**

**FOREIGN-OWNED ENTERPRISES (FOEs)**

**DIRECT FOE JOBS**

**26,230**

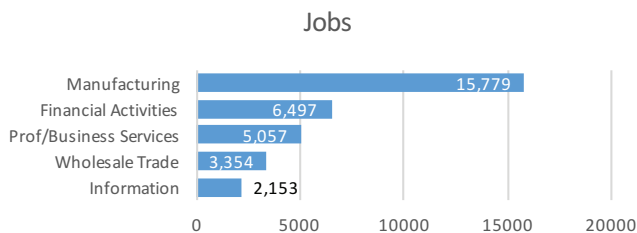
**FOE FIRMS**

**743**

**ESTIMATED WAGES**

**\$1,737MM**

**CANADIAN FOE JOBS BY SECTOR**



**CANADIAN FOEs BY DESTINATION COUNTY**

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	17,710	44.5%	330	\$1,208.9
2	Orange	12,643	31.8%	166	\$837.3
3	San Diego	4,576	11.5%	160	\$311.5
4	San Bernardino	2,619	6.6%	89	\$167.1
5	Riverside	1,498	3.8%	73	\$89.7
6	Ventura	752	1.9%	40	\$41.0
<b>Total</b>		<b>39,798</b>	<b>100.0%</b>	<b>858</b>	<b>\$2,655.5</b>



**NO. 04**  
**FRANCE**

**FOREIGN-OWNED ENTERPRISES (FOEs)**

**DIRECT FOE JOBS**

**32,558**

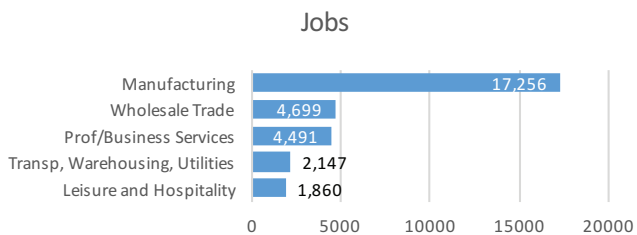
**FOE FIRMS**

**606**

**ESTIMATED WAGES**

**\$1,990MM**

**FRENCH FOE JOBS BY SECTOR**



**FRENCH FOEs BY DESTINATION COUNTY**

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	15,255	42.4%	358	\$990.0
2	Orange	8,257	22.9%	134	\$557.2
3	Ventura	5,283	14.7%	28	\$360.0
4	San Diego	4,018	11.2%	96	\$264.4
5	San Bernardino	2,363	6.6%	40	\$152.4
6	Riverside	805	2.2%	33	\$44.8
<b>Total</b>		<b>35,981</b>	<b>100.0%</b>	<b>689</b>	<b>\$2,368.8</b>



## NO. 05 GERMANY

### FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

34,141

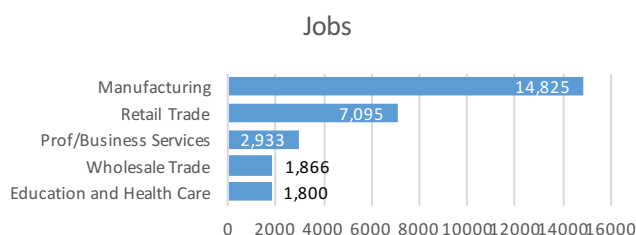
FOE FIRMS

858

ESTIMATED WAGES

\$2,047.5MM

#### GERMAN FOE JOBS BY SECTOR



#### GERMAN FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	15,873	46.5%	369	\$945.6
2	Orange	7,943	23.3%	181	\$495.3
3	San Diego	4,833	14.2%	145	\$296.1
4	Riverside	2,353	6.9%	50	\$146.1
5	San Bernardino	1,646	4.8%	68	\$89.0
6	Ventura	1,493	4.4%	45	\$75.4
<b>Total</b>		<b>34,141</b>	<b>100.0%</b>	<b>858</b>	<b>\$2,047.5</b>



## NO. 06 SWITZERLAND

### FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

24,675

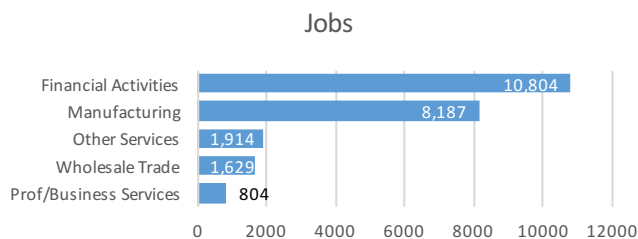
FOE FIRMS

387

ESTIMATED WAGES

\$1,842.8MM

#### SWISS FOE JOBS BY SECTOR



#### SWISS FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	15,672	63.5%	173	\$1,218.6
2	San Diego	3,196	13.0%	67	\$223.4
3	Orange	3,172	12.9%	90	\$219.2
4	Riverside	1,645	6.7%	19	\$113.7
5	San Bernardino	872	3.5%	28	\$59.5
6	Ventura	118	0.5%	10	\$8.4
<b>Total</b>		<b>24,675</b>	<b>68.3%</b>	<b>387</b>	<b>\$1,842.8</b>



**NO. 07**  
**SWEDEN**

**FOREIGN-OWNED ENTERPRISES (FOEs)**

**DIRECT FOE JOBS**

**23,177**

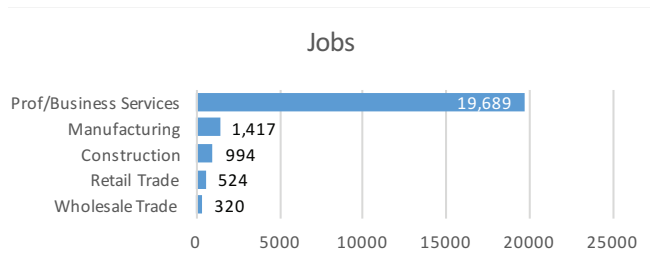
**FOE FIRMS**

**121**

**ESTIMATED WAGES**

**\$1,020.8MM**

**SWEDISH FOE JOBS BY SECTOR**



**SWEDISH FOEs BY DESTINATION COUNTY**

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	17,818	76.9%	54	\$756.1
2	San Diego	1,503	6.5%	16	\$67.5
3	Riverside	1,450	6.3%	13	\$77.7
4	San Bernardino	979	4.2%	13	\$44.1
5	Ventura	730	3.1%	8	\$34.3
6	Orange	697	3.0%	17	\$41.1
<b>Total</b>		<b>23,177</b>	<b>100.0%</b>	<b>121</b>	<b>\$1,020.8</b>



**NO. 08**  
**IRELAND**

**FOREIGN-OWNED ENTERPRISES (FOEs)**

**DIRECT FOE JOBS**

**20,985**

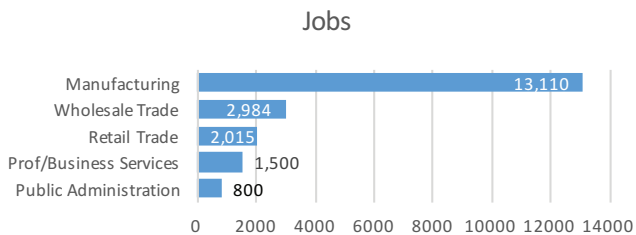
**FOE FIRMS**

**203**

**ESTIMATED WAGES**

**\$1,368.4MM**

**IRISH FOE JOBS BY SECTOR**



**IRISH FOEs BY DESTINATION COUNTY**

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Orange	7,329	34.9%	54	\$510.9
2	Los Angeles	6,677	31.8%	60	\$450.1
3	San Diego	4,404	21.0%	35	\$233.4
4	Ventura	1,027	4.9%	21	\$69.3
5	Riverside	808	3.9%	17	\$53.2
6	San Bernardino	740	3.5%	16	\$51.5
<b>Total</b>		<b>20,985</b>	<b>100.0%</b>	<b>203</b>	<b>\$1,368.4</b>



## NO. 09 CHINA

### FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

11,221

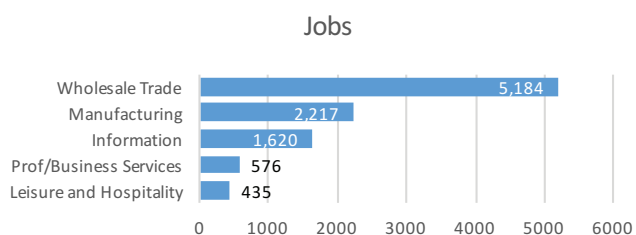
FOE FIRMS

323

ESTIMATED WAGES

\$725.9MM

#### CHINESE FOE JOBS BY SECTOR



#### CHINESE FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Orange	5,959	53.1%	51	\$409.1
2	Los Angeles	3,462	30.9%	190	\$214.0
3	San Diego	898	8.0%	31	\$46.6
4	San Bernardino	560	5.0%	39	\$36.0
5	Riverside	181	1.6%	10	\$11.5
6	Ventura	161	1.4%	2	\$8.8
<b>Total</b>		<b>11,221</b>	<b>100.0%</b>	<b>323</b>	<b>\$725.9</b>



## NO. 10 NETHERLANDS

### FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

11,104

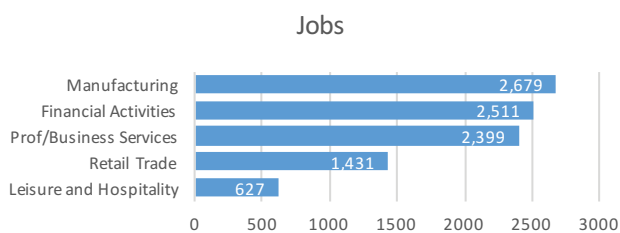
FOE FIRMS

216

ESTIMATED WAGES

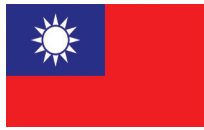
\$726.9MM

#### DUTCH FOE JOBS BY SECTOR



#### DUTCH FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	5,473	49.3%	80	\$361.1
2	San Diego	2,798	25.2%	49	\$177.2
3	Orange	1,478	13.3%	31	\$100.2
4	Ventura	587	5.3%	23	\$43.7
5	Riverside	421	3.8%	18	\$29.8
6	San Bernardino	347	3.1%	15	\$14.9
<b>Total</b>		<b>11,104</b>	<b>100.0%</b>	<b>216</b>	<b>\$726.9</b>



# NO. 11 TAIWAN

## FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

**8,035**

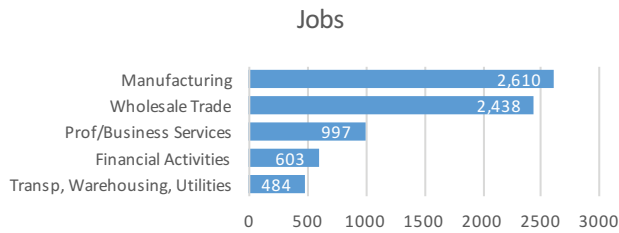
FOE FIRMS

**257**

ESTIMATED WAGES

**\$551.2MM**

### TAIWANESE FOE JOBS BY SECTOR



### TAIWANESE FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	3,827	47.6%	146	\$252.1
2	Orange	2,858	35.6%	70	\$199.8
3	San Diego	666	8.3%	12	\$51.5
4	San Bernardino	577	7.2%	24	\$40.3
5	Ventura	65	0.8%	3	\$4.6
6	Riverside	42	0.5%	2	\$3.0
<b>Total</b>		<b>8,035</b>	<b>100.0%</b>	<b>257</b>	<b>\$551.2</b>



# NO. 12 AUSTRALIA

## FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

**7,569**

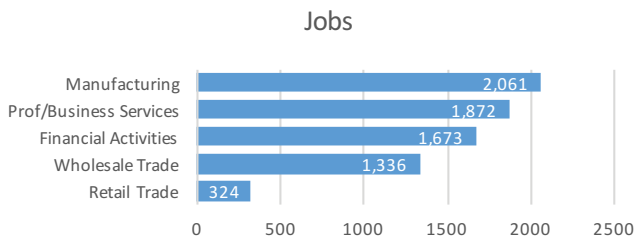
FOE FIRMS

**202**

ESTIMATED WAGES

**\$500.8MM**

### AUSTRALIAN FOE JOBS BY SECTOR



### AUSTRALIAN FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	4,367	57.7%	105	\$283.7
2	Orange	1,373	18.1%	44	\$89.8
3	San Bernardino	865	11.4%	15	\$59.6
4	San Diego	616	8.1%	24	\$44.2
5	Riverside	316	4.2%	10	\$21.3
6	Ventura	32	0.4%	4	\$2.2
<b>Total</b>		<b>7,569</b>	<b>100.0%</b>	<b>202</b>	<b>\$500.8</b>



## NO. 13 REPUBLIC OF KOREA

### FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

7,464

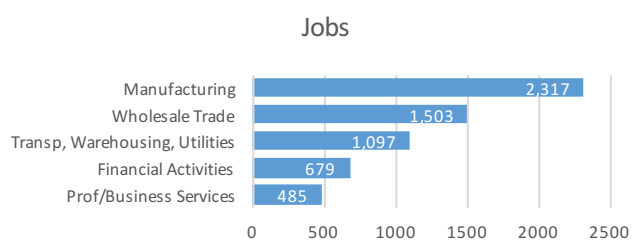
FOE FIRMS

262

ESTIMATED WAGES

\$475.8MM

#### SOUTH KOREAN FOE JOBS BY SECTOR



#### SOUTH KOREAN FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	3,215	43.1%	131	\$180.0
2	Orange	1,947	26.1%	70	\$140.8
3	San Diego	1,279	17.1%	32	\$87.4
4	San Bernardino	537	7.2%	21	\$35.6
5	Ventura	471	6.3%	5	\$30.9
6	Riverside	15	0.2%	3	\$1.1
<b>Total</b>		<b>7,464</b>	<b>100.0%</b>	<b>262</b>	<b>\$475.8</b>



## NO. 14 SPAIN

### FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

6,764

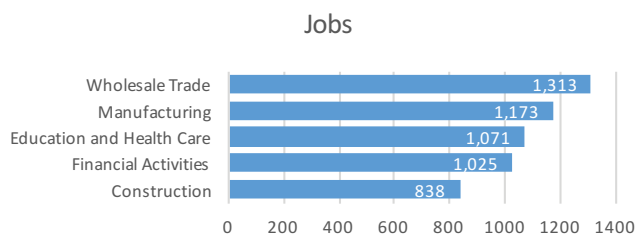
FOE FIRMS

116

ESTIMATED WAGES

\$441.4MM

#### SPANISH FOE JOBS BY SECTOR



#### SPANISH FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	2,774	41.0%	31	\$176.1
2	San Diego	1,285	19.0%	28	\$84.3
3	Riverside	1,088	16.1%	27	\$92.0
4	Orange	839	12.4%	20	\$44.9
5	San Bernardino	733	10.8%	9	\$40.5
6	Ventura	45	0.7%	1	\$3.6
<b>Total</b>		<b>6,764</b>	<b>100.0%</b>	<b>116</b>	<b>\$441.4</b>



# NO. 15 MEXICO

## FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

**6,673**

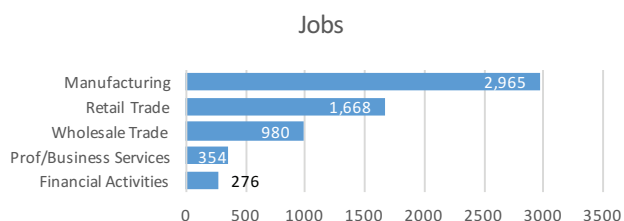
FOE FIRMS

**254**

ESTIMATED WAGES

**\$404.5MM**

### MEXICAN FOE JOBS BY SECTOR



### MEXICAN FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	3,595	53.9%	94	\$213.2
2	San Diego	1,077	16.1%	62	\$68.0
3	San Bernardino	1,040	15.6%	35	\$62.1
4	Orange	564	8.5%	29	\$32.8
5	Ventura	311	4.7%	13	\$21.9
6	Riverside	86	1.3%	21	\$6.5
<b>Total</b>		<b>6,673</b>	<b>100.0%</b>	<b>254</b>	<b>\$404.5</b>



# NO. 16 LUXEMBOURG

## FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

**4,734**

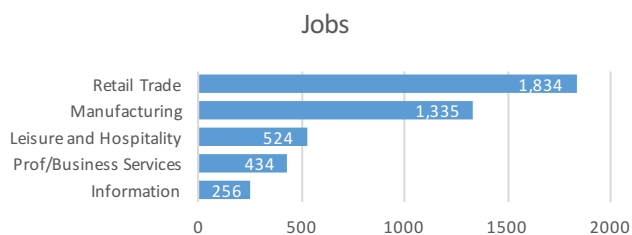
FOE FIRMS

**332**

ESTIMATED WAGES

**\$230.2MM**

### LUXEMBOURG FOE JOBS BY SECTOR



### LUXEMBOURG FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	2,207	46.6%	139	\$96.8
2	Orange	1,595	33.7%	59	\$96.7
3	San Diego	356	7.5%	53	\$13.0
4	Riverside	281	5.9%	35	\$11.8
5	Ventura	154	3.3%	21	\$6.8
6	San Bernardino	141	3.0%	25	\$5.2
<b>Total</b>		<b>4,734</b>	<b>100.0%</b>	<b>332</b>	<b>\$230.2</b>





## NO. 17 ISRAEL

### FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

**4,495**

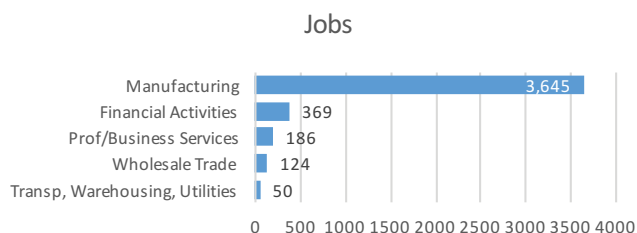
FOE FIRMS

**53**

ESTIMATED WAGES

**\$311.4MM**

#### ISRAELI FOE JOBS BY SECTOR



#### ISRAELI FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Orange	2,592	57.7%	13	\$178.3
2	Los Angeles	1,562	34.7%	27	\$109.5
3	San Diego	249	5.5%	6	\$17.4
4	San Bernardino	36	0.8%	4	\$2.5
5	Ventura	35	0.8%	1	\$2.4
6	Riverside	21	0.5%	2	\$1.3
<b>Total</b>		<b>4,495</b>	<b>100.0%</b>	<b>53</b>	<b>\$311.4</b>



## NO. 18 INDIA

### FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

**3,535**

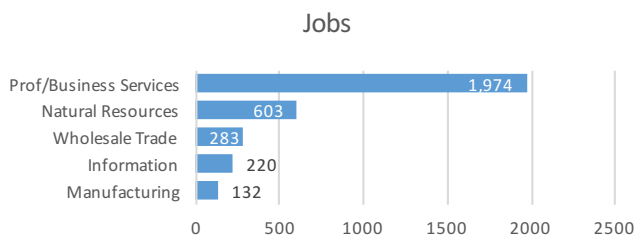
FOE FIRMS

**108**

ESTIMATED WAGES

**\$236.6MM**

#### INDIAN FOE JOBS BY SECTOR



#### INDIAN FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Orange	1,688	47.8%	26	\$95.2
2	Los Angeles	950	26.9%	54	\$68.3
3	San Bernardino	734	20.8%	11	\$61.7
4	Ventura	87	2.5%	4	\$6.6
5	San Diego	50	1.4%	8	\$3.5
6	Riverside	26	0.7%	5	\$1.3
<b>Total</b>		<b>3,535</b>	<b>100.0%</b>	<b>108</b>	<b>\$236.6</b>



# NO. 19 SINGAPORE

## FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

**3,314**

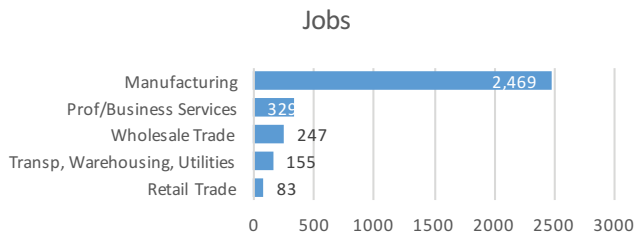
FOE FIRMS

**71**

ESTIMATED WAGES

**\$227.0MM**

### SINGAPOREAN FOE JOBS BY SECTOR



### SINGAPOREAN FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Orange	1,798	54.3%	21	\$126.1
2	San Diego	951	28.7%	9	\$65.3
3	Los Angeles	492	14.8%	30	\$31.6
4	San Bernardino	41	1.2%	6	\$2.5
5	Riverside	32	1.0%	5	\$1.5
6	Ventura	-	-	-	-
<b>Total</b>		<b>3,314</b>	<b>100.0%</b>	<b>71</b>	<b>\$227.0</b>

FOREIGN DIRECT INVESTMENT 2017



# NO. 20 KAZAKHSTAN

## FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

**3,298**

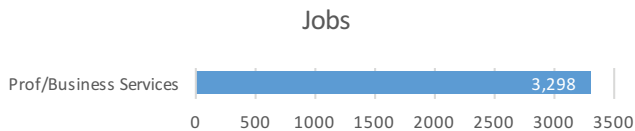
FOE FIRMS

**7**

ESTIMATED WAGES

**\$261.5MM**

### KAZAKH FOE JOBS BY SECTOR



### KAZAKH FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	3,108	94.2%	4	\$246.5
2	San Diego	150	4.5%	1	\$11.9
3	Orange	40	1.2%	2	\$3.2
4	Riverside	-	-	-	-
5	San Bernardino	-	-	-	-
6	Ventura	-	-	-	-
<b>Total</b>		<b>3,298</b>	<b>100.0%</b>	<b>7</b>	<b>\$261.5</b>



## NO. 21 ITALY

### FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

3,096

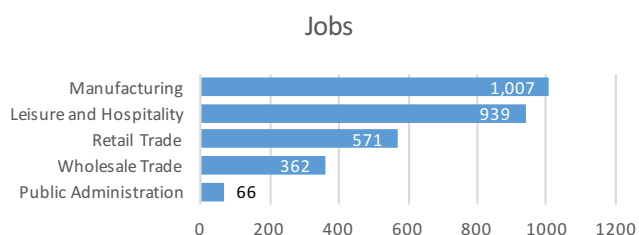
FOE FIRMS

152

ESTIMATED WAGES

\$153.0MM

#### ITALIAN FOE JOBS BY SECTOR



#### ITALIAN FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	1,541	49.8%	74	\$61.6
2	Orange	881	28.5%	36	\$54.5
3	San Diego	462	14.9%	25	\$23.7
4	Riverside	111	3.6%	9	\$7.0
5	San Bernardino	73	2.4%	5	\$4.4
6	Ventura	28	0.9%	3	\$1.8
<b>Total</b>		<b>3,096</b>	<b>100.0%</b>	<b>152</b>	<b>\$153.0</b>



## NO. 22 BELGIUM

### FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

2,834

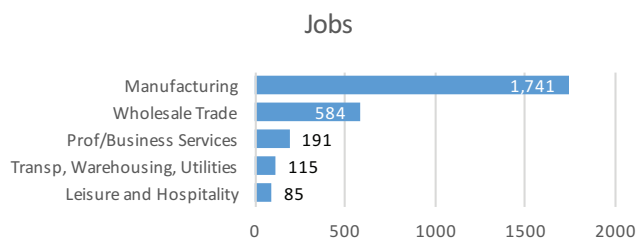
FOE FIRMS

72

ESTIMATED WAGES

\$183.8MM

#### BELGIAN FOE JOBS BY SECTOR



#### BELGIAN FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	853	30.1%	33	\$54.6
2	Orange	807	28.5%	14	\$55.4
3	Riverside	547	19.3%	7	\$37.6
4	San Diego	384	13.5%	9	\$22.2
5	San Bernardino	196	6.9%	5	\$11.9
6	Ventura	47	1.7%	4	\$2.1
<b>Total</b>		<b>2,834</b>	<b>100.0%</b>	<b>72</b>	<b>\$183.8</b>



# NO. 23 CAYMAN ISLANDS

## FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

**2,745**

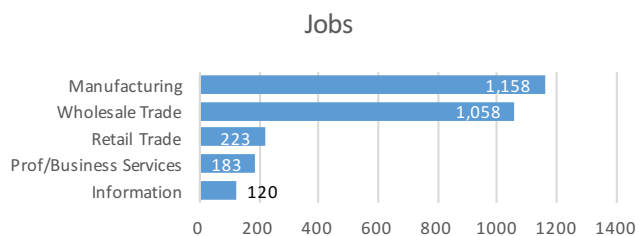
FOE FIRMS

**33**

ESTIMATED WAGES

**\$183.9MM**

### CAYMAN ISLAND FOE JOBS BY SECTOR



### CAYMAN ISLAND FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	2,499	91.0%	22	\$167.2
2	Orange	210	7.7%	7	\$14.2
3	San Bernardino	18	0.7%	2	\$1.2
4	Ventura	10	0.4%	1	\$0.7
5	San Diego	8	0.3%	1	\$0.6
6	Ventura	-	-	-	-
<b>Total</b>		<b>2,745</b>	<b>100.0%</b>	<b>33</b>	<b>\$183.9</b>

FOREIGN DIRECT INVESTMENT 2017



# NO. 24 HONG KONG

## FOREIGN-OWNED ENTERPRISES (FOEs)

DIRECT FOE JOBS

**2,286**

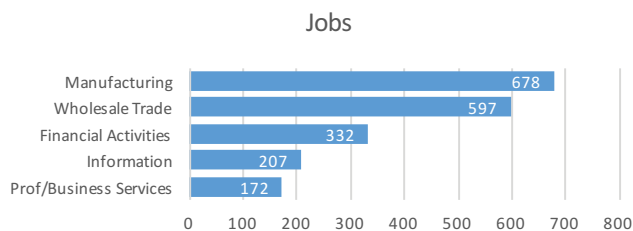
FOE FIRMS

**94**

ESTIMATED WAGES

**\$151.7MM**

### HONG KONG FOE JOBS BY SECTOR



### HONG KONG FOEs BY DESTINATION COUNTY

Rank	County	Jobs	% of All FOE Jobs	Firms	Est. Wages (\$millions)
1	Los Angeles	1,379	60.3%	70	\$90.4
2	San Bernardino	578	25.3%	6	\$40.2
3	San Diego	211	9.2%	8	\$14.2
4	Orange	51	2.2%	6	\$2.6
5	Riverside	34	1.5%	2	\$1.8
6	Ventura	33	1.4%	2	\$2.5
<b>Total</b>		<b>2,286</b>	<b>100.0%</b>	<b>94</b>	<b>\$151.7</b>

# CLUSTERING ANALYSIS

Tables in this section illustrate the level of spatial agglomeration in Southern California. Spatial agglomeration refers to the clustering of firms within a particular location. Firms locate nearby one another – for example car dealerships, jewelry or fashion districts, or furniture stores – for many reasons, including being attractive to customers and workers from similar firms, being close to supply chains, and to be in ethnically familiar neighborhoods. Empirical studies have found positive relationships between regional economic growth and the level of industrial spatial agglomeration. As mentioned in the background discussion above, today’s industrial systems are transaction intensive. Firms perform critical functions within a constantly shifting system of linkages, and spatial proximity reduces the costs of transacting and intensifies localized positive externalities. These cost reductions and positive externalities are expected to be larger among firms in the same sector and/or located along related supply chains.

This analysis measures the level of spatial agglomeration in a particular area based on the number of FIEs. Intuitively, FIEs

might choose to cluster with other firms in their own sector in order to benefit from customers’ supply, positive spillovers, and common infrastructure and supply chain synergies. On the other hand, FIEs might choose to cluster with other firms from the same country of origin in order to benefit from their shared background and resources, as well as similar experiences when locating, competing, and expanding in the U.S. The H-Indexes (Tables A-1 and A-2) are calculated taking into account the proportion of all FIEs located in each individual city. Once the proportions are computed for every city, they are squared and added. By construction, the H-Index for a particular sector/county will equal to one when all activity is located in only one city. Similarly, the H-Index will be close to zero when all activity is spread almost equally among many cities. The analysis based on the number of employees employed by FIEs follows the same procedure.

**TABLE A-1**

Sector H-Index for FOE Firms by County, 2016

Sectors	Southern California	Los Angeles	Orange	Riverside	San Bernardino	San Diego	Ventura
Natural Resources	0.043	0.018	0.156	0.185	0.184	0.188	0.500
Construction	0.051	0.025	0.193	0.181	0.431	0.133	0.301
Manufacturing	0.029	0.029	0.034	0.135	0.178	0.175	0.341
Wholesale Trade	0.025	0.030	0.050	0.114	0.134	0.187	0.341
Retail Trade	0.018	0.034	0.046	0.073	0.094	0.093	0.185
Transportation, Warehousing, Utilities	0.041	0.041	0.072	0.160	0.117	0.138	0.610
Information	0.041	0.041	0.088	0.132	0.157	0.099	0.389
Financial Services	0.043	0.043	0.128	0.114	0.081	0.071	0.272
Prof/Business Services	0.055	0.043	0.119	0.189	0.185	0.204	0.487
Education/Health Care	0.034	0.046	0.042	0.103	0.184	0.134	0.326
Leisure/Hospitality	0.046	0.051	0.092	0.100	0.194	0.207	0.478
Other Services	0.030	0.055	0.058	0.096	0.140	0.173	0.444
Public Administration	0.503	0.503	0.702	0.556		1.000	0.515

Source: Dun &amp; Bradstreet, DHEI Analysis

**TABLE A-2**

Sector H-Index for FOE Firms by Source Nations and County, 2016

Country of Origin	Southern California	Los Angeles	Orange	Riverside	San Bernardino	San Diego	Ventura
Japan	0.032	0.075	0.089	0.102	0.115	0.292	0.141
United Kingdom	0.033	0.073	0.113	0.113	0.135	0.336	0.142
Germany	0.023	0.045	0.108	0.129	0.156	0.289	0.169
Canada	0.027	0.076	0.120	0.123	0.104	0.251	0.175
France	0.027	0.056	0.087	0.146	0.139	0.392	0.253
Switzerland	0.042	0.108	0.138	0.136	0.099	0.405	0.300
Luxembourg	0.021	0.054	0.083	0.120	0.142	0.246	0.238
China	0.032	0.053	0.186	0.240	0.264	0.517	0.500
Korea Rep Of	0.075	0.199	0.200	0.333	0.234	0.578	0.680
Taiwan	0.043	0.068	0.243	0.500	0.340	0.222	0.333
Mexico	0.026	0.044	0.111	0.098	0.084	0.260	0.172
Netherlands	0.042	0.103	0.297	0.117	0.324	0.348	0.153
Ireland	0.054	0.063	0.324	0.225	0.242	0.662	0.247
Australia	0.048	0.135	0.108	0.340	0.218	0.299	0.375
Italy	0.031	0.069	0.113	0.333	0.280	0.258	0.333

Source: Dun &amp; Bradstreet, DHEI Analysis

Table A-1 shows that public administration is the sector with the highest level of spatial agglomeration in Southern California, but this might be determined by the relatively small level of firms located in a few cities in each county. For example, the City of Los Angeles houses roughly 85 percent of all firms in this industry in the Los Angeles County. Among industries with a large number of FOE, Financial Services and Prof / Business Services are the industries with the highest level of spatial agglomeration.

Also in Table A-1, among FOE in the manufacturing, wholesale trade, and retail trade industries, San Diego County shows by far the highest level of spatial agglomeration. This again is driven mainly by a relatively small number of firms located in a few cities in that county. For the construction industry, the highest level of spatial agglomeration occurs in Riverside County. Besides public administration, FOE in Orange County show a higher level of spatial agglomeration in Professional / Business Services. As an example, a perspective FOE seeking to locate in Southern California in the Public Administration industry could use this information and realize that Los Angeles County has by far the highest number of FOE in this sector and the level of spatial agglomeration is among the highest in Southern California. On the other hand, a perspective FOE in the transportation, warehousing, utilities industry would see that Los Angeles County has by far the highest number of FOE in this

sector, but the level of spatial agglomeration is higher in San Diego and Orange County.

In terms of country of origin (see Table A-2), Korea shows the highest level of spatial agglomeration in Southern California, followed by Taiwan and Switzerland. For the Los Angeles County, Korea, Switzerland, and Canada show the highest level of spatial agglomeration, in that order. For Orange County, the order is Taiwan, Korea, and China. Japan and the United Kingdom have the highest number of firms in Southern California, and they show a higher level of spatial agglomeration in San Diego and Ventura County. Similar results are presented for the other top 10 countries with FOE in Southern California. As an example, the perspective FOE from Japan or United Kingdom seeking to locate in Southern California could use this information and acknowledge that Los Angeles County has by far the highest number of FOE from these countries, but also the lowest level of spatial agglomeration among counties in Southern California.

The analysis presented in this section also provides evidence that spatial agglomeration tends to be higher for industrial sectors than for country of origin, except for countries with the largest number of FOE in the area, like Japan and United Kingdom. This suggests that firms might be more likely to locate close to another firm in the same sector than to another firm from the same country of origin, with the exception of Japan and United Kingdom.

## CLUSTERING ANALYSIS

# DISTANCE ANALYSIS

Another, and probably more intuitive, approach to measure clustering is to take the firm perspective and consider how many FOE's from the same sector or the same county of origin are located within a predetermined radius. This information could be useful for existing firms and prospective investors to assess the level of competition and spillover benefits associated with spatial agglomeration in a particular area.

Once firms located inside the radius are identified, they are further classified based on whether they belong to the same industrial sector or the same country of origin. The results presented in Tables A-3 through A-6 utilize a 5 km radius and represent average measures.



**TABLE A-3**  
Average Number of Foreign-Owned Firms within a 5km radius

Sectors	Los Angeles	Orange	Riverside	San Bernardino	San Diego	Ventura
Natural Resources	146	162	35	71	5	38
Construction	215	239	51	62	101	40
Manufacturing	156	214	51	113	100	39
Wholesale Trade	182	206	39	113	97	40
Retail Trade	172	184	29	75	73	47
Transp, Warehousing, Utilities	195	230	44	93	96	41
Information	196	216	30	78	96	40
Financial Services	211	174	24	49	86	40
Prof / Business Services	225	257	39	111	122	44
Education / Health Care	132	192	31	69	98	43
Leisure / Hospitality	204	213	30	92	84	52
Other Services	179	173	30	95	104	27
Public Administration	347	184	0	51	101	0

Source: Dun & Bradstreet, DHEI Analysis

**TABLE A-4**  
Average Number of Foreign-Owned Firms within the same Sector within a 5km radius

Sectors	Los Angeles	Orange	Riverside	San Bernardino	San Diego	Ventura
Natural Resources	2	1	0	1	0	1
Construction	4	4	3	2	2	0
Manufacturing	19	45	16	29	22	7
Wholesale Trade	41	40	7	27	15	6
Retail Trade	41	39	10	18	20	14
Transp, Warehousing, Utilities	40	5	2	6	5	1
Information	20	7	1	3	4	1
Financial Services	40	19	3	2	9	5
Prof / Business Services	40	55	5	11	31	7
Education / Health Care	3	4	1	2	5	1
Leisure / Hospitality	10	7	1	1	5	1
Other Services	3	3	1	1	3	1
Public Administration	31	1	0	0	2	0

Source: Dun & Bradstreet, DHEI Analysis

**TABLE A-5**

Average Number of Foreign-Owned Firms from the same Source Nation within a 5km radius

Sectors	Los Angeles	Orange	Riverside	San Bernardino	San Diego	Ventura
Natural Resources	16	17	4	6	1	1
Construction	37	20	7	3	10	4
Manufacturing	23	22	4	7	11	5
Wholesale Trade	42	28	4	7	11	3
Retail Trade	24	22	3	7	9	5
Transp, Warehousing, Utilities	32	26	7	8	15	4
Information	24	26	3	8	11	3
Financial Services	26	24	2	4	11	4
Prof / Business Services	31	24	4	10	11	4
Education / Health Care	14	20	3	7	9	7
Leisure / Hospitality	37	22	3	9	10	5
Other Services	26	26	3	3	11	4
Public Administration	9	7	0	0	2	0

Source: Dun &amp; Bradstreet, DHEI Analysis

**TABLE A-6**

Average Number of Foreign-Owned Firms from the same Sector and Source Nation within a 5km radius

Sectors	Los Angeles	Orange	Riverside	San Bernardino	San Diego	Ventura
Natural Resources	0	0	0	0	0	0
Construction	1	0	2	1	1	0
Manufacturing	3	5	1	2	3	2
Wholesale Trade	13	8	1	2	2	1
Retail Trade	6	6	1	3	3	2
Transp, Warehousing, Utilities	5	1	1	1	1	0
Information	4	1	0	0	1	0
Financial Services	5	5	0	0	2	1
Prof / Business Services	6	7	1	1	4	1
Education / Health Care	1	0	0	1	1	1
Leisure / Hospitality	2	1	0	0	1	1
Other Services	1	0	0	0	0	0
Public Administration	1	0	0	0	0	0

Source: Dun &amp; Bradstreet, DHEI Analysis

As shown in Tables A-3, the results for Los Angeles County suggest that FOE in the Public Administration, Prof / Business Services, and Construction tend to be located in dense business areas. FOE in Prof / Business Services, Construction, and Transp., Warehousing, Utilities are located in the most dense business areas in Orange County. The highest concentration areas for Riverside County FOE are construction and manufacturing, while Prof / Business Services and Other Services are the highest concentration areas for FOE in San Diego County, while Public Administration in Los Angeles County shows the highest level of agglomeration.

As mentioned before, spatial agglomeration impacts might be larger for firms in the same sector and/or along the supply chain. Table A-3 shows the average number of firms located within the 5 km radius and that belong to the same sector. The results for Los Angeles County show that FOE in the Wholesale and Retail Trade industry are located in areas with an average of more than 40 FOE in their same sectors, but the agglomeration of FOE in Prof / Business Services and Manufacturing is even higher in Orange County. For San Diego County, the highest concentration is for FOE in Prof Business Services and Manufacturing, while the highest level of agglomeration in Ventura County is for FOE in Retail Trade.

The results for spatial agglomeration based on country of origin (Table A-5) show that FOE in Los Angeles County present a high level of concentration in the Wholesale Trade, Construction, and Leisure / Hospitality industries. For FOE in Orange County, firms in Wholesale Trade, Transp., Warehousing, and Utilities, and Information industries show the highest level of spatial agglomeration. An average FOE in these industries could find close to 30 other FOE from the same country of origin within a 5 km radius.

Comparing the level of spatial agglomeration based on sector and country of origin (Table A-6), the results show that FOE tend to be slightly more concentrated when based on the country of origin. That suggests that FOE located in most of Southern California tend to have a closer proximity to another company from the same country of origin than from the same sector. However, these results might be driven mainly by FOE from Japan, United Kingdom, and Germany that tend to be located in Los Angeles and Orange County. Finally, further analysis into industry concentration based on both sector and country of origin show that FOE in Wholesale Trade, for example, can expect to see an average of 10 other FOE in the same sector and from the same country of origin within a 5 km radius when located in Los Angeles and Orange County.

## CLUSTERING ANALYSIS

# STATISTICAL CORRELATION ANALYSIS

So far, our analysis has focused on identifying the county and sector level of spatial agglomeration based on the H-Index and the number of FOEs from the same sector or same country of origin within a predetermined radius. This section analyzes whether spatial agglomeration is correlated with measures of economic development and growth applying Analysis of Variance (ANOVA). ANOVA is a statistical tool that tests the hypothesis that the means of two different groups are statistically different. In this case, the null hypothesis is that the difference between two groups' means is not statistically significant and probably driven simply by randomness. This technique is applied here to test whether or not spatial agglomeration of FOEs is statistically correlated with city and firm level measures of economic development and growth.

At the city level, all FOEs are measured with respect to the average sales volume, number of employees, city-level labor force and unemployment rates, the 3-year growth rate in sales, and the 3-year growth rate in employment. Although arguably optimal measures of economic development and growth, these are intuitively good measures of economic conditions at the city level. At this stage, the ANOVA considers cities in Southern California and groups them in quartiles according to the number of FOEs. The following table presents the results at the city level.

**TABLE A-7**  
**Summary Statistics for Agglomeration Regression Analysis**

Variable	Statistic	Value
Sales Volume	Median	\$4,045,456
Number of Workers	Mean	44
3 Year Growth % Sales Volume	Mean	1.44
3 Year Growth % Employees	Mean	10.80
Y-O-Y Change Sales Volume	Mean	\$2,294,932
Y-O-Y Change in Employees	Mean	0.17
Subsidiary	Mean	0.724
Female CEO	Mean	0.149
Minority Owned	Mean	0.003
Distance to LAX (km)	Mean	66.2
Distance to San Pedro Ports (km)	Mean	63.5
Distance to US-Mexico Border (km)	Mean	165.6
FOE in 5 km Radius	Mean	157.0
FOE Same Sector in 5 km Radius	Mean	27.8
FOE Same Country of Origin in 5 km Radius	Mean	21.0
FOE Same Country of Origin and Sector in 5 km Radius	Mean	4.6

Source: Dun & Bradstreet, DHEI Analysis

**TABLE A-8**  
**ANOVA: Concentration Based on Number of FOEs at City Level**

	Low Concentration		High Concentration
Sales Volume (Mean)	\$18,100,00	***	\$90,300,000
Number of Workers	20.9	***	41.0
Labor Force	16,339	***	91,386
Unemployment Rate	5.9	*	5.5
3 Year Growth % Sales Volume	0.0	**	1.3
3 Year Growth % Employees	11.4		11.9

Note: \*\*\*, \*\*, \* refers to statistical significance at the 1%, 5%, and 10%, respectively  
 Low and high FOEs concentration refers to cities in the lowest and highest quartile, respectively

Source: Dun & Bradstreet, DHEI Analysis

According to the results, cities with higher concentrations of FOEs have statistically larger labor forces and lower unemployment rates. FOEs in these cities also have statistically higher sales, more workers, and higher 3-year growth rates in sales volume when compared with FOEs in cities with lower concentrations. To explore further the issue of spatial

agglomeration, this analysis groups cities in Southern California into quartiles according to the number of average number of FOEs located within a 5 km radius. The previous analysis considers only the number of FOEs in the city, while this quartiles approach considers cities with FOEs that are spatially agglomerated.

**TABLE A-9****ANOVA: Concentration Based on Number of FOEs Within a 5km Radius at City Level**

	Low Concentration		High Concentration
Sales Volume (Mean)	\$29,800,000	*	\$53,500,000
Number of Workers	20.9	***	37.6
Labor Force	18,135	**	74,828
Unemployment Rate	6.3	***	5.4
3 Year Growth % Sales Volume	1.1		1.9
3 Year Growth % Employees	9.5		8.6

Note: \*\*\*,\*\*,\* refers to statistical significance at the 1%, 5%, and 10%, respectively

Source: Dun & Bradstreet, DHEI Analysis

Low and high FOEs concentration refers to cities in the lowest and highest quartile, respectively

Results in Table A-9 show that cities with higher levels of spatial agglomeration tend to have larger labor forces and a lower unemployment rates. FOEs in these cities also tend to have larger average sales and larger average numbers of employees. Although there is a natural overlap of cities in the high concentration categories of the previous two tables, cities classified as high concentration in the number of FOEs are not necessarily those same cities classified as having high spatial agglomeration.

This analysis also examines whether or not firms are more likely to locate in the proximity of another firm from the same

sector or of another firm from the same country of origin. Although there is some overlap in the cities for both groups, Table A-10 presents support that FOEs located in cities with high agglomeration of firms from the same sector tend to have higher average sales volume and employ more workers than FOEs located in cities with high spatial agglomeration based on the country of origin. These FOEs also tend to have higher 3-year growth rates in sales and employment. These results suggest that spatial agglomeration based on sector might have larger impacts on economic development and growth than spatial agglomeration based on country of origin.

**TABLE A-10****ANOVA: Concentration Based on Number of FOEs Within a 5km Radius at City Level**

	Sector High Concentration		Country of Origin High Concentration
Sales Volume (Mean)	\$60,700,000	**	\$48,500,000
Number of Workers	37.6	*	35.9
Labor Force	73,965		75,982
Unemployment Rate	5.3		5.3
3 Year Growth % Sales Volume	2.6	*	2.2
3 Year Growth % Employees	14.2	**	9.0

Note: \*\*\*,\*\*,\* refers to statistical significance at the 1%, 5%, and 10%, respectively

Source: Dun & Bradstreet, DHEI Analysis

High concentration FOEs refers to cities in the highest quartile based on the number of firms in the same sector and the number of firms from the same country of origin, respectively

## CLUSTERING ANALYSIS

# CONCLUSION

This section compared two methods to identify and measure the level of spatial agglomeration among FOE: the city-level H-Index of agglomeration based on the number of firms and the number of FOEs located within a predetermined radius from each FOE. The latter approach is further divided into FOEs in the same sector and FOEs from the same country of origin. Maps of the clusters by country of origin and sector are also available in Appendix AX below.

Excluding the effect of countries with large number of FOEs in Southern California, like Japan and the United Kingdom, this analysis found some evidence that spatial agglomeration is larger when based on sector than when based on country of origin. In other words, FOEs locating in Southern California will tend to locate close FOEs from the same industrial sector, rather than locating nearby FOEs from the same country of origin. For the prospective FOE, these results might assist in their decision where to locate within Southern California.

This analysis also explored whether spatial agglomeration is correlated with economic development and growth. This analysis found statistical evidence that cities with higher levels of spatial agglomeration tend to have larger labor forces and lower unemployment rates. FOEs located in these cities also tend to have higher sales volumes and more employees. In some cases they also have higher 3-year growth rates in sales and/or employment. Lastly, this analysis found that FOEs in cities with high levels of spatial agglomeration by sector show higher 3-year growth rates in sales volume and employment than FOEs in cities with high levels of spatial agglomeration based on country of origin. All of these suggests that Southern California might have more to offer to prospective FOEs than had previously been documented.

# SURVEY ANALYSIS

A survey of FOfEs in Southern California was conducted by DHEI between January and May of 2017. This survey aims to better-understand the contribution of these 9,000+ businesses to the regional economy, their motivations for locating in Southern California, their experiences doing business here, and which factors encourage foreign firms to continue a presence the region.

The survey was administered through phone calls and an online instrument. All 9,105 firms from the 2016 dataset were contacted, via email or phone call. A total of 143 responses were collected; similar to the 118 responses collected in the 2009 survey.

In contrast to the 2009 survey, for which respondents were largely Japanese (63%) and Manufacturing (44%) firms, and all located in Los Angeles County, respondents to the 2017 survey were spread across numerous sectors, source nations, and counties within Southern California, as shown in Tables S-1, S-2, and S-3 below.

As with the 2009 report, the majority of respondents were positive about their business experiences within Southern California. In the 2009 report, the majority of respondents were particularly concerned about the state and regional economic climate, which is unsurprising given the recent global financial crash. However, other factors were of particular concern to respondents, including: housing affordability, public safety/crime, commercial/industrial price/availability, energy supply/prices, labor costs, obtaining skilled employees, K-12 education quality, business taxes, and regulatory environment/permit procedures.

As shown in Tables S-10 and S-11, the 2017 survey found that the most pressing risk factors in general for respondents were customer satisfaction/retention, labor and HR issues, political and regulatory uncertainty, currency volatility, and tougher competition. Specific to business within Southern California, respondents reported concern over trade and investment

restrictions, delays for business visas for overseas visas, taxes, labor costs, and housing affordability.

Similar to the 2009 survey, when considering future investments, 2017 survey responses favored expansions of current facilities and growth into new facilities (see Tables S-5 through to S-9). A larger proportion of respondents in 2017 appear to be considering relocation. In terms of potential for new investment, of those responding, most are considering Los Angeles County, followed by San Diego County, and Orange County. Within other areas of California, the Bay Area is the most popular response. Outside of California, investment potential is spread across the US, with a slight preference for the states of Texas, New York, Hawaii, Nevada, and Florida. Outside the US, Asian countries were significantly the most popular potential market, followed by Canada and Europe.

In terms of connections to other institutions, as shown in Table S-12, respondent FOfEs are most likely to be in contact with industry organizations and local or city governments. While a majority of respondents still engage with local chambers of commerce and local home-nation consulates, the numbers are significantly lower than for industry organizations and local and city governments. This last figure appears to be consistent over time, as 2009 respondents all reported favorable interactions with local government offices.

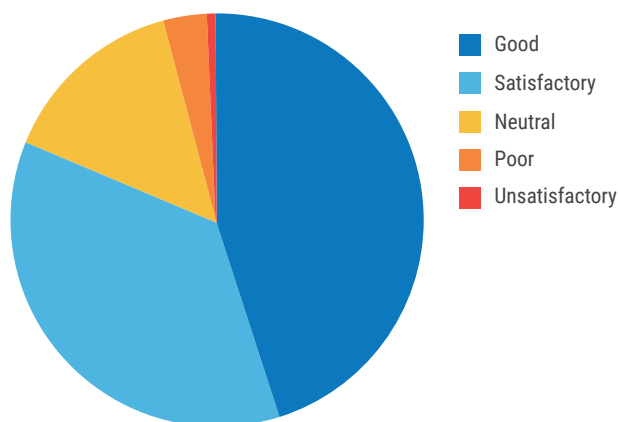
As shown in Table S-13, respondents were asked to report which regional programs would benefit their company. The most popular response was "Economic reports on local markets", followed by "Public road network investment", "Training and workshops on doing business in Southern California (export training, etc...)" and "Workforce development initiatives, such as job-training, layoff support". It is notable that there was significantly less interest in "Public mass-transit investment", "Sister-city/sister region programs connected to a city in your home country", "Matchmaking events" and "Trade missions abroad".



**TABLE S-1**  
% of Survey Respondents by Sectors

Sector	% of respondents answering question
Manufacturing	12.9%
Wholesale Trade	12.9%
Retail Trade	35.5%
Transportation, Warehousing and Utilities	1.6%
Information	6.5%
Financial Activities	12.9%
Professional and Business Services	9.7%
Education and Health Care	1.6%
Leisure and Hospitality	1.6%
Other Services	4.8%

**FIGURE S-1**  
How would you rate your company's present business experience in the Southern California region?



**TABLE S-2**  
% of Survey Respondents by Source Nation

Source Nation	% of respondents
Luxembourg	16%
Taiwan	16%
Japan	11%
Switzerland	11%
Germany	10%
Canada	6%
Spain	5%
Hong Kong	3%
Ireland	3%
Netherlands	3%
Thailand	3%
Other nations	11%

**TABLE S-3**  
% of Survey Respondents by County

County	% of respondents
Los Angeles	53.2%
Orange	16.1%
Riverside	6.5%
San Bernardino	6.5%
San Diego	9.7%
Ventura	8.1%

**TABLE S-4**  
How would you rate your company's present business experience in the Southern California region?

Response	Count	% of Responses
Good	55	45%
Satisfactory	44	36%
Neutral	18	15%
Poor	4	3%
Unsatisfactory	1	1%
<b>Total</b>	<b>122</b>	<b>100%</b>

**TABLE S-5**

**What are your company's plans for investment and business operations within Southern California over the next two years?**

Response	Count
Expansion of existing facilities or branches (including purchase of equipment)	46
Establishment of a new facility or branch	43
Investment in a different business sector	18
Scale-down or closure of existing facility	10
Relocation of branch or facility within Southern California	11
Relocation of branch or facility within California	12
Relocation of branch or facility outside California	6
Revision of the role of existing facilities or branches	11
Nothing in particular	38

**TABLE S-6**

**Within Southern California, which area holds the most potential for new investment by your company?**

County	Responses
Los Angeles	33
Orange	13
Riverside	10
San Bernardino	5
San Diego	15
Ventura	4

**TABLE S-7**

**Within the rest of California, which area holds the most potential for new investment by your company?**

Region	Responses
Bay Area	15
Central California	5

**TABLE S-8**

**Outside California, but within the United States which area holds the most potential for new investment by your company?**

State	Responses
Texas	5
New York	4
Hawaii	3
Nevada	3
Florida	3
Colorado	2
Washington	2
Virginia	2

**TABLE S-9**

**Outside the United States, which area holds the most potential for new investment by your company?**

Country/Region	Responses
Canada	4
Mexico	1
China	3
Other Asia	8
Europe	4

**TABLE S-10**

What is the likelihood the following risk factors will influence your company's earnings over the next three years?

Factor	Average Score
Customer Satisfaction/Retention	3.59
Labor and HR issues	3.28
Political/regulatory uncertainty	3.18
Currency volatility	3.13
Tougher competition	3.13
Tax risk	3.12
Country risk/geopolitical challenges	3.00
Inflation	3.00
Natural catastrophe	2.88
IT risk (e.g. systems failure)	2.82
Credit	2.76
Cyber security threats	2.76
Interest rates	2.76
Liquidity	2.76
Supply chain disruptions	2.76
GDP growth	2.71
Energy price volatility	2.65
Commodity (non-energy) price volatility	2.53
Infrastructure failure/breakdown	2.44
Terrorism	2.38

**TABLE S-12**

Contacts with industry organizations, chambers of commerce, consulates and local governments

Is your company	Yes	%	No	%
...an active member of an industry organization?	61	67%	30	33%
...in close contact with your local chamber of commerce?	48	52%	44	48%
...in close contact with your home-nation's consulate in Southern California?	48	54%	41	46%
...in close contact with your local/city government in Southern California?	58	64%	33	36%

**TABLE S-11**

How important are the following concerns regarding your company's future business operations in Southern California?

Factor	Average Score
Trade/investment restrictions	3.67
Delays for business visas for overseas visas	3.61
Taxes	3.44
Labor costs	3.39
Housing affordability	3.33
California economic performance	3.28
Health insurance/care costs	3.28
Overseas competition	3.24
Environmental regulations	3.17
Transportation infrastructure	3.12
Public safety/crime	3.11
Energy prices/supply	3.00
Permit approval procedures	2.94
Driver's license issuance delays for expatriates	2.65

**TABLE S-13**

How important are the following concerns regarding your company's future business operations in Southern California?

Regional Programs	Responses
Public mass-transit investment	24
Public road network investment	39
Workforce development initiatives, such as job-training, layoff support	32
Sister-city/Sister-region programs connected to a city in your home country	16
Regional fiber-optic broadband	21
Economic reports on local markets	42
Training and workshops on doing business in Southern California (i.e. export training, etc...)	33
Connection with local service providers	31
Matchmaking events	17
Trade missions abroad	17
Conferences on trade and investment	31
Permit approval procedures	2.94
Driver's license issuance delays for expatriates	2.65

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