California Trade Policy

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EXECUTIVE SUMMARY

In his wonderful 1949 centennial book, *California: The Great Exception,* Carey McWilliams wrote:[1]

> California is destined to occupy in the future, not a marginal, but a central position in world affairs. The ports of the West Coast will be the ports through which the expanding trade and commerce of the West will flow to ports throughout the entire vast area of the Pacific.
>
> [He also contended that the] very scale by which happenings, events, and developments are measured…means…that to describe the state accurately is to run the risk of being branded a liar or a lunatic.

Today, California's global trade is central to its prosperity. The vastness of trade activity, and the way it penetrates the economic life of the state, perhaps even surpasses McWilliams' vision of the future. The state's foreign trade strategy, and the structure of state government trade services that emerges from it, needs to proceed from an understanding of this worldwide economy.

A global economy "is an economy with the capacity to work as a unit in real time on a planetary scale."[2] Bill Gates contends that: "If the 1980s were about quality and the 1990s were about reengineering, then the 2000s will be about velocity. …[W]hen the increase in velocity of business is great enough, the very nature of business changes."[3] These three factors—quality, reengineering, and velocity—are rapidly changing the structure of foreign trade. They directly affect relationships between the flow of imports, exports, and foreign direct investment. In particular, global e-commerce represents a substantial change in the velocity at which products are developed. The customer is integrated into design and production processes speeding development. Manufacturing locations must quickly respond to changes in demand and local cost structures. The challenge for California businesses is to capture worldwide markets as this new way of producing and trading rapidly takes hold.

Why should state government be involved in foreign trade? California's regional economies[*] compete with other states' and nations' regional economies for global economic advantage.[4] Since 1992, foreign trade has increased 45 percent in California and may account for one-quarter of the state's economy.[5] It is estimated that for every billion dollars in regional exports generates 10,000 to 20,000 high quality, good paying jobs.[6] Furthermore, exporting firms are more productive and increase employment faster than firms that restrict themselves to the domestic economy.

State government can boost foreign trade in a number of direct and indirect ways. It can help smaller, trade-ready firms to identify and exploit foreign markets and to gain the

[*] California's regional economies are: San Diego Region, Los Angeles Region, Bay Area Region, Sacramento Valley Region, Central Valley Region and the Natural Resources-based Region (far North and Sierras).

financing they need. It can facilitate foreign direct investment, which can finance research and build factories. State government can represent the viewpoints of critical industries in international forums and to multinational enterprises. The state provides critical infrastructure such as high-speed roads, sea and airports, encourages and regulates telecommunications, educates the populace, funds universities, and seeks to maintain a high quality of life. While the federal government may not concern itself with how foreign competition affects individual states and regions, state officials are responsible for maintaining regional economic competitive advantage.

The State of California operates five trade-related programs and 15 approved trade and contract offices to encourage and facilitate foreign trade. The State's role in the overall scheme of California's trade is relatively small if the focus is on providing services to individual companies. It is simply not possible for the state to have a decisive affect on trade volume this way. However, the following state activities can have a significant effect:

- Active state advocacy at the federal and international level,
- State attention to tax and other initiatives,
- A programmatic focus on multinational enterprises and their parts and service networks,
- Emphasis on the export and import of innovative research (such as biotechnology or software), and
- The provision of useful trade and market information to trade-ready companies.

Traditional approaches by states to increase business trade with foreign nations and to attract direct investment have met with varying degrees of success. Today these efforts must be far more complicated undertakings to be successful. For example, the most effective programmatic mix of export or finance-related skills, information, and contacts varies by industry.

Trade affects the state's domestic economy and can have a strong influence on a particular industry cluster's development and employment. The aerospace and computer industries are good examples. In addition, production-sharing in foreign countries may incorporate U.S. parts in both the flow of exports *and* imports through intra-corporate channels. These arrangements can affect California's supplier and service businesses and employment.

Large and small businesses have varying needs for trade assistance. The bulk of the world's exported goods and services passes through multinational enterprises. Multinational enterprises use a range of strategic alliances, production-sharing, and often virtually- organized supplier and research networks to achieve global competitive advantage. Intra- and inter-business e-commerce are increasing their capacity to form ever more diverse relationships. Virtual multinational corporations can rapidly exploit information to achieve strategic advantage within industries. In contrast, small firms directly contribute only a small portion of the state's total foreign trade volume. However, this difference in volume is misleading. Small firms produce creative designs

of parts and services, conduct innovative research and engage in production-sharing for multinational corporations. Some small firms in highly competitive high-tech global industries *must* export by entering into strategic alliances with multinational enterprises or fail to grow.

The complex flow of imports and exports and foreign direct investment discussed in this report provides the background for examining the role of state foreign trade offices in strengthening the state's global economic competitive position. The report examines these issues by:

- describing California's foreign trade and comparing it with other key trading states.
- comparing the characteristics of companies that export compared with those that do not.
- reviewing the global factors that affect California's foreign trade.
- identifying the effects of foreign trade on employment in California.
- providing an overview of California's trade policy and foreign trade programs.
- examining how other states organize their foreign trade offices.
- reviewing the effectiveness of state foreign trade offices.
- suggesting options for improving the state's foreign trade efforts.

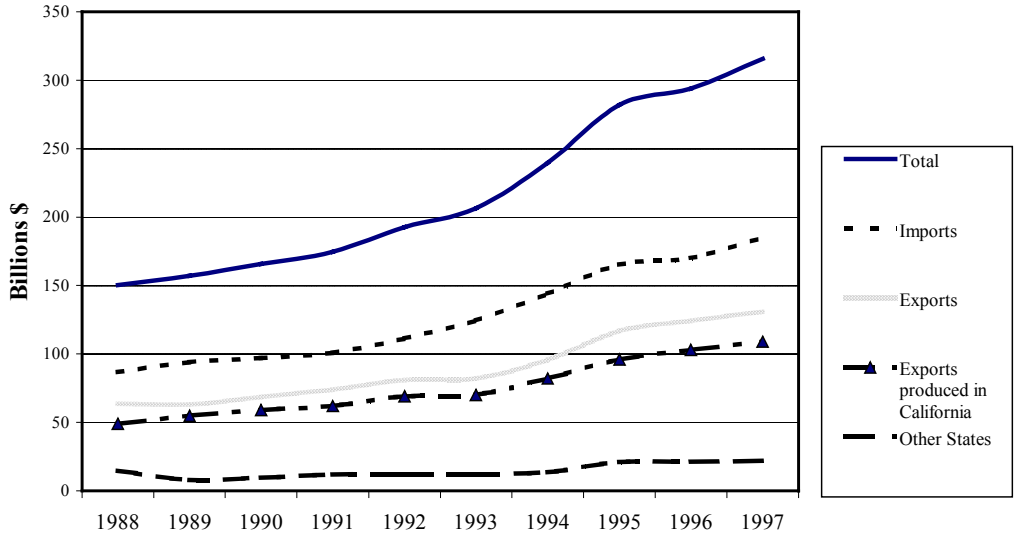
The report concludes with options that suggest a new state trade policy and strategy. The strategy would focus on the state's regional industry clusters. It would take into account the increasing velocity of global trade and the emerging global reorganization of business, particularly as associated with e-commerce. A hierarchy of public-private services for small- and medium-sized firms could promote interest in trade and target expert state marketing assistance to trade-ready firms. A key component of this effort could be to actively encourage California parts and service suppliers to join together to compete for contracts with multinational enterprises around the world. The state could also build the foreign affairs capacity to track and respond to international regulatory initiatives and activities affecting the competitiveness of its industries. California could join with other states to tackle international policy issues including agreements that might redefine state sovereignty. All of this calls for the close coordination of all of the state's foreign trade services, and for inventive and responsive organizational forms, not just trade offices, to meet the challenge of global trade.

TRADE IS IMPORTANT TO CALIFORNIA'S ECONOMY

Foreign trade is a fast growing sector of California's economy. Exports of goods and services constituted 15 percent of the State's Gross State Product in 1998. California's total foreign trade volume, excluding services, was almost $300 billion in 1996 and is forecast to grow to $339.2 billion by the year 2000. Imports are outpacing exports, reflecting more movement of goods to the U.S. through California ports.

Chart 1 shows that exports *produced* in California more than tripled from 1988 to 1997, and California's share of U.S. trade activity increased from 14 percent to nearly 16 percent.[*] However, California exports declined in 1998, driven by large declines in exports to Asia.[7] Experts believe that this may have been the bottom of the state's one and a half year decline, pointing to the second quarter export increase in trade as evidence.[8]

Chart 1
Value of California Exports and Imports (1988-1997)

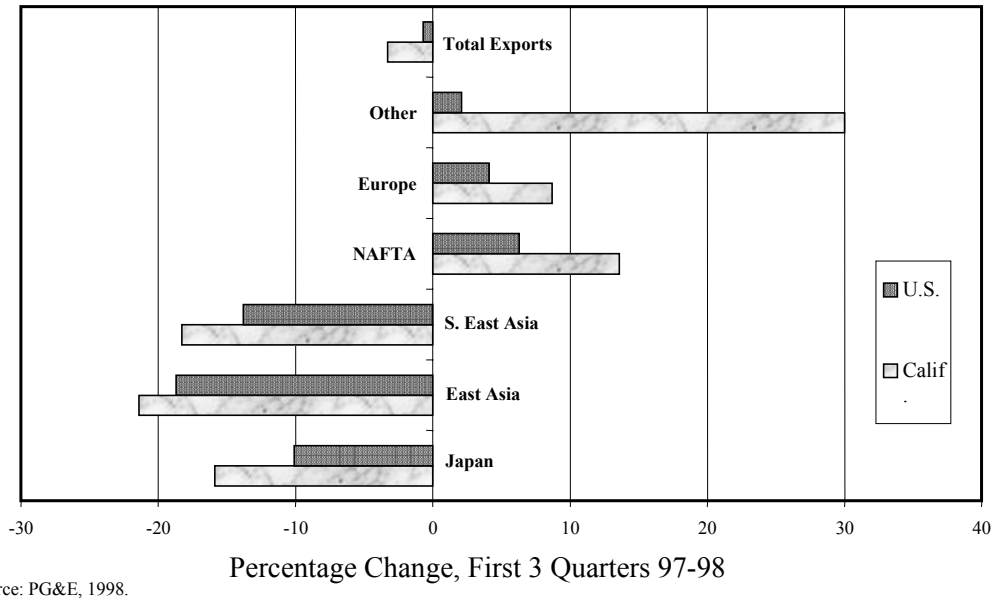


Source: Center for the Continuing Study of the Economy, 1999.

[*] There are two problems with export data. First, data on the state where a product originated or was manufactured are poor. For example, data on manufacturing location is defined as "where the product began its journey to the point of export." This may be the state location were products are bundled together for shipment, not production. This accounts for Louisiana being the ninth largest exporting state, since it bundles agricultural goods for export from the central U.S. Also, the address of the exporting company may be used in the data as the manufacture's address. For example, New York is one of the largest exporters of agricultural goods due to the exporter's business address. These problems may also distort trade comparisons between California and Texas. (See: Jock O'Connell, "Does Texas Export More to Mexico than California Does?" *San Francisco Chronicle*, Op-Ed Page, June 4, 1999.) The second problem involves export data on software. Here the export value of information on a disk or of a master disk used for duplication is not measured. (See: Jock O'Connell, "A Case of Missing Software," *Sacramento Bee*, August 15, 1999, p. I-2.) Unless noted to the contrary, data reported in this report is limited to the export of merchandise.

Growth in California exports was a key factor in the early stages of California's recovery from the early 1990's recession. Exports of California-produced goods, led by computer and electronics, increased by as much as 19 percent in 1995. However, computer and electronics exports decreased sharply in 1998, as sales to Asian countries declined, a trend that is starting to reverse. Exports to Asia fell by $11 billion in 1998, down nearly 20 percent from 1997 levels.[9] Asia's overall share of California's exports fell from 53 percent in 1996, to 47 percent in 1997, to 43 percent during the first three quarters of 1998. Meanwhile, the trade share of North American Free Trade Agreement (NAFTA) and European countries each increased by 25 percent.

Chart 2
California and U.S. Merchandise Exports



Source: PG&E, 1998.

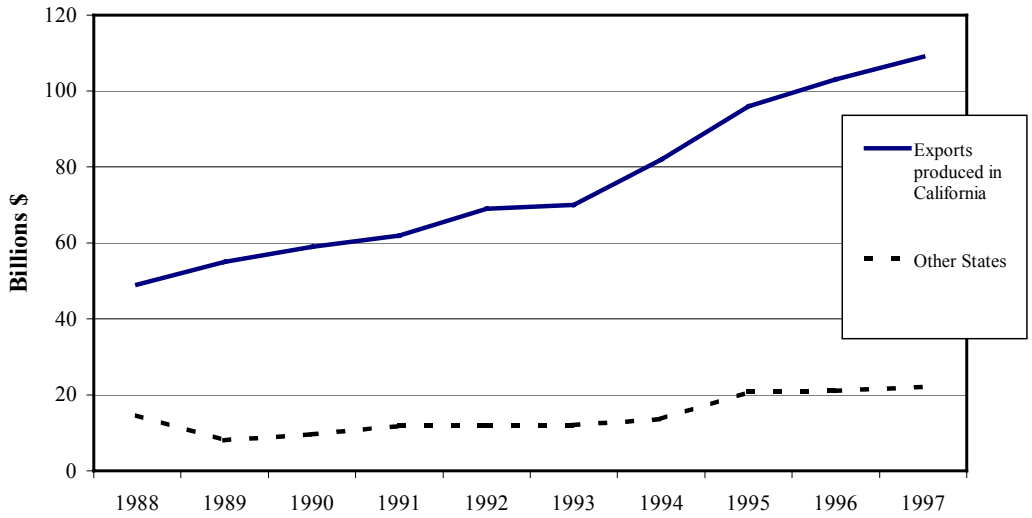
Table 1
Export of Goods Produced in California 1987-1997 ($Billions)

	1987	1996	1997
California	$ 34.3	$103.3	$109.5
United States	$252.9	$626.8	$687.6
California as % of U.S.	13.6%	16.6%	15.9%

Source: U.S. Dept. of Commerce and California World Trade Commission, as presented in *California Economic Growth 1999*, Center for Continuing Study of the California Economy, pp. 5-11.

Four to six percent of the goods moving through California ports in 1992 originated in other states or countries.[10] Exports originating in other U.S. locations and Mexico, and moving through California ports, are increasing slightly in volume (Chart 3). More

recently, California-produced exports are increasing more rapidly than goods produced in other states and Mexico.



Source: U.S. Dept. of Commerce and California World Trade Commission, 1999.

Within California, distribution of foreign trade has been fairly consistent over the last several years—around 60 percent of the state's total foreign trade passes through the Los Angeles customs district, and one-third passes through the Bay Area. San Diego's share increased from five percent to seven percent of the state's total foreign trade between 1994-1997, in part due to the recovery of Mexico's economy.

Table 2
California Foreign Trade By Customs District ($Billions)

	1994	1996	1997	% Change 1994-97
Los Angeles	$ 146.1	$ 168.8	$ 185.8	27.2%
San Francisco	80.5	105.4	107.0	32.9%
San Diego	13.0	18.4	23.0	76.3%
California	239.6	292.6	315.8	32.8%
United States	$1,170.3	$1,413.3	$1,550.0	32.4%

Source: California World Trade Commission, as cited in *California Economic Growth 1999*, Center for Continuing Study of the California Economy, pp. 5-10.

A slightly different picture emerges for exports that originate in California. The two most important exporting regions are San Jose and Los Angeles-Long Beach, accounting for about 55 percent of the trade originating in California.

Table 3
California-Produced Exports by Metropolitan Origin

	1997 (Bill. $)	1997 Share of Total	% Change 1996-97
San Jose	$29.1	29%	-0.9
L.A.-Long Beach	25.8	26%	5.6%
San Francisco	10.0	10%	16.6%
Orange County	8.8	9%	5.9%
Oakland	6.9	7%	-5.3%
San Diego	$7.8	8%	16.2%

Source: Tapan Monroe, *California Economic Outlook and Key Issues 1999 and Beyond*, San Francisco, Pacific Gas and Electric, December 1998, p. 14.

California's top export partners border the Pacific Rim. Asia is California's largest regional export market, with sales accounting for over seven percent of the state's GSP. Japan is the largest single trading partner, although export volume has fallen recently. Mexico is likely to soon become California's top national trade partner, as demonstrated by second quarter 1999 export trade data showing that Mexico has overtaken Japan. Much of Mexico's trade with California is centered in the maquiladora industry, which produces and assembles goods for export mostly to the US.

Table 4
California Top Export Markets 1990-97 ($Billions)

	1990	1997	% Change 1990-97
Japan	$10.3	$ 17.5	70%
Mexico	4.7	12.1	157%
Canada	5.8	11.4	97%
South Korea	3.8	7.0	84%
Taiwan	3.2	7.0	119%
Singapore	2.6	5.7	119%
U.K.	3.4	5.4	59%
Hong Kong	1.7	4.2	147%
Germany	3.7	4.1	11%
Netherlands	1.8	3.4	89%
Total Exports	$58.4	$109.5	88%

Source: California World Trade Commission, as cited in *California Economic Growth 1999*, Center for Continuing Study of the California Economy, pp. 5-12.

An analysis of California's foreign trade identifies the following factors as contributing to its success:

> …[T]he proximity of the [foreign] country to California, the proportion of immigrants from that country in California, and, for Asian countries, the special relationship of California firms with Asian producers, are all significant factors in the level of exports to that country, along with the size of its economy and its per-capita gross domestic product.[11]

The combination of the state's vibrant high-technology sector, and direct links via immigrants and industry production-sharing relationships with firms in foreign countries have contributed to the state's competitive export advantage.

Table 5 lists California's top exports, which are concentrated in high growth industries. Manufactured goods accounted for 72 percent of the total value of exports in 1997.

Table 5
California's Top Exports Industries Other Than Services 1990-97
($Billions)

	1990	1997	% Change 1990-97
Electrical Equipment	$11.8	$ 30.4	158%
Computers, Indust. Equipment	13.5	28.5	111%
Transportation Equipment	7.9	11.2	42%
Instruments	4.4	9.1	107%
Food Products	3.8	5.5	45%
Chemicals	2.7	4.5	67%
Crops	2.4	3.2	33%
Other	11.9	17.1	44%
Total Exports	$58.4	$109.5	88%

Source: California World Trade Commission, as cited in *California Economic Growth 1999*, Center for Continuing Study of the California Economy, pp. 5-13.

Strong international trade flows are important to the long-term growth of trade-intensive industries. The size of state trade export and import flows relative to average U.S. trade flows, and the net balance between these two flows (positive or negative trade balance), varies considerably by industry. Table 6 on page 10 reports data on the U.S. trade flow and the balance of trade that involves key California industries.[12] Industries with below average U.S. trade flows produce primarily for the domestic market. Foreign trade accounts for less than 10 percent of their sales. For these industries, pressures from foreign demand and competition are likely to remain low.

U.S. industries with above average U.S. trade flows are important to California's trade (Table 6). Their import and export shares are well above 10 percent of domestic demand. Four of the five high-trade industries (women's outerwear, electronic components, office equipment, and motor vehicle equipment) had a negative trade balance in 1995, but

significantly increased employment and sales. For example, imports of computers exceeded exports and lost domestic jobs between 1990 and 1995. In contrast, industries with both high-trade flows and a positive trade balance showed strong growth in 1995. This occurred in the aircraft and parts industry despite having lost sales and jobs during the previous ten years.

Table 6
Average U.S. Trade Flow and Balance of Trade for California Manufacturing Sectors (Companies With More than 25,000 Employees, 1995)*

	Below U.S. Average Trade Flows	**Above U.S. Average Trade Flows**
Positive Trade Balance	Preserved Foods Newspapers Commercial printing Misc. Plastics Fabricated Structural Metal Industrial Machinery Missiles/Space Vehicles Navigation Equipment	Aircraft/Parts Measurement Instruments Medical Instruments
Negative Trade Balance	Beverages Household Furniture	Women's Outerwear Computers/Office Equipment Electronic Components Motor Vehicle Equipment

* Detailed industry export and import data is not available for California manufacturing companies.
Source: Adaptation of a table prepared by: Cynthia Kroll, Dwight Jaffee, Ashok Bardhan, Josh Kirschenbaum, and David Howe, *Foreign Trade and California's Economic Growth*, Berkeley, California, California Policy Seminar, 1998, p. 27.

The complex interaction between the flow of imports and exports, and their impact on jobs, can mean that increased foreign trade sales do not necessarily produce growth in employment: "These sectors are likely to see the greatest transformation of their production processes, with resultant changes in labor-force mix, as they adjust to the opportunities and challenges of competitive global markets."[13] Some industries must have a positive trade balance that goes beyond productivity increases if they are to add jobs. Other industries may have a negative trade balance, yet still add jobs.

A useful analysis of exports and imports includes services as well as goods. Services are a diverse economic sector including: passenger fares, ocean freight services, royalties and license fees, transactions for industrial processes, industrial research, educational and financial services, telecommunications and business, professional, and technical services.

The U.S. services sector trade balance has been positive for nearly three decades and is growing faster than merchandise exports. The U.S. exported $239 billion worth of commercial services in 1997, a seven percent increase over 1996, and a 46 percent increase over 1992. Multinational enterprises dominate service exports. In 1996, $221.1 billion (99

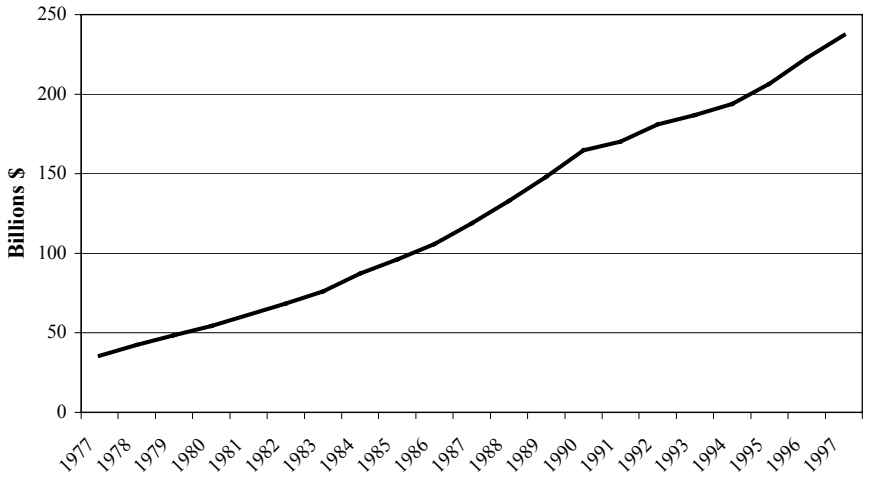
percent) of sales were through foreign subsidiaries of U.S. firms. During the same year, computer and data processing services accounted for $28.3 billion, and motion pictures (including television tape and film) exported $9.6 billion. Europe received over half of this export trade, followed by Asia and the Pacific, and the Western Hemisphere.[14]

Jock O'Connell suggests that the value of California service exports may be under-estimated by a considerable amount.[15] Software is often included in calculations of service exports. Very little is exported in bulk. Usually a master disk is "shipped" over the Internet and copies are made in the foreign country. The value of the disk itself is not high, even though the information as a commodity is valuable. U.S. software companies earn more than half of their total revenues from overseas sales.[16] Sales of packaged software outside of the U.S. reached over $135.4 billion in 1997. Estimates are that American companies control as much as 70 percent of European software sales. A miniscule fraction of these sales are counted as California exports, even though the state may control one-quarter of this new exporting industry.[17]

The difficulties associated with trying to determine the value of software exports extends to all "information-related" exports. Almost any procedure for producing a product, or the product itself, can be digitized, and electronically delivered anywhere in the world. For example, a product could be sent over the Internet to a location that offers the best price and capacity to produce an acceptable product for a particular market. In this example, no "product" or "process" has been shipped from a California port, yet both have arrived in a foreign market. The domestic virtual company that controls this network has made a profit from international trade that eludes state export data and U.S. export controls.

Service exports accounted for $236 billion of California's Gross Domestic Product of $1.03 trillion in 1997 (23 percent). This sector has grown considerably since 1977, and at a quicker pace since 1994 (Chart 4).

Chart 4
California Services Exports (1977-97)



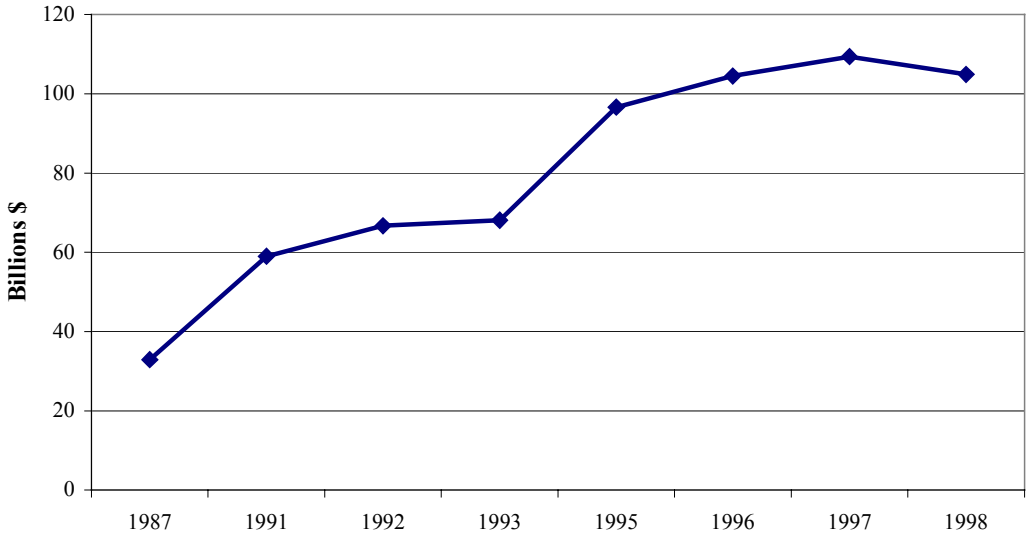
Source: Bureau of Economic Analysis, U.S. Census Bureau, 1999.

California Foreign Direct Investment

Direct foreign investment occurs when a foreign company purchases a domestic company or some portion of it, enters into a joint venture, or builds a subsidiary. It also may involve investing in portfolios that invest in state businesses. California leads the nation in direct foreign investment, with nearly $101 billion in assets in 1996, as measured by the book value of property.[18] This represents 13 percent of all foreign assets in the U.S., a proportion that has remained stable over the past ten years.

Direct foreign investments are primarily made in real estate, services, wholesale trade, and in specialized manufacturing areas such as computers, electronic components, and biotechnology.

Chart 5
Direct Foreign Investment in California



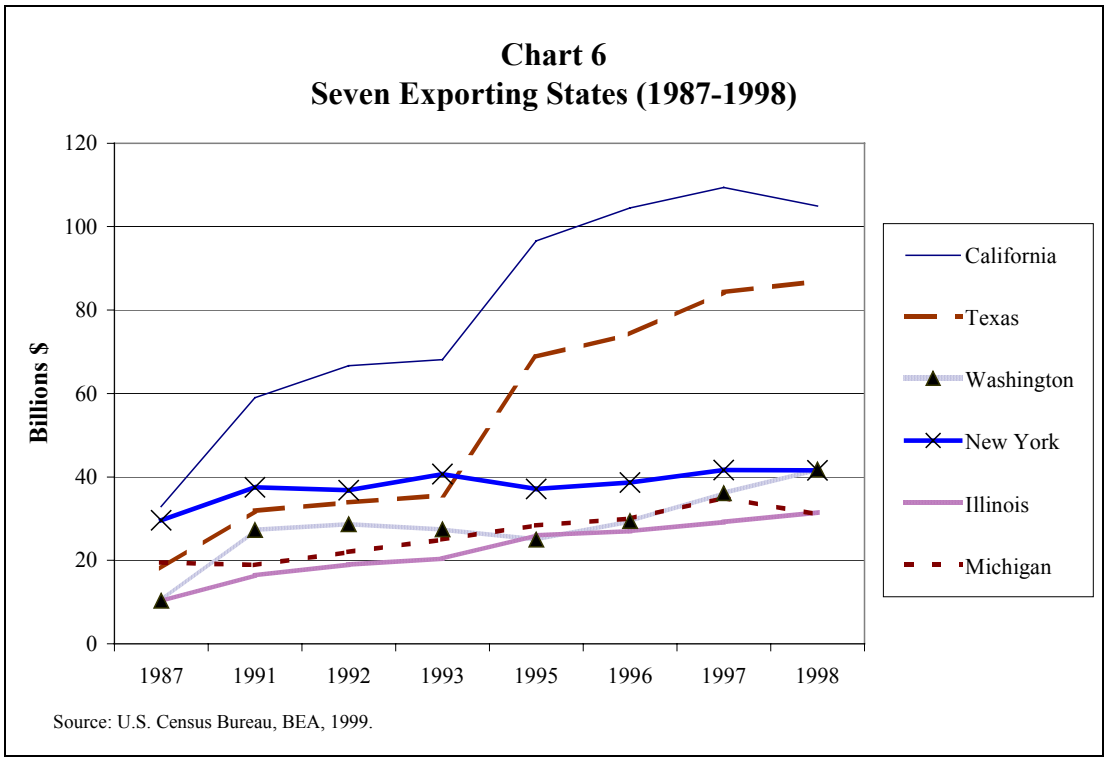
Source: California Trade and Commerce Agency, 1999.

Asian investors generally prefer California, investing 48 percent of the state's total foreign investment in 1996, in comparison to 26 percent in the U.S. In contrast, Europeans placed 41 percent of all foreign investment in California in 1996, compared to 55 percent in the U.S. as a whole.[19]

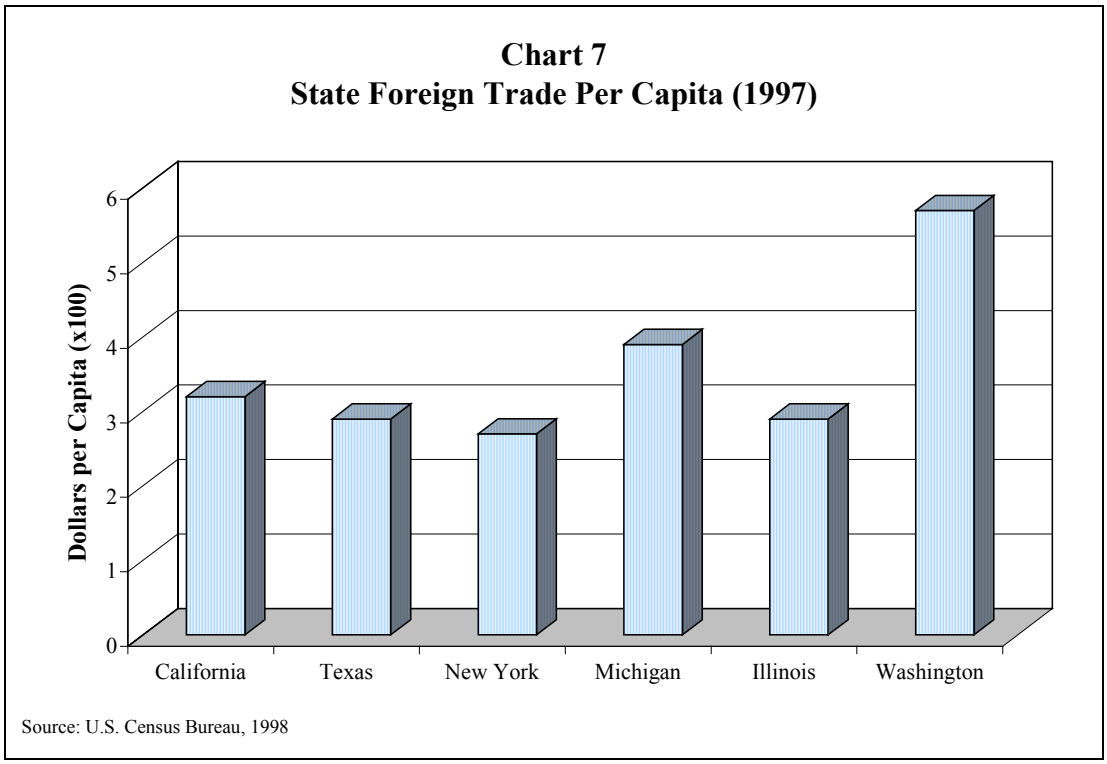
California Trade Compared with the Top Six Trading States

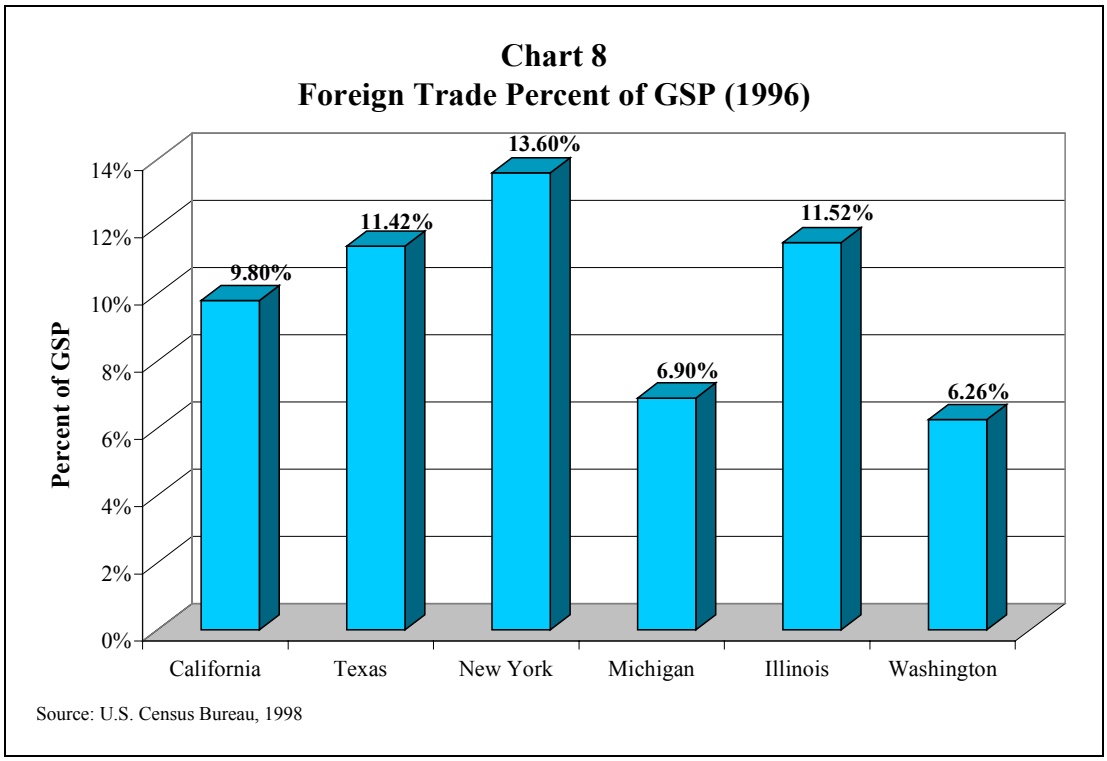
The total amount and the rate of growth of California exports far exceeds that of the other top exporting states of Texas, Illinois, Michigan, New York, Pennsylvania, and Washington.[*] Two measures, foreign trade per capita and percent of Gross State

[*] This analysis does not include software and other services in its calculations nor does it attempt to correct for the various data problems associated with product origins mentioned above.



Product (GSP) gauge state trade intensity. The higher a state ranks on these two measures, the more dependent its economy is on trade. California ranks third in dollars per capita and fourth in relative foreign trade percentage of GSP on this state scale.





California ranks seventh in the world in terms of Gross Product, and would rank behind Ireland, Belgium, Netherlands, Norway, and Sweden in terms of the GNP percent of exports[20] (Table 7).

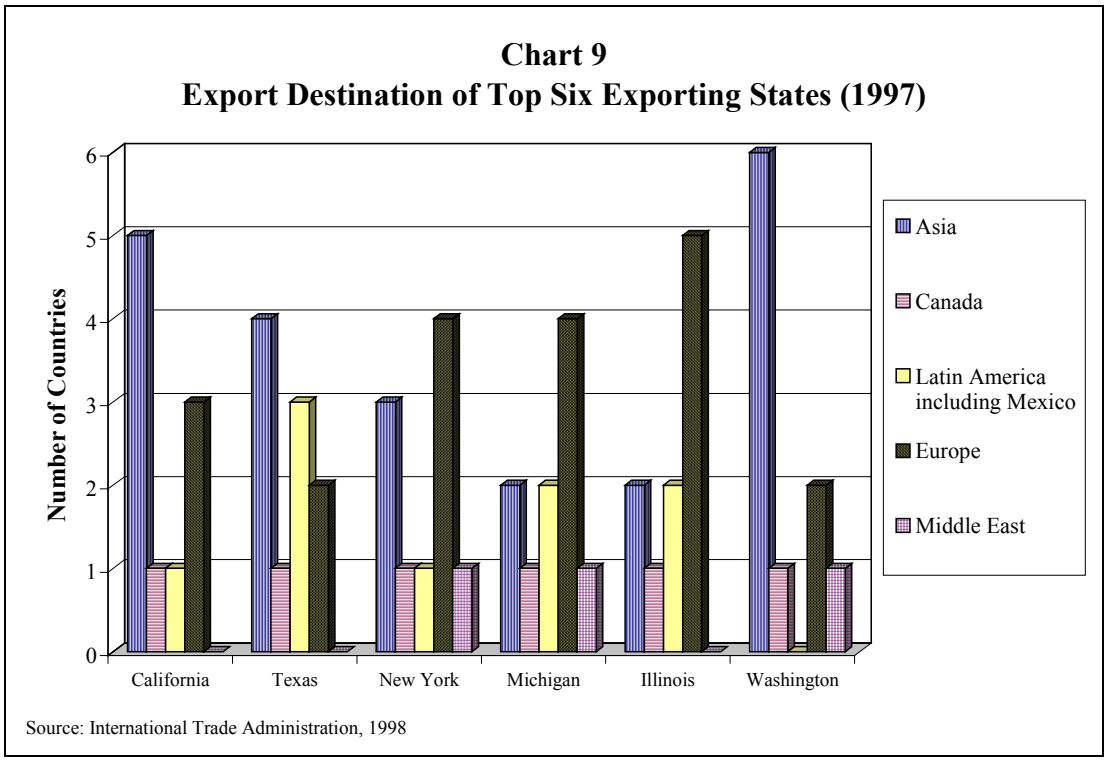
Table 7
A Comparison Of California's Gross Product With Eighteen Nations (1998)
($ Billions)

1. United States	$8,179	10. Canada	$584
2. Japan	3,797	11. Spain	556
3. Germany	2,142	12. **Los Angeles (5 Counties)**	**499**
4. France	1,436	13. India	423
5. United Kingdom	1,362	14. Mexico	417
6. Italy	1,172	15. Netherlands	378
7. **California**	**1,082**	16. Australia	350
8. China	950	17. Argentina	334
9. Brazil	802	18. **Los Angeles County**	**296**

Source: OECD, direct country sources, L.A. County Economic Development Corporation, July, 1999.

As noted above, California's largest export markets are Asia and Latin America. However, this trade is highly concentrated in Japan and Mexico. Other states export to a larger *number* of countries in both of these regions. Washington exports to more Asian countries than California, while Michigan, Illinois and Texas export to more Latin

American countries. New York, Michigan and Illinois export to more European countries.*



The competitive picture that emerges from comparing California and the other major exporting states is more complex than one might expect. The state's foreign trade volume is the largest, but so is its economy. Foreign trade is actually a lower relative percentage of capital income and GSP, suggesting that California's economy is less trade intensive than that of some competing states. In addition, California's trade is concentrated with a small number of trading nations, suggesting opportunities for expansion. Mexico is California's top trading partner but we may not be trading with as many Latin American countries as other U.S. states. (Current trade data may understate California trade with Latin American Countries. A significant amount of California's Latin American bound shipments are transshipped through Florida and Texas ports, and showing up in their trade statistics.)

* Attachment 3 compares California's six top ranked exports (electronics, industrial machinery, transportation equipment, chemicals, food products, and instruments) with the same exports by the six top exporting states.

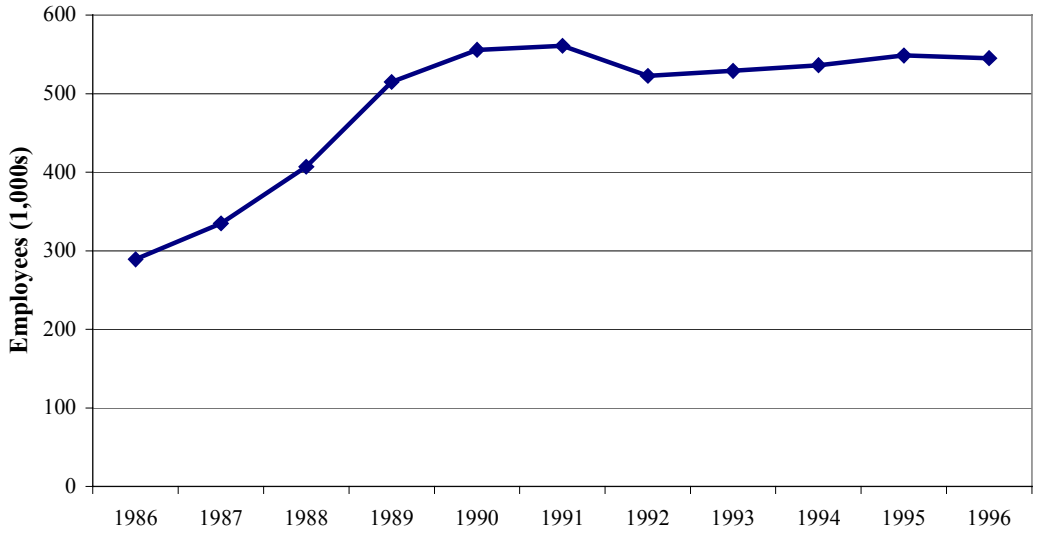
FOREIGN TRADE SUPPORTS AN INCREASING NUMBER OF CALIFORNIA JOBS

An estimated one in seven California jobs is directly or indirectly linked to foreign trade, an increase from one in 12—ten years ago.[21] According to the Trade and Commerce Agency:

> California exports in 1997 directly and indirectly supported approximately 1.53 million jobs in the Golden State. Export growth in 1997 supported approximately 88,000 California jobs. These figures are based upon conventionally used U.S. Department of Commerce calculations where an average of 14,000 jobs is supported by every $1 billion in exports.[22]

Foreign direct investment also brings jobs to California. During the ten-year period of 1986 to 1996, foreign company affiliate* employment in California increased from about 289,000 to more than 545,000 jobs. Most of this growth occurred in the late 1980s, and leveled off during the state's recession in the early 1990s, growing much more slowly thereafter.

Chart 10
Foreign Company Affiliate Employment (1996)



Source: Trade and Commerce Agency, 1999.

The global marketplace has a large impact on California's exporting economy and employment. For example, there was strong employment growth in California's computer and electronics industries between 1995 and 1997, with export demand a primary catalyst. The slowdown in the Asian economy, especially Japan, led to a slowdown in computer and electronic exports and had a negative effect on the state's

* A foreign company affiliate is a company owned by a parent firm in a foreign country.

high-tech industries. High-tech employment growth subsided in early 1998, turned negative during the last quarter of that year, and now may be increasing again as the Asian economies begin to improve.[23]

Foreign trade may contribute as much as 39 percent of the widening income gap between high- and low-wage workers in certain industries in California.[24] For example, high-wage design operations may produce products that are manufactured abroad by skilled workers or parts produced in other countries may be imported into California for assembly of complex products, again reducing potential production jobs. The role that imports and exports play relative to the income gap and state employment raises important policy issues. For example, the state could incentivize the development of a highly trained blue-collar workforce to operate and create high value-added production processes.

Generally, an increase in exports results in a proportional increase in sales and employment. An increase in imports does not necessarily mean a decrease in sales and employment. This is because "factors mitigating the negative effects of imports include the role of imports as inputs for California's producers and the price effects of low-cost final products (such as computers) on the efficiency of U.S. producers…."[25] Low-cost imports fuel employment expansion in the California industries that use imports in high-cost assembly operations. However, these low-cost imports may replace domestic suppliers of the same item, resulting in fewer jobs for skilled and unskilled blue-collar workers. In a global economy, U.S. blue-collar jobs compete with similar jobs abroad. An estimated 20 percent of the loss in production share of California's manufacturing sector employee income is due to a redirection in the number of blue-collar production jobs to overseas manufacturers, rather than to decreases in their wages.[26] For example, IBM recently laid off ten percent of its Northern California workforce and moved its tape drive assembly operations to Guadalajara, Mexico, and to Hungary.[27] Mexico has dramatically increased its manufacturing exports since 1992, although the number of highly skilled workers has declined, as have wages.[28]

At one extreme, high-paying professional and technical administrative jobs are increasing in the Bay Area. There is a higher proportion of supervisory and non-production workers within industry sectors, and a faster expansion of information and financial services. White-collar workers are developing the technologies that lead to new products, new methods of global design and production, and advanced marketing and distribution systems.[29]

A recent conference organized by the World Bank and the International Labor Organization examined the global impact of new information and communications technology (ICT) on employment, including use of the Internet. The conclusion was that foreign trade will permit the export of jobs to any low-pay/high-productivity location in the world. Several factors could add to the "velocity" at which blue-collar, and perhaps white-collar, jobs could be exported around the world. One analysis finds a great deal of uncertainty due to the following factors:[30]

- …[E]vidence and predictions on ICT and work suggest that it could be used to automate production or enrich it; to deskill the workforce or to build up worker skills; to routinize work or to add value to it; to flatten hierarchies and empower the workforce or to institute great control and disempower the shop floor.
- [Global] telework …can be used by employers to retain, or to tap into, a skilled workforce which might otherwise be unavailable. …[But t]elework may increase isolation, marginalization and social dispersion; create unprotected jobs; contribute to gender disparity; and fragment the labor force.
- …[J]ob creation due to ICTs is incidental and takes considerable time, while job elimination is an inevitable and fairly rapid result …, new jobs created by ICT tend to be short-lived as they are eventually replaced by ongoing advances in technology.
- ICT facilitates the relocation of jobs, resulting in a loss of jobs in one area and a gain in another. The result can accentuate local differences and exacerbate regional polarization, as employers take advantage of ICTs to shift operations to locations with an abundance of specialists.

COMPANIES THAT EXPORT ARE DIFFERENT

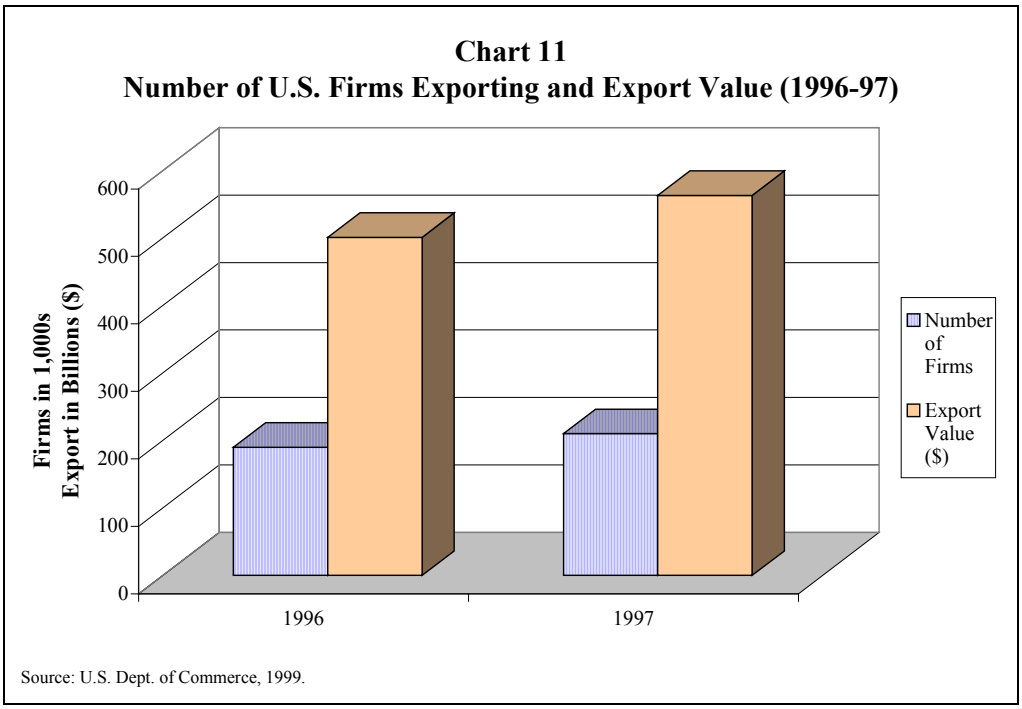
Why companies choose to export is an important question. Some companies export products immediately while others do not. Important variables include the size of the company and how it connects with other businesses to develop, manufacture or market products. These variations need to be considered when developing a strategy and designing programs to help California's companies participate in foreign trade.

In 1999, the California Chamber of Commerce surveyed its membership to determine the impact that trade has on businesses.[*] Twenty-six percent of the respondents are exporters, 23 percent both import and export, and 8 percent are involved in international joint ventures. Companies identified the following factors as deterring them from developing additional trade:

- Lack of sales leads (26 percent),
- Costs/complexity (23 percent),
- Difficulty in finding agents/distributors (21 percent),
- Foreign trade barriers (16 percent),
- Shortage of financing (10 percent), and
- Cannot produce more for export (4 percent).[31]

National studies on exporting companies may be generally applicable to California, given the state's significant portion of U.S. exports. Only three percent of all U.S. firms export, but the number is growing. Of the exporting firms, only about 20 percent sell in more than five countries. In 1991, the Census Bureau estimated that 66 firms accounted for 54 percent of all U.S. exports.[32] The top 50 manufacturing firms accounted for 45 percent of the exports in 1997.[33] In 1997, exporting companies with multiple locations in the U.S. and overseas represented only15 percent of the total exporting companies, but accounted for 80 percent of export value. The remaining 179,000 single location (and probably much smaller) companies, accounted for 20 percent of U.S. exports.[34]

[*] The survey had methodological limitations; it did not report the number of companies surveyed, how they compare with the kind and distribution of California's companies generally, the size or distribution of companies returning the survey, nor the return rate



Nationally, 209,455 companies exported $563 billion in merchandise in 1997, a $62 million increase over that of 189,670 companies with $501 billion in exports in 1996.[35] The number of companies exporting in 1997 represented an 86 percent increase over 1992, and a 62 percent increase in export value.

Manufacturers produced more than two-thirds of U.S. exports ($386 billion) in 1997. Wholesalers were next with $71 billion, followed by other companies such as freight forwarders, transportation services, business services, engineering and management services, gas and oil extraction companies, coal mining companies, communication services, and others, accounting for $81 billion. The remainder was produced by unclassified companies.

Exporting firms tend to be large. Companies with over 500 workers represented only 4 percent of all exporting firms but accounted for 69 percent of all exports. A substantial portion of this export (42 percent) is between multiple location firms or with related partners. One-quarter of manufacturers with sales under $500 million, and over half of the companies with sales in the $500 million to $1 billion range, operated internationally in 1998.[36] For companies in sectors other than manufacturing, the top 50 firms accounted for between 28 percent to 37 percent of the exports, depending on the industry, in 1997.[37]

Only about six percent of all of the small- and medium-sized companies in the U.S. export. Small companies with less than 20 employees represent about half of all exporters but only 11 percent of export value.[38] Small exporting companies comprised about 30 percent of manufacturers, 75 percent of wholesalers, and 72 percent of "other companies." A special study conducted by the Bureau of the Census in 1987 found that 78 percent of the firms

studied had total export shipments worth less than $250,000, and almost 90 percent made about six shipments per year valued at only $7,800 per shipment.

Small- and medium-sized U.S. companies generally perceive foreign trade as too risky, complicated, and not profitable relative to the time, attention, and resources required to make it happen. Only one in ten small- and medium-sized U.S. companies with exportable products actually exports them.[39] Customs declarations and export documentation, financing, and language problems are major barriers. Non-exporters also typically do not have a long-term company development plan, which includes exporting as a priority. Often firm management simply does not have the time nor the inclination to gather market intelligence and to gain access to the right information in the right form at the right time. As a result, follow-up on an initial trade opportunity, even if presented during a trade mission or trade fair, is difficult. These companies lack information about possible distributors, distribution networks and other factors. Transactional barriers also may limit their ability to close a deal, including such activities as establishing representation or arranging joint ventures, credit and finance, insurance, shipping, quality standards, and customs requirements.[40]

In contrast to smaller firms, many large U.S. companies are expanding and diversifying overseas to take advantage of the global economy.

> Customer demand for just-in-time delivery is forcing decentralized inventory and manufacturing. Stable, low-cost, high productivity labor pools are emerging around the world. Companies are using networks much more extensively to produce and distribute their products. Privatization in emerging markets is attracting U.S. capital. The strengthening of trading blocs such as the European Union and Mercosur are creating a sense of urgency to 'be in the zone.' "Technological innovation…is happening everywhere. The emergence of the Internet and other communication channels is redefining the product life cycle, shortening awareness-building horizons, and forcing companies to develop global distribution strategies in advance of sales. The [corporate] goal of lowering or eliminating import duties is driving companies to either manufacture or at least assemble in many countries in order to penetrate markets. Financial market efficiency…has lowered international risk and transaction costs and hurdle rates for investments [for large corporations]."[41]

Businesses are also trying to reduce cash-flow problems by offsetting seasonally-driven production. This means opening new markets for products that can be produced during low demand periods. In addition, consumer buying habits are changing as a sizable middle class emerges in developing countries.

The Relationship Between Domestic Business Performance and Trade

The strategies that manufacturers adopt *within* an industry to compete for domestic and global markets can significantly affect their industry's ability to improve performance. Three principle business strategies vary according to investment in technology and workforce skills, management style, and type of product produced.[42]

1. ***High-performance strategy*:** This group of manufacturers typically uses advanced technology, pays relatively high-average blue-collar wages and employs a large proportion of skilled workers. These firms "...spend more than average to train shop employees, and exhibit high labor productivity, widespread multi-skilling, low worker turnover, and significant worker authority." They have a higher capital investment per worker. For example, even in metal working, "some 15 to 20 percent of smaller shops are becoming more productive and are doing so at a rate of nearly 10 percent per year. In those shops, wages are also rising.... Indeed, in every industry the productivity level achieved by the most productive 10 percent of shops is at least 160 percent of the industry median."[43]

2. ***Lean-performance strategy*:** These firms use advanced technology and employ limited quality management and lean production techniques (principally by reducing waste). They generally have reduced indirect labor cost (for example operators set up their own machines), use less machinery, and are as likely as not to use team problem solving or work organizing techniques. They are less likely to introduce newer or better product designs.[44] They compete on price alone and find it difficult to improve either wages or productivity.

3. ***Low-performance strategy*:** These companies have not invested much in advanced technology, and they "...train less, use fewer quality management and lean production techniques than average, often do not use statistical quality control, and seldom have groups or teams of any kind." Low-performance manufacturers may temporarily reduce production costs by keeping workers' wages low, and by not investing in capital equipment or improving management practices. A low-performance strategy can achieve short term market gains but is likely to fail in the long run as equipment wears out, and workers' skills are no longer compatible with high-value added product design and production requirements.

In a 1992 national study, Luria found that companies that adopted either lean- or low-performance strategies grew by taking *domestic* customers away from high-performance manufacturers.[45] This weakened the entire industry for global competition.

Table 8 below estimates the percentages of manufacturing firms in the United States that have adopted each of these three strategies. A majority of intermediate goods manufacturers (such as suppliers of components to prime contractors) employ a low performance strategy, including piecework[*] and high performance firms may also contract out for piecework on occasion.

[*] Historically, manufacturers with fewer than 500 employees have fallen behind larger U.S. firms and foreign companies of the same size in terms of wages, adoption of technology (particularly computer-based technology), and productivity. See: D. Luria, *Identifying High Performance Work Organizations: Initial Observations* (Ann Arbor, Michigan: Industrial Technology Institute, 1992).

Table 8
Estimated National Distribution of Small- and Medium-sized Manufacturers by Strategy and Type of Manufactured Product

	Type of Manufactured Product		
Strategy	Intermediate Goods*	End-Use Products*	Capital Goods*
Low-Performance	55%	50%	10%
Lean-Performance	33%	25%	30%
High-Performance	12%	25%	60%

* Intermediate goods are part of an assembly such as a car door produced by another firm. End-use products are typically small items such as bolts or nuts sold to wholesalers or retailers. Capital goods include washing machines and other complex products sold to the consumer.
Source: D. Luria, "Why Markets Tolerate Mediocre Manufacturing," *Challenge* (July-August 1996), p. 15.

End-use product manufacturers (the product is sold directly to wholesalers or retailers) are about evenly divided between low-, lean-, and high-performance strategies. For example, many apparel manufacturers have adopted the lean-productivity alternative or a variation of it. Their strategy depends on networking with other apparel and retail firms; using advanced computer design and manufacturing techniques; and ready availability of investment capital and paying low wages to production workers, including outsourcing to low-cost ("sweat shop") subcontractors to maintain productivity advantages. Some apparel firms are moving toward the high-productivity strategy, as evidenced by increasing wages and exports, but they still must compete with low-performance companies in order to maintain their domestic market share. In Los Angeles, LA Prosper Partners and apparel industry associations are encouraging a higher-performance strategy.[46]

Capital goods manufacturers produce cars and large household items, for example, and compete with foreign low-cost capital goods assemblers (see discussion of production sharing below). To remain competitive, they must use high-performance techniques and rapidly introduce new products or risk losing their market share to lower cost, labor-intensive operations.

Successful globally competitive companies *develop their global networks while they maintain their domestic market position* by adopting new technologies and other improvements. In contrast, companies that restrict themselves to domestic markets are generally less competitive. Domestic intra-industry competitiveness can even inhibit the development of global competitiveness if significant numbers of low- and lean-performance manufacturers undercut and destabilize the domestic market. This appears to be happening in the U.S. with lean-manufacturers displacing both low- and high-performance shops.[47] Destructive intra-industry competition exposes the domestic market to capture by global competitors who have lower costs and can produce a knock-off or better product faster and cheaper.

Furniture manufacturing in North London in the late 1970s offers an example of how a low investment strategy can lead to long term failure. Manufacturers tried to maintain competitiveness by cutting wages and other costs, by hiring less skilled workers and by automating or increasing the intensity of work. The result was poor labor relations, progressively slimmer profits and insufficient capital to modernize. In 1960, 25 furniture manufacturers employed 16,000 people; by 1987, one firm remained employing 550 people.[48]

In the long run, as more global competitors use technology to increase productivity, the low-performance strategy of U.S. domestic manufacturing firms may lead to their demise. Wages will always be lower somewhere else than in the U.S. for international wage comparisons (Table 11).

Domestic and Globally Competitive Manufacturing

What strategies might California's manufacturers pursue in order to become competitive in domestic and global markets? In both cases, key factors are innovation, productivity, flexibility, networking, access to capital, and effective marketing. As the world moves from labor-intensive mass manufacturing to markets segmented in technology-centered niches this process will accelerate.

Globally competitive manufacturing "refers to a firm's process of striving for the best quality product, competitive prices, lowest total product costs, competitive customer delivery lead times, on-time delivery, knowledge of competitors and their product lines, and dedication to the development of new products to meet customer needs."[49] In addition:

> Globalization...can be characterized by the emergence of multiple innovative methods, originating in various places around the world. …[G]lobalization today is characterized by high uncertainty and intense new competitive pressures from rival innovators in all parts of the world. ...[C]ompetition is multidimensional. Price, quality, speed, and product differentiation are new axis's [sic] along which to compare the merits of alternative models for productive organizations. For the organization of production, economies of scale [such as mass production], scope, and proximity no longer encompass the whole game. Worldwide sourcing, productive arrangements that attempt to take advantage of economies of scope, and different forms of flexible organization have become key. [50]

An effective global business strategy requires firms to connect rapidly to primary producers, customers, suppliers, and innovators around the globe. Product development and production must go hand-in-hand with opening new markets. Each of these activities must occur at the same time, collapsing the product-to-market time substantially.[51] New organizational forms are being created to redesign product development processes and other value-creating systems, while simultaneously improving manufacturing and other operations. These innovations are rapidly spreading around the globe.[52]

Competitiveness

What factors account for differences in manufacturing productivity, making one country, state, or region more globally competitive than another? To answer this question, the McKinsey Global Institute compared selected manufacturing sectors in Germany, Japan, and the U.S.[53] Their findings appear in Table 9. Dark circles identify factors that contribute to labor productivity; clear circles mark factors of lesser importance. In summary, McKinsey found that competitiveness is related to: [54]

- Organization of functions and tasks, or how the company arranges its various operations and assigns tasks to its employees.
- The age and technology of machinery, equipment and buildings.
- Design-for-manufacturing, or the ability to create products that are less complex with fewer parts, easier to assemble with fewer tools, lower cost, and acceptable to customers.
- Scale of production – how many products are produced at a time.

After the McKinsey study accounted for differences in product design and manufacturing processes, significant differences in competitiveness remained between countries. An efficient organization was a key distinguishing factor. Efficient organizations undertake process improvements such as time-motion studies to determine the best product-assembly procedures. They delegate responsibility to allow immediate implementation of worker-suggested improvements, stress continuous quality improvement, offer cross-functional training and design automated production systems around workers' skills[55]

Direct worker participation in organizing work is important. Studies support the view that increased worker participation in decision-making correlates with higher productivity. This is particularly true when worker participation is combined with improving the production system and manufacturing processes.[56]

Productivity is low where older craft methods predominate. Interestingly, differences in employees' basic skills failed to explain productivity differences. Leading-edge producers successfully transferred advanced manufacturing processes to facilities in the U.S., Germany, and Japan, even where skills varied. These transfers also tended to improve the production methods of local firms.

Table 9
Factors That Contribute To Labor Productivity By Industry
(Japan, Germany, and the U.S.)

(Influence of factor on labor productivity is: ●High, O Low)

	Type of Industry									
	Processed Food	**Beer**	**Steel**	**Metal Working**	**Cars**	**Parts**	**Consumer Electronics**	**Com-puters**	**Soap and Detergent**	**Average**
Output										
Product Mix, Variety, Quality	●	O	O	O				O	●	O
Production Factors										
Machinery, Equipment, Buildings	●	●	●	●	O	O	O			●
Scale of production	●	●	●	●					O	●
Firm Designed for Manufacturing				●	●	●	●	O		●
Labor Skills					O		O			
Raw Materials, and Parts					O					
Operation										
Capacity Utilization							O			
Organization of Functions and Tasks	O	O	●	●	●	●	●	O	O	●

Source: McKinsey, *Manufacturing Productivity*, Washington D.C., 1993, p. 2.

The competitive industries in the McKinsey study did *not* become highly productive first and then seek to export or to make foreign investments to exploit their cost advantages.[57] Their business plans were globally oriented at the beginning, *before* they confronted global industry leaders. These latter competitive pressures increased their productivity growth. For example, U.S. companies facing global competition either reformed operations (autos, steel and computers), permanently reduced operations (auto-parts manufacturers), or left the industry (consumer electronics): "U.S. companies exited from low value-added-per-hour-worker industries, but increased their productivity in other industries."

McKinsey found that U.S. production can be profitable if there is enough value-added during production to pay for the relatively higher wages.[58] However, low wages can offset the global competitiveness achieved by improved productivity,[59] and low-paid foreign workers are often nearly as productive as U.S. workers. For example, U.S. workers took 3.4 hours to produce a ton of steel, while Brazilian workers took 5.8 hours

in 1994, but the wage difference was 10 to 1: $13 vs. $1.28 per hour.[60] Increased productivity alone does not make up for lower wage costs (Table 10).

Table 10
U.S.-Brazil Labor Costs of Steel Production

Brazil	5.8 hours/ton	x	$1.25/hour in wages	x	100 tons	=	$ 725
U.S.	3.4 hours/ton	x	$13/hour in wages	x	100 tons	=	$4,420

Source: CRB using data reported in Table 11 below.

Table 11
Ranking of Hourly Labor Costs in Selected Countries (1994)

Country	Rate	Country	Rate
West Germany	$24.90	Singapore	$5.10
Former East Germany	17.30	South Korea	4.90
Japan	16.90	Hong Kong	4.20
United States	16.40	Hungary	1.80
France	16.30	Czech Republic	1.10
United Kingdom	12.40	China	0.50

Source: *Financial Times,* March 7, 1994

Wage-productivity relationships reinforce the notion that a competitive U.S. manufacturing strategy emphasizes workforce training, process improvements, and rapid product and process innovation tied to effective marketing and enterprise networking. Such an approach increases the knowledge-value added to the product, allowing a higher price, higher wages and the rapid creation and capture of market niches.

Increasing productivity without increasing market share can hurt employment. For example, substantial increases in European productivity have led to significant job losses because they were not accompanied by equally substantial growth in domestic or foreign markets. California's high value-added industries (such as electrical equipment and computers) have substantially increased exports but added proportionally fewer jobs due to productivity improvements. Other research shows that productivity improvements are not passed along to all workers.

An estimated 23 percent of U.S. exports involve multinational enterprises, which are not based in the U.S. In addition, international corporate clusters are emerging whose members are tied together by both equity (stock, for example) and other non-financial relationships. Non-equity relationships, such as joint ventures, represent an effort to reduce the risk associated with a rapidly changing global marketplace and to decrease product cycle time. A relatively small number of multinational firm networks (including suppliers) account for more than 25 percent of world productivity.[61]

To participate effectively in virtual transnational corporations, small firms need the capacity to pool their unique abilities. Local and global networks of small firms can enable the flexible expansion and contraction of manufacturing capacity, investment in research and technology, increased design and marketing capacity, worker training and other innovative activities. Numerous states and nations have successfully encouraged the development of small business networks.[62]

In summary, exporting manufacturers share unique characteristics:

- *Size*:
  Exporting manufacturers tend to be large and to have diverse and flexible overseas distribution and manufacturing networks. They are successful because of the complex way they are able to establish a local manufacturing presence that is a part of the whole, yet highly focused on a particular market. This permits them to dominate the market or a unique niche.
- *Business orientation and production performance*:
  - Smaller exporting companies develop business plans that include simultaneous development of both domestic and foreign markets. They have access to current foreign country product marketing and distribution information, and are not intimidated by the various regulatory, financing, and other requirements such as obtaining insurance.
  - Successful exporters are able to respond with rapidly evolving customer-based designs. They have shorter product life-cycles, use just-in-time delivery methods, and are continuously updating their production processes, workforce training, business practices, and organizational structures. These activities are increasingly taking place on the Internet.
  - High performance companies tend to be exporters but must also maintain their domestic share or risk being undercut by local low-performance competitors. Their productivity improvements are accompanied by expansion in both domestic and foreign markets.
- *Networks*:
  Participation in flexible global and domestic networks of suppliers, producers, and customers allows successful small exporters to gain access to larger global markets. Participation in these networks requires a high level of innovation, quality control and productivity.

GLOBAL TRADE: KEY FACTORS THAT AFFECT CALIFORNIA'S TRADE

Globalization is a process simultaneously affecting the firm and its individual employees. Tom Peters has diagramed how all of the various crosscutting factors link together (See Diagram 1, next page). The diagram shows just how complex these relationships are and how far they reach into the workplace and community. As Peters notes, winners and losers can include jobs, people, firms, industries, and by extension states. Competitive advantage requires important public investments in infrastructure and human capital.

Table 12
Possible Effects of Global Trade Interactions on California

Type of Global Interaction	Positive Effects	Negative Effects
Exports	Adds jobs and revenues to state businesses.	As firms widen export markets, they may move production abroad.
Export components to production-sharing partner abroad (maquiladoras in Mexico, for example)	May add high-wage jobs and supports other firms in supplier networks.	May move supplier production abroad. Loss of blue-collar jobs could result.
Import competition	In long term, may lead to worldwide expansion of markets.	May reduce revenue and employment for California firms.
Imported inputs to California manufacturers	Lower costs for California firms.	May be competition for a domestic supplier.
Foreign direct investment abroad by California firms	Adds revenues to state businesses, may add high-wage jobs and support other California firms.	May move blue-collar and technical jobs out of California to production-sharing partner abroad.
Foreign direct investment in California	May add jobs, improve technology, and increase supplier business.	May be another way for foreign firms to compete in U.S. markets, leading to loss of jobs.
Foreign direct investment in venture capital portfolios	Additional early and later stage capital for California firms.	Rapid changes depending on health of world's and California's economy.
Expanded business and consumer e-commerce activity and networks	Virtual corporations reduce space and time between companies, suppliers and customers. Could add supplier and service jobs.	Could reduce the number of both white-collar and blue-collar jobs, depending on cost of labor and technology. Could change market and sales strategies.
Exported or imported research findings from universities and small firms	Attracts multi-national firms and adds high-paying innovative jobs. Takes advantage of global R&D.	"Cherry-picks" California technology which could increase competition with state's industries.

Source: Partially based on Table 1 in Cynthia Kroll, *Foreign Trade and California's Economic Growth: A Summary of Findings and Directions for Policy*, Institute of Business and Economic Research, UC Berkeley, March 1998, p. 2.

Diagram 1:
Global Trade Network

Source: Tom Peters, "Prometheus Barely Unbound," *Academy of Mangement Executive*, Vol. 4, No. 4, 1990.

Multinational Enterprises

Multinational enterprises provide and control a very large portion of the world's trade and services. A significant portion of this trade flows among their supplier and service networks. More than 40 percent of U.S. imports, and 35 percent of U.S. exports, flow between parent companies and their subsidiaries.[63] As multinational enterprises move toward acquisition of firm-specific technological capabilities, they are tending to rely on extensive contacts and networking with external sources of expertise and innovation, particularly in smaller firms.[64] These relationships vary by industry and often by firm within an industry. Such differences are important to smaller suppliers and by extension to state programs that target different foreign trade industries and regions.[65] This implies a need for a high level of sophistication, agility and flexibility in California trade policy and programs, particularly since the state's businesses are closely linked to many varying multinational networks.

Trade networks are organized and controlled by an increasingly small number of multinational enterprises.[*] Five firms control more than 50 percent of the global market in the following industries: consumer durables, automotive, airlines, aerospace, electronic components, electronics, and steel. Another five firms control over 40 percent of the global market in oil, personal computers, and media.[66] The pace of mergers between multinationals increased dramatically in the 1990s; by dollar volume the seven largest 1998 mergers were the seven largest of all time.[67] These mergers further concentrate control of trade networks into fewer multinational corporations.

There are at least six types of multinational enterprises. They differ according to:

- The direction of movement of their products (from a foreign to a domestic economy is one example).
- The regional or global reach of their markets.
- The location of their research, production and other facilities.
- The type of product they produce, be it natural resource products, manufactured goods, or services.[68]

Resource-based multinational enterprises organize around the extraction of natural resources, or the growth of agricultural products and their processing, for sale in industrialized countries.

Export-oriented multinational enterprises maintain the preponderance of their production and research and development base in their domestic markets. They export high value-added products to other national markets, often through intra-firm trade. Typically, they establish final assembly, service, support, sales, and marketing operations abroad.

[*] During 1998, 12,523 mergers occurred between large firms, for a total impressive value of $1,679,622,200,000 concentrating many industries even more.

Regional multinational enterprises optimize their activities, including production, around a regional market, but have not yet achieved significant sales and operations outside their region of origin.

Transnational multinational enterprises have begun to locate production facilities globally, but still depend heavily on their domestic market and operations for their competitive position, economies of scale and scope, key production operations, and research and development. Often this takes place through formal production-sharing arrangements in various countries that depend on labor, transportation, market, and other costs. Intra-firm transactions, in which U.S. parts are assembled abroad and shipped back to the U.S., amounted to over $100 billion in 1997.[69]

Global multinational enterprises replicate much of the full value-added chain, including substantial product development and research operations, in more than one national or regional market.

Distributed multinational enterprises optimize the location of their sourcing, production, and research and development on a global basis. Trade transactions involving two or more unrelated U.S. companies or international strategic alliances have grown substantially in number since the late 1980s.[70]

Multinational corporations maintain similar cultural business practices in both their domestic and foreign operations. However, these distinctions are beginning to blur as the pace of international mergers accelerates, the level of resources shifts to foreign affiliates, and direct investment in foreign countries increases.[71] Cultural links to a multinational company's culture of origin can provide an important competitive advantage to small suppliers who wish to develop a networked relationship. For example, AnnaLee Saxenian finds that Chinese and Indian professionals in the computer industry in Silicon Valley have created networks that encompass their native countries, providing important benefits and economic relationships to each.[72]

International Manufacturing Production-Sharing

Production-sharing involves the distribution of production processes to different global locations based on inherent efficiencies (such as labor costs or skills), reduced cost of production inputs, or improved access to local markets. Typically, U.S. companies retain the research and development, and the capital-intensive production of parts or assembly, while outsourcing labor-intensive operations to a suitable foreign location. Such relationships require careful networking, rapid communications and production coordination, and excellent air and sea port facilities to achieve just-in-time parts delivery.

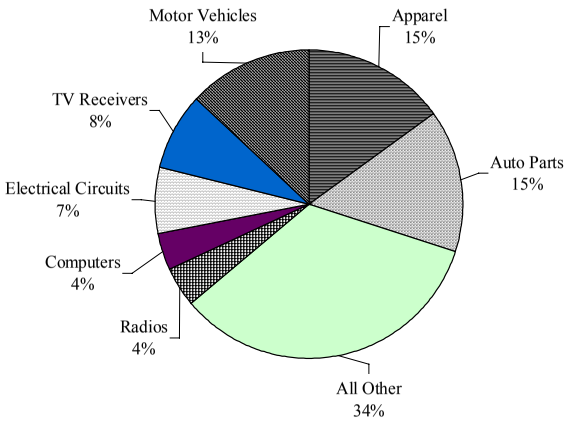
A significant proportion of U.S. imports of goods that are assembled or processed abroad include U.S.-made components or materials. In 1997, for example, an estimated $158.4 billion of total U.S. imports involved production-sharing.[73] Key California industries, including apparel and microelectronic components, accounted for the majority of U.S.

origin content used in foreign assembly operations. Official Mexican government "…statistics indicate that exports to the U.S. from assembly plants using imported materials…amounted to $76.4 billion in 1997, or 81 percent of total Mexican exports to the U.S."[74] In 1997, a third of these plants were U.S. owned. Assembly plants using U.S. parts accounted for over one-third of Canada's exports to the U.S. in 1997, 62 percent from the Dominican Republic, and 59 percent from Honduras.

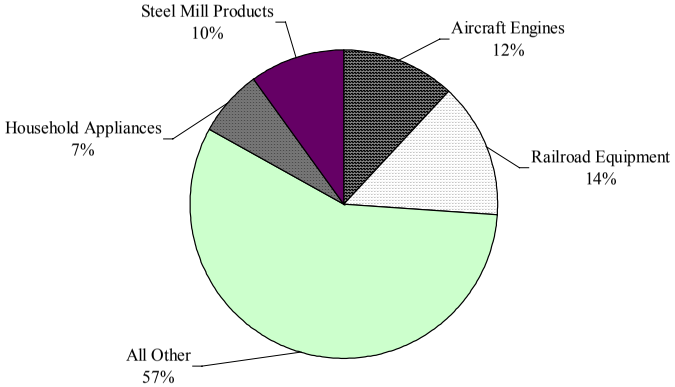
Chart 12 shows how production-sharing by industries is distributed around the world. In each case, a mix of local and U.S.-produced supplies and services are assembled to produce a product or assembly that is exported to the U.S.[75] The Chart also shows how various industries tend to concentrate their operations in a particular country or region.

Chart 12
Comparison of the Composition of U.S. Imports from Major Supplying Countries/Regions, 1997

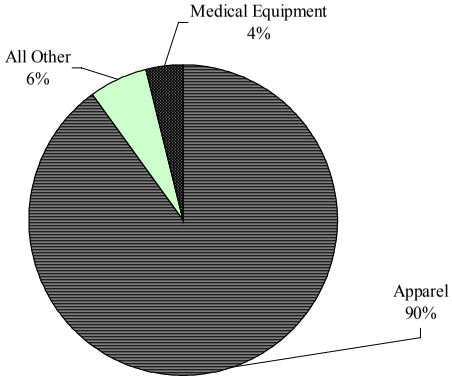
Mexico Total $28.8 Billion



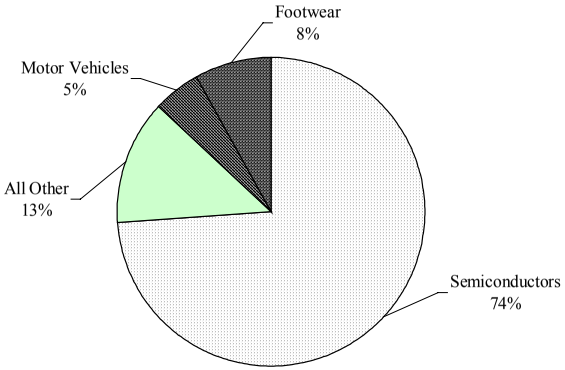
Canada Total $1.5 Billion



Caribbean Basin Total $7.2 Billion



Southeast Asia Total $10.1 Billion



North American Free Trade Agreement's (NAFTA) rules of origin require that key subassemblies, or a minimum portion of each product's inputs, be of North American origin. As a consequence, a number of multinational enterprises are switching from non-North American (particularly Asian) sources to U.S. suppliers for components used in Mexican assembly operations. Clearly, the influence of extra-national treaties like NAFTA and GATT have a profound influence on California's foreign trade and how parts and service provider alliances are entered into with multinational corporations. The state has a clear interest in positioning itself to influence how these treaties are developed and interpreted.

Multinational Enterprises and California Trade

Two case studies—one of the computer industry, and the other of food processing—illustrate how varied and complex trade and production relationships are for different industries and within industries.[76] Multinational enterprises can affect the way industries develop, and whether high-tech small firms survive or fail. Their impacts have important consequences for the state's foreign trade policy and program design.

Computer Firms

California computer firms earn a significant proportion of their income from exports and goods produced abroad. Firms in the U.C. study reporting that at least half their sales were from overseas sales had production facilities in other countries in 1997. A significant amount of the larger companies' foreign trade profits are made on goods produced abroad in Mexico, Brazil, Europe, India, China, Indonesia, Korea, Japan or Australia for overseas customers. In contrast, firms reporting *no* overseas production are more likely to be smaller fast growing firms who export to a particular market niche.

Foreign trade varies by specialized sectors in computer-related manufacturing. For example, software firms tend to keep product development in California but to locate disk duplicating and manufacturing overseas. Often this growth is accompanied by the acquisition of competitors or key producers in foreign countries. Firms in globally highly competitive sectors generally assemble their products in countries like Taiwan or Singapore, which have a good technical infrastructure and lower cost labor. Conversely, firms that assemble their products in California generally import a large number of components. According to Kroll and Kirschenbaum:[77]

> At one extreme, one manufacturer of components reported transshipments from foreign (company owned) production facilities equal to over 70 percent of the value of shipments. Most component manufacturers report foreign transshipments equal to 50 percent of shipments or higher. At the other extreme, none of the software firms whose annual reports we reviewed reported foreign transshipments. Computer manufacturers also showed significant levels of within-company foreign production inputs, while network manufacturers, like software producers, showed very low levels of foreign transshipments.

The software industry's foreign trade relationships and issues are very different from those of the hardware segment of the industry. Very little is actually known about the value of software exports, or about how the industry carries out its foreign trade. Given the rapid expansion of the Internet, the state could profitably improve its data to better understand these industries and their needs.[78]

Preserved Foods and Beverage Processing

Agriculture is an important part of California's economy. Food product exports amounted to $5.5 billion in 1997, ranking fifth after instruments, transportation equipment, industrial machinery and computers, and electronics.[79] Some specialty crops such as almonds, citrus, walnuts, prunes, and raisins have export levels well above ten percent of shipments. For example, the Sunkist cooperative exports approximately 40 percent of its products. Prune, walnut, and raisin growers export about 30 percent of their production.[*] In contrast, foreign trade accounts for only about ten percent of their annual revenues for most California based food-processing firms. This relatively small portion is attributable to the large domestic market that consumes California produce.

The majority of California foreign sales of processed foods are due to exports, rather than foreign production. Almost all foreign sales revenues are generated from domestic production. In a few cases, foreign production operations have been established by California firms to take advantage of specialized produce rather than low-cost labor or markets.[80] Conversely, in a few but important cases, entire sectors have moved out of California. For example, virtually all frozen broccoli production and a significant percentage of cauliflower production have moved into Mexico to take advantage of lower labor costs.

California's agricultural foreign trade is changing with the emergence of agribiotechnology[†] and the continued development of multinational corporate food research, production, processing and distribution networks. Multinationals produce and market about 95 percent of the food in the United States,[81] and the trend is toward greater concentration in the food industry.[82]

Sales of U.S. agribiotechnology products will grow from $285 million to an estimated $1.74 billion by the year 2005.[83] For example, in 1998, 30 million hectares worldwide were planted with genetically modified crops including more than one-half of the world's soybean harvest about one-third of world's corn harvest.[84]

California's agribusiness' production practices and foreign trade could change substantially with the emergence of new agribiotech-driven multinational enterprise networks. This change has important implications for Californian's export assistance and trade programs. These two state industries—biotechnology and agriculture—will

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[*] The firms included in this study accounted for about one-third of all food processing in California and for two-thirds to three-fourths of employment in the preserved foods and beverages processing sector. Most of the firms are family owned or are grower cooperatives.

[†] Agribiotechnology involves the application of genetic and other bioengineering techniques to the agricultural sector. Gus Koehler, *Bioindustry: A Description of California's Bioindustry and Summary of the Public Issues Affecting Its Development"* (*Sacramento,* California Research Bureau*,* April 1996).

increasingly merge together in the future. New organizational relationships between biotechnology-based seed production, farm management, food processing and distribution could dramatically affect California's family and cooperative farms, where and how foods are grown and processed, and the pattern of imports and exports. Ownership and distribution of seeds and much of the new agribiotechnology is concentrated in a few multinational enterprises, which hold the patents. Important changes in how farmers manage their fields accompany this concentration. For example, growers are not permitted, as they have been historically, to use seed from one crop to sow the next.[85] They must also set aside a significant portion of their land as insect pest preserves to slow down pest adaptation to the engineered crop.[86]

Information Technology

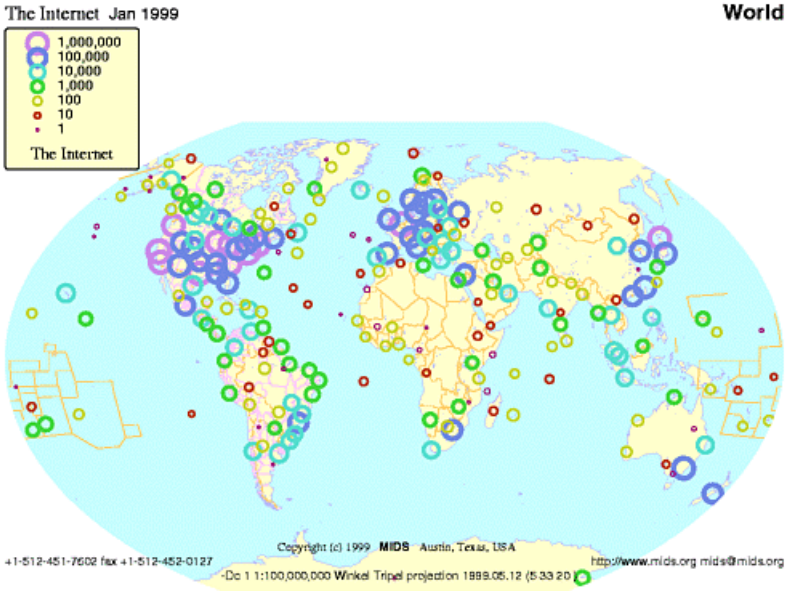
Telecommunications, and the computer software and hardware backbone used to conduct business over the Internet, is an increasingly important dimension of foreign trade. A recent Price Waterhouse/World Economic Forum survey reported that "nearly 80 percent of global CEOs…believe electronic commerce will reshape competition in their industries…CEOs in Europe and Asia believe that electronic commerce will have a more dramatic effect on their business than their counterparts in North America."[87] The survey also found that the surveyed companies "always" or "frequently" use the Internet to communicate with employees or to coordinate international operations. Fifty-six percent reported "always" or "frequently" using the Internet to communicate with customers, and 43 percent use it to market products.

Information technology improves connectivity between individuals and between all types of public and private organizations through a vast information infrastructure including cell phones, satellites, and the Internet. This infrastructure not only ties multinational firms together, but also permits the formation of global virtual corporations, very close ties between suppliers and customers in different locations, and the rapid movement of capital. "Electronic commerce is by definition global."[88]

Map 1, on the following page, shows the complex international structure of the Internet that supports global e-commerce. The larger circles represent the heaviest concentration of internet activity. The U.S. accounts for about 80 percent of worldwide electronic commerce, though that share will probably decrease in the future as the technology spreads globally.[89] Significant growth is occurring in Europe, Singapore, Hong Kong, Japan, Korea, and China. Singapore's leaders, for example, state that: "Our vision is to transform Singapore into a dynamic and vibrant global ICT capital with a thriving and prosperous Net economy by the year 2010."[90]

E-commerce's most significant immediate impact is on information-dominated sectors such as the postal service, communications, radio, and TV. Electronically delivered products are also changing software, travel services, banking services, entertainment and finance and on employee recruitment practices. Product distribution is moving rapidly to the Internet, sometimes competing with hometown storefront operations. Worldwide sales of both consumer products and business services over the Internet will be an estimated $300 billion to $1 trillion in the first decade of the twenty-first century.[91]

Map 1:
Internet Matrix Map, January 1999
(Largest circle represents the heaviest Internet activity)



Source: Matrix and Information Directory Services, Inc., Copyright 1999, (Austin, Texas). http://www.mids.org.

E-commerce is already generating intense price competition on a global scale because of ready consumer access to price information. Consumers can use "shopbots" (automated Internet shopper software) to locate a product's best price. New marketing approaches target specific consumer sectors worldwide, using tactics such as "versioning" (giving away free limited software editions of commercial products to entice purchase of more expensive systems), and loyalty programs (incentives given only to high volume customers).[92] In this electronic commerce environment, virtually any kind of information can reach individuals or be retrieved from them wherever they are in the world.[93]

Business-to-business exchanges and operations are likely to dominate e-commerce over the next five years. Reduced transaction costs and improved product quality and customer service will contribute to further growth, as will the need to follow competitors who go online and insistence by large businesses that their suppliers link into their e-commerce systems. For these reasons, business-to-business e-commerce is likely to have a significant effect on small- and medium-sized enterprises.[94]

E-commerce is changing production and supplier relationships, the nature of the goods and services themselves, and means by which goods and services are brought to market.[95] The result will have a profound impact on how California industry clusters are organized, including their global extension via the Internet, and on in-state employment.[96]

E-commerce is likely to replace traditional business hierarchies with looser inter-organizational structures. The accelerating volume of rich information exchanges across the globe suggests that relationships between suppliers and end-producers will become not only much less hierarchical but also more extended in space, and much more flexible

and short-term.[97] This is taking place as access to global telecommunications networks, and the formats used to send information over them, is becoming highly concentrated among a few multinational enterprises as they compete for position and merge with each other and with smaller companies to obtain needed technology.

Timing is of the essence if California business is to take advantage of its preeminent position in this new technology, posing a challenge to state trade programs. Europe is catching up with the U.S. and should be about even in its ability to exploit the Internet in four years.[98] Africa ONE is building a fiber optic ring around the entire coast of Africa, facilitating trade and investment.[99] As the world becomes more e-commerce driven, California firms can be first-movers and corner new markets in Europe, Asia, and Africa. The state's telecommunications, multi-media, and Internet industries are second to none in the world and could quickly move to take advantage of these opportunities. This appears to be a one-time opportunity given the "velocity" at which these developments are occurring.

Air and Seaports

Infrastructure investments are an important component of the state's competitive trade advantage. Air and seaports are critical to the rapid movement of goods and trade.[100] By *value* in terms of weight, most of California's international trade is shipped by air. By *volume*, most of California's trade is shipped by sea. Both air and sea port competitiveness are based on facilitating the delivery of time-sensitive, high value materials (such as electronic components) that must be transported quickly, or conversely, cost sensitive products (such as wood chips). The future competitiveness of seaports, which primarily handle cost sensitive materials, depends on infrastructure investments in harbor channel, crane and ship slip size, terminal productivity, and rail and truck access. Airports, which handle time sensitive high value-added shipments, are competitively dependent on airspace congestion, surface transport access, number of runways, and take-off restrictions.

International Capital

International finance flows quickly from one region to another and dramatically affects foreign trade.[*] In fact, the separation of trade from world financial policy has become entirely artificial.[101] Foreign direct investment decisions can help develop a region or contribute to its quick collapse, as in Asia in 1997 and the following hesitancy to invest in Latin America, Eastern Europe and Russia. For example, the exodus of capital from Brazil following Thailand's economic crash in 1997, cost the Brazilian government $10 billion overnight.

[*] Private overseas investment can take the form of portfolio investment or foreign direct investment in California firms. Portfolio investment is the purchase of bonds or bank holdings, and accounts for more than 60 percent of transactions flows into and out of the U.S. Foreign direct investment involves the ownership of ten or more percent of a corporation with the purpose of exercising an effective voice in its management. Foreign direct investment can also involve the purchase of technology, managerial expertise, plant facilities, real estate and the like. DeAnne Julius, *Global Companies and Public Policy; The Growing Challenge of Foreign Direct Investment* (London: Royal Institute of International Affairs, 1990).

Currency valuation struggles between nation states and speculators have recently taken place in several countries. Such manipulations can affect foreign direct investment. The World Bank and International Monetary Fund are debating the need to reform the world's current exchange system to minimize such swings.[102]

Increased competition and the challenge of identifying safe investments to achieve a high rate of return accelerates the rate of capital flow around the world.[103] These changes may affect the rate of foreign direct investment in California.

Global investment banking is important for financing foreign trade and is rapidly consolidating. This trend takes advantage of market restructuring, such as is occurring with the emergence of the European Union. Risk has increased and return on investment has decreased for global banks. International competition from various mutual and other funds investors is also driving these changes.

Efforts to reduce the risks and complexity associated with foreign direct investment have been initiated by the U.S. government and the Organization for Economic Co-operation and Development (OECD). According to the Western Governor's Association, several of the proposed actions in the Multinational Agreement on Investment could significantly reduce state government sovereignty, such as:[104]

- Limits on state laws in which the state directly subsidizes business, and on state procurement practices that favor state businesses.
- Limits on the ability of state governments to act as a market participant to help commercialize a technology to achieve a public good (recycling) or to close off a market (trade with South Africa).
- Limits on investment incentives and regulatory actions to control pollution or to promote economic development.
- Limits on job development and other requirements as a condition for receiving state investments.
- Limits on economic, land use, and environmental regulations.

Probably the most significant provision of the proposed Multinational Agreement on Investment is that it proposes to permit "…investors or their home governments to seek remedies directly against state laws through international arbitration or domestic courts and creates rights that are not now available to foreign investors through American statutes or case law."[105]

International Agreements and World Trade Regulatory Organizations

The federal government is involved in a significant number of initiatives with other nations and international organizations that will shape California's foreign trade for years to come. These include talks to stabilize the world financial system and to open world markets by participating in the World Trade Organization (WTO); ensuring full compliance with existing trade agreements such as GATT and NAFTA; strong enforcement of trade laws by bringing cases to the WTO for resolution; and laying the foundations for emerging technologies and global e-commerce. In addition, bilateral negations and regional trade agreements such as those being developed between Europe

and South America could have an important impact on California. Examples of U.S. initiatives include:[106]

- Negotiate a new "Information Technology Agreement II" to add products to those already covered under the first Information Technology Agreement, which currently protects intellectual property rights.
- Extend the OECD agreement not to tax electronic commerce.
- Address the intersection between trade and environmental policies to protect biodiversity and clean up the air and water.
- Support an International Labor Organization initiative for labor rights, labor law enforcement, and the elimination of child labor.
- Reduce agriculture tariffs, export subsidies and foreign domestic agricultural supports, and ensure that scientifically proven biotechnology can be used to develop products without trade discrimination.
- Enforce compliance with the intellectual property protection provisions of the Uruguay Round (GATT).

Some analysts contend that the once predominant role of national governments in setting and controlling trade relationships has decreased with the emergence of international trade agreements like the General Agreement on Tariffs and Trade (GATT), the North American Free Trade Agreement (NAFTA), the Biosafety Protocol to the United Nations Convention on Biological Diversity and the Multilateral Agreement on Investment.[107] It is also their view that international organizations like the World Bank, the International Monetary Fund, and the World Trade Organization have contributed to this redistribution of power and authority. The impact is particularly strong on state policy. For example, GATT and the proposed Multilateral Agreement on Investment have provisions that may weaken California's environmental, health and safety regulatory standards.[108] Other provisions could strengthen intellectual property rights, which are critical to the state's bioindustry and information intensive industries.

One of the most decisive developments for U.S. and California foreign trade is the emergence of global e-commerce.[109] The form that global e-commerce regulatory structures may take, raises important policy issues for California. A general outline of what foreign trade e-commerce regulatory structures might look like was developed during a recent Organization for Economic Cooperation and Development (OECD) conference on global electronic commerce. Quoting from the planning document:[110]

- Cooperation amongst all players (governments, consumers, business, labor, and public institutions), as well as social dialogue, must be encouraged in policymaking to facilitate the development of global electronic commerce in all countries and that their actions should strive to be internationally compatible whenever possible.
- Government should promote a pro-competitive environment to allow electronic commerce to flourish, work to reduce and eliminate unnecessary barriers to trade, and act where necessary to ensure adequate protection of key public interest objectives in the digital world just as they do in the physical world.

- Government intervention, when required, should be proportionate, transparent, consistent and predictable, as well as technologically neutral.
- Governments should recognize the importance of continued cooperation among business in setting standards, and in enhancing interoperability, within an international, voluntary and consensus-based environment.
- Business should continue to play a key role in developing and implementing solutions to a number of the issues essential for the development of electronic commerce, recognizing and taking into account fundamental public interests, economic and social goals, and working closely with governments and other players.

Critics of the OECD planning document are concerned that relatively unregulated global e-commerce between businesses could increase international labor exploitation. This point was also made during a recent Internet conference held by the World Bank and the International Labor Organization on the impact of information and communications technology (ICT) and the Internet on the global workforce.[111] According to this argument, the introduction, control, regulation, and optimization of the Internet should be subject to close scrutiny by trade unions, the state, and consumer and community groups in order to optimize its benefits for all stakeholders.

CALIFORNIA'S TRADE POLICY AND FOREIGN TRADE PROGRAMS

Historically, states have taken a chamber-of-commerce promotional approach to trade development. Trade shows and assistance for individual firms have been important programs. States have encouraged small firms to engage in foreign trade and offered opportunities to display their products, and/or services, at trade shows. This approach does not work well in today's changing, high speed, and complex global marketplace.

It is important to understand the economic, political and structural context of this new trade environment in order to develop a competitive state trade strategy and accompanying program structure. Foreign trade is competing directly for domestic market share and for lucrative relationships with large multinational prime contractors both here and abroad. In manufacturing, this competition involves the rapid exchange of information research, innovative prototyping of parts, high quality production, and just-in-time deliveries. Service industries are rapidly developing and distributing their information-based products over their own networks.

California is rich in the number of programs that support foreign trade activities. Five state government agencies manage ten foreign trade programs budgeted for $16.1 million in FY 1999-2000 (Table 13). The Trade and Commerce Agency is California's foreign trade lead agency and coordinates its activities with the Department of Food and Agriculture which manages agricultural exports. State trade resources are augmented by federal government agencies that operate ten local offices throughout the state. In addition, there are more than 52 local government and private sector trade-related organizations, not including many chamber of commerce efforts, in California.

Table 13 California State Foreign Trade Programs (FY 1999-2000)			
Agency and Program		**Funding ($1,000)**	**Description**
Trade and Commerce Agency			
	California Export Finance Office	$836	Export guarantees to banks to secure small business loans.
	California Office of Foreign Investment	637	Attracts direct foreign investment.
	Office of Export Development	1,710	Trade shows, "matchmaking," market data.
	Office of California-Mexico Affairs	537	Fosters trade with Mexico with matchmaking, etc.
	California Trade Offices	6,300	Trade shows, trade leads, market information.
Community Colleges and Trade and Commerce Agency			
	International Trade Development Centers	2,504	Helps firms become trade-ready, provides marketing and other information.
	Small Business Development Centers	2,529	Business, management, capital, marketing, sales, and other business assistance.
Dept. of Food and Agriculture			
	California Agricultural Export Program	300	Assists with export of goods and other agricultural products.
Energy Commission			
	Energy, Technology Export Program	485	Promotes export of energy efficient technologies.
Environmental Protection Agency and Trade and Commerce Agency			
	California Environmental Technology Partnership	256	Promotes environmental technology transfer.
Total:		$16,094	
Source: Agency and Department budget office or program.			

Recent History and Major Programs

In the 1980s and early 1990s, there were numerous efforts to develop a foreign trade program for California (see detailed time-line in Attachment 1). The World Trade Commission was established in 1982. Several studies examined how to consolidate the state's trade programs and analyzed if trade offices were necessary and where they should be located. The Lieutenant Governor proposed a state trade policy in 1986. Legislative trade committees were established and dissolved. Administratively, this activity culminated in the 1993 creation of the Trade and Commerce Agency, which absorbed the World Trade Commission and various foreign investment and foreign trade financing programs.

The California Trade and Commerce Agency has the following statutory trade responsibilities:[112]

- To develop a state economic development and trade policy and to report successes and needed improvements to the Legislature.
- To coordinate the various trade activities of the state, ensuring that funds are used "effectively and efficiently and that they foster the state's reputation as a source of high quality, cost-effective goods and services.…"
- To coordinate the various research, finance, export development, policy, and promotion programs that exist in State government.
- To coordinate the use of trade offices with any state export program, including those in the Department of Food and Agriculture, the Energy Commission and other agencies.
- To ensure that smaller and medium-sized firms have adequate knowledge about and access to overseas trade offices.
- To disseminate information through all of the trade offices on exporting California's environmental technologies.
- To "report to the Legislature on the activities and expenditures of the overseas offices and make recommendations for present and future offices, including recommendations for funding of these offices." This requirement includes responding in a timely fashion to the Legislature's requests for information about the trade offices and their operations.

The Trade and Commerce Agency received $467.3 million in state and federal funding in FY 1999-2000. Of this amount, $4.9 million was for international trade and investment, and $6.3 million was for foreign trade offices. The Agency may also solicit private funds, not to exceed $10,000 per donation, to promote international trade and investment.

Today, the California World Trade Commission serves as an advisory group to the Secretary of the Trade and Commerce Agency. Foreign trade activities are administered by the Agency's International Trade and Investment Division.[113] Programs include:

- The ***California Export Finance Office*** issues guarantees to banks to secure export loans for small- and medium-sized businesses. For example, the office guarantees up to 90 percent of a bank loan (not in excess of $833,000) for working capital to finance export transactions. The program claims that it works with over 100 financial institutions and tries to achieve a four-week turn-around time from application to commitment. It is budgeted at $836,000 for FY 1999-2000.
- The ***California Office of Foreign Investment*** provides economic information to foreign companies wishing to locate in the state. Local and state officials are regularly brought together on a team to help with this effort. Office staff members are encouraged to maintain expertise on some key state industries. The office claims to have assisted foreign corporations with investing nearly $1 billion in California's economy, creating some 5,000 jobs. It is budgeted at $637,000 for FY 1999-2000.

- The ***Office of Export Development*** has a FY 1999-2000 budget of $1.7 million, provides export-related assistance such as arranging or participating in international trade shows and trade missions, and offering "matchmaking" services for overseas buyer delegations and commercial visitors. The office identifies international contracts to be awarded by foreign governments and international institutions of interest to California businesses, publishes trade directories listing California manufacturers and suppliers active in foreign trade, and provides trade leads and market information.
- The ***Office of California-Mexico Affairs*** exists to foster favorable economic, educational and cultural relations with Mexican states bordering the U.S. It is budgeted at $537,000 for FY 1999-2000.
- ***California Trade Offices*** are operating in nine countries with an additional eight that have received funding but are not yet established (Table 14). Their mission is to provide access for California businesses to trade shows, help to guide California trade missions, develop trade leads, and provide specialized information about in-country trade. The total budget for FY 1999-2000 is $6.3 million.

California's Foreign Trade Offices

California currently has 15 approved trade and contract offices, an increase of three from 1998, of eight since 1995, and 11 since 1986.[114] Four of the authorized offices were not opened in FY 1998-99 (Shanghai, Calgary, Philippines, and Brazil). Additional contract offices were added this year in India, Singapore, Korea, and Argentina. The Brazil office was not funded in FY 1999-2000. The total fiscal year 1999-2000 trade office budget is $6.3 million; it was $5.5 million in FY 1998-1999, and $4.4 million in 1995. The average budget per office was $626,000 in 1995, $460,000 in 1998-99, and is projected to be $426,000 for FY 1999-2000. In FY 1998-99, staffing ranged from a high of 11 in Mexico City to a low of three in the Taipei, Taiwan office, for an average of six staff per office.

Table 14 Location and Budget of California Trade Offices for Selected Years				
Location	**1995 Budget (thousands)**	**1998-99 Budget (thousands)**	**1999-2000 (thousands)**	**1998-99 staff & State (S) or Contracted (C)**
Frankfurt, Germany	$635	$557	$584	5 - S
Hong Kong	798	895	876	6 - S
Jerusalem, Israel		50	50	1 - C
Tokyo, Japan	1,075	1,163	963	6 - S
Mexico City	896	983	1,079	11 - S
Johannesburg, South Africa	374	396	422	4 - S
Taipei, Taiwan	305	310	317	3 - S
London, UK	299	578	511	4 - S
Korea			200	C
Sao Palo, Brazil*		300		C
Shanghai, China*		300	296	C
Calgary, Canada*		150	143	C
Philippines*		150	158	C
India*			300	C
Singapore*			200	C
Buenos Aires*			300	C
Total	$4,382	$5,522	$6,399	
Source: CRB and Trade and Commerce Agency Budget Office. *These offices have been funded but not established.				

Over time various issues have arisen regarding the Agency's foreign trade offices. To summarize, the main concerns have involved the cost and effectiveness of the offices. Issues include:

- The lack of a state foreign trade policy.
- Where to locate foreign trade offices.
- The competency of state foreign trade office staff.
- The accuracy of cost-benefit estimates of office activities relative to potential alternative public investments.
- The ability to correctly qualify companies as being trade-ready and provide follow-up with local companies that are.
- The appropriate level of trade office staff pay and benefits.
- The value and purpose of state-sponsored foreign trade missions that include the Governor, agency chiefs, or Members of the Legislature.
- The appropriateness of private funding for state trade missions.

Many of these issues have been addressed in studies conducted by the Little Hoover Commission (1987), the Senate Office of Research (1993), and the California State Auditor (1996).[115] A budgetary crisis threatened the program in 1992, when the Assembly threatened to remove all appropriations because the Legislative Analyst had recommended against establishing new trade offices via budget bills, suggesting that they instead be created through legislation. The FY 1999-2000 Legislative Analyst Office budget review withheld recommendation on a $5.8 million appropriation for the state's foreign trade offices, contingent on receiving evaluation reports as requested in the Supplemental Report of the 1998-99 Budget Act.[116]

A historical review suggests that most trade offices have been established based on a varying mix of quantitative and qualitative factors related to political issues and constituency requests, rather than being guided by a comprehensive state trade policy. Both the Deukmejian and the early Wilson administrations resisted some legislative proposals to create new offices.

Critics interviewed for this study contend that many of the state's foreign trade program problems were exacerbated by the 1993 merging of the World Trade Commission with the Department of Commerce. They feel that this act significantly reduced the state's capacity to develop a coherent trade policy, led to the loss of expert management of the state's various foreign trade operations (including its foreign trade offices), and resulted in a generally disorganized state foreign trade system.

Fourteen bills were introduced in 1999 session that reflected continuing controversy over the state's foreign trade activities (Attachment 2). Of these bills, three proposed to establish new trade offices (Philippines, Argentina, and an unspecified location) or a special foreign trade office (Japan); eight propose either a state trade strategy or targeted rural or technology export strategies; and three bills mandate various studies of the trade offices and their effectiveness.

In 1998, the California State World Trade Commission issued a report, *Foreign Office Location Study,* which uses a quantitative method to determine where state trade offices should be located. If fully implemented, the study's recommendations could shift the criteria for establishing trade offices to a more empirical basis. The methodology examines the candidate country's market potential (size of the economy, market risk and growth potential, economic and social compatibility with California, tariff rates, stock market capitalization), various strategic factors (importance of the foreign trade office for overcoming language and other barriers, potential to be a regional trade hub), and political stability. The study found empirical support for existing office locations and recommended additional sites in Singapore, France, the Netherlands, Chile, and Argentina.[117] However, the analysis did not include key variables such as the value of California ethnic community ties to ancestral countries,[*] Internet and telecommunications development, research activities of interest to

[*] AnnaLee Saxenian, in her new study of immigrant entrepreneurs "… concludes that immigrant entrepreneurs in Silicon Valley create both new jobs and important economic linkages that are central to the continuing success of the California Economy." See: AnnaLee Saxenian, *Silicon Valley's New Immigrant Entrepreneurs* (San Francisco: Public Policy Institute of California, 1999), p. iv.

California, the potential for new supplier relationships with multinational enterprises, or the potential to participate in shared-production operations. It also did not disaggregate trade data in a way that would clearly show where the ultimate export product destination is. For example, a large volume of shipments pass through Singapore and the Netherlands on the way to other locations in the region but this fact alone does not mean that a state trade office should be located in either country. The World Trade Commission study did not survey exporters to determine their needs and priorities.[118]

The staffing and funding levels of California's foreign trade offices may be too small to accomplish their objectives. Robert Collier, Institute of Governmental Studies at UC Berkeley, contends that trade office funding is so small "…that it leaves many offices so understaffed and under funded that they are able to do little more than answer phones and faxes."

OTHER STATE FOREIGN TRADE OFFICE OPERATIONS

State foreign trade assistance programs generally seek to increase trade between in-state businesses (particularly small- and medium-sized businesses) and foreign nations, and to attract direct financial investment and new businesses. States do this primarily by providing information, export-related skills, contacts, and export funding. While there is general agreement on these goals, there is less agreement on how they should be carried out. More importantly the rapidly changing nature of global trade provides an incentive and opportunities to redefine priorities, objectives, and methods for accomplishing them.

In 1995, the vast majority (121) of state trade offices were located in 18 developed countries (Attachment 4). This is probably because the vast majority of world trade is carried out among economically advanced countries. In addition, advanced countries are most likely to have more foreign investment capital available and businesses to attract.[119] Data appears to show a recent and significant trend toward establishing additional trade offices in Eastern Europe, the Pacific Rim, and in Latin America.

The vast majority of foreign trade offices operated by other U.S. states were established in the 1980s and early 1990s (Table 14). In 1986, all 50 states had world trade programs, but only 31 states operated overseas offices. These 31 states had established, or were planning to establish, 69 trade offices in 14 foreign countries. The majority of states, including California, operated only two trade offices at the time.[120] State employees staffed most of the early operations, but since 1980, two-thirds of the offices have contracted with private trade specialists in-country for their operations.

The latest complete data on state trade offices (1997) reports that 39 states maintained at least one state-staffed or contract trade office, for a total of 158 trade offices:

- 70 percent (111) were contract offices,
- 25 percent (40) were staffed with state employees,
- The remaining 5 percent (7) used a mixed approach.[121]

Table 15
Year When State Trade Offices were Opened (1995)

Year Opened	Number of Offices	Number State Staffed	Number Contracted	Percent Contracted
1960-1969	5	2	3	60%
1970-1979	6	5	1	17%
1980-1989	32	10	22	69%
1990-1995	40	14	26	65%

Source: National Association of State Development Agencies, 1995. (Note: Only reporting states.)

California accounts for seven of the 40 state-staffed offices (Michigan and Ohio operate most of the rest).

More recent 1997 data reports that 38 states have 172 offices (and if non-reporting Oklahoma and Utah retained their 1995 offices, the total is 182). In addition, Minnesota, Montana and Nevada identified 27 "honorary representatives" who advise businesses but do not operate out of a trade office and are not under contract. Nearly two-thirds of the reporting state's trade offices operated under contract, 37 percent were staffed with state employees, and one office employed both state and contract staff.

The largest exporting states use a combination of state staff and contractors in their trade offices (Table 16). In addition, incomplete data for 1997 show that 15 states shared at least one trade office with another state (40 shared offices).[122]

Constraints on the appropriate staffing structure include the availability of trained state personnel, the number and type of industries that need to be represented, the number of countries requiring state attention, and the type and volume of trade with a particular country. States also consider the cost and availability of in-country consultants, and the opportunity to join regional state alliances.

Table 16
Six Top Exporting States and Types of Trade Office (1995)

State	Value of Exports in $Billions	Type of Foreign Trade Offices: *State Staffed (S) or Contract (C)*	
California	$92	7 - S	1 - C
Texas*	$45	–	4 - C
New York	$44	–	12 - C
Michigan	$37	4 - S	2 - C
Illinois	$30	2 - S	3 - S/C

*Note Texas eliminated all but its Mexico office in 1997.
Source: National Association of State Development Agencies, 1995.

There is clear evidence that state governments have not yet arrived at the best way to structurally organize and deliver foreign trade services.[123] Many state trade office programs have been reorganized more than once over the past 15 years (Connecticut, New York, Texas, Florida, and Maine are recent examples). Changes in administrations and varying perceptions on how to best organize and provide trade services account for much of this turbulence.

Organizational Structure of State Foreign Trade Offices

***Dedicated state foreign trade office*:** A state pays for office space and staffs it with state personnel. The office clearly represents the state and its Governor. This is the most expensive option (Table 17). A sufficient volume of businesses needing assistance must pass through the office to justify the expense. Potential problems include the expertise of office directors and staff. They may be political appointees and staff, who may lack language skills and industry-specific knowledge of the country, reducing this approach's cost-effectiveness.

***Dedicated and shared state foreign trade office*:** Two or more states share an office. Alaska, Hawaii, Idaho, and Oregon have entered into this relationship for at least one of their offices.

***Privatized dedicated state foreign trade office*:** Currently Florida, New Jersey, and Rhode Island are in the process of privatizing their foreign trade office programs. Their goal is to assure highly competent foreign trade expertise by holding the contractor to tight performance standards. All three state offices are at least partially dependent on public funding but are expected to become self-supporting in the future. One concern with this strategy is that charging fees to cover expenses could have a negative effect on an office's ability to serve small- and medium-sized businesses, a major target clientele of state programs.

***Consultants hired to deliver services in-country*:** Rather than maintaining an office, knowledgeable consultants are hired to develop leads and provide services in-country. As Table 17 shows, this is the least costly approach. In addition to saving overhead, only a portion of a consultant's time is contracted in a country with a low volume of trade. It may be possible to cover more countries using this approach. On the other hand, there is the potential for conflicts of interest. For example, the consultant might be allied to in-country service providers and financial groups and profit by bringing business to them. Anecdotal stories indicate that this may be a problem for some states that use consultants in Mexico. In addition, consultants may represent more than one state, which can also create conflicts of interest. A close focus on specific trade or financial investment skills might attract higher quality trade representatives.*

Table 17
Number, Cost, and Staffing of States Foreign Trade Offices (1995)*

	State Offices	Contract Offices
Number of states with:	15	29
Total number of offices	40 (3 per state)	111 (4 per state)
Average office budget	$384,000	$179,000
Average office staff size	3	2

*The data is only for states reporting complete data for each row.
Source: National Association of State Development Agencies 1995.

***Consultant networks within the state*:** The state contracts with local consultants who provide technical assistance to "export-ready" companies. These in-state consultants either use their own foreign contacts or work with the state's in-country consultants to make the deals. The Washington Local Trade Assistance Network uses this model. A second example, IC2, at the University of Texas at Austin, provides:

- Real time training for executives that are in the process of going global.
- A global technology incubator for foreign high-technology start-ups.

* For example, the Vice Consul Investment, British Consulate General, San Francisco, works for Ernst and Young, United Kingdom, where she is a member of the Inward Investment team.

- Training for Texas students in Japanese or other foreign business practices and internships abroad.
- Matchmaking to small firms and technology-oriented start-ups with foreign universities and firms.[*]

***State links to foreign chambers of commerce and other states in foreign nations*:** States that do not have foreign trade offices, such as Texas (which does maintain an intergovernmental relations office in Mexico), have developed direct links with foreign chambers of commerce and with the European Union to promote trade. Foreign nations also may provide trade options through special trade organizations such as JETRO (Japan External Trade Organization). The U.S. Commerce Department and the U.S. Chamber of Commerce also provide in-country contacts and information.

***Honorary consultants*:** Montana and Nevada name state residents who are knowledgeable about foreign trade in certain countries as honorary consultants. Their effectiveness has not been formally evaluated.

***In-state partnerships*:** Several states have joined with ports in their jurisdictions to promote exports (for example, Alabama Docks Department, and the Massachusetts Office of International Trade and Investment and MASSPORT). They may promote enterprise zones or foreign trade zones.

***Regional programs among states*:** The Mid South Trade Council seeks to minimize the expenditures of its member states by holding joint catalogue shows and export trade missions. The Council of Great Lakes Governors maintains foreign trade offices in Canada, Brazil, Chile, South Africa, and Argentina.

***Cross-border regional programs*:** The Pacific Northwest Economic Region has an international membership of five American states and two Canadian provinces, and helps to identify cross-border business opportunities.

Export services, no matter how they are delivered, are not necessarily provided free of charge. The maxim: "Exporting is worthwhile only if it is profitable; if it is profitable, assistance should be paid for" guides some trade-ready marketing programs.[124] A number of approaches are used to provide services to export-ready firms including: subsidized services on a sliding scale, fee-for-service with a matching fee, indirect subsidies, soft loans that only have to be repaid if exports occur, or matching funds. Historically, German, French and Italian chambers of commerce have limited their assistance and services to the export-ready. Sweden, Denmark, Italy, France, and Britain have used similar cost sharing approaches and moved away from completely subsidized services.

[*] Southern Growth Policies Board, "Technology-Centered Initiative Fosters Global Partnerships," C*learinghouse on State International Policies*, 9, no. 5 (June/July 1999), p.1.

Evaluations of State Foreign Trade Offices

It is difficult to evaluate state foreign trade offices in comparison to private contractors. State foreign trade assistance is typically directed at motivating and helping small- and- medium-sized business to export, regardless of their ability to pay. This is because large firms have often developed a trade capacity within their organizations. Many firms who seek state assistance may not actually be capable of exporting, yet must be served. In contrast, private trade consultants concentrate on export-ready firms who can afford their services. Measures of success also vary. State trade offices must often show high volume to justify their operations, while private consultants succeed when they earn a high profit from limited successful trade activity.[125]

Public sector trade offices may also be at a disadvantage relative to private consultants due to other factors: their location may have been selected in a haphazard way; the office may lack a marketing or business plan; clients may not be trade-ready; some offices may have a lower administrative priority than others, and some offices struggle with an inadequate staff and budget. Furthermore, in-state public and private trade activities are fragmented, compete with each other, and are often poorly linked to overseas trade offices.[126] Each of these variables makes it very difficult to compare state-staffed with private contract trade offices. Part of the problem in trying to assess the impact of state trade programs is one of scale. Helping single companies one at a time cannot have a dramatic effect on California's $100 billion a year merchandise export trade.[127]

A few empirical studies examine whether state government export promotion expenditures actually increase state exports and/or lead to more jobs. They arrived at conflicting findings:

- In 1987, Coughlin and Cartwright used economic modeling techniques to determine that state export promotion expenditures do increase exports, leading to additional jobs.[128] Their study found that a $1,000 increase in state export promotion expenditures resulted in a $432,000 increase in state-manufactured exports.
- A second 1987 study by the same authors found that every one percent increase in real exports would lead, on average, to a 0.21 percent increase in nonagricultural employment.[129]
- The Michigan Department of Commerce examined state assistance to exporters in 1989 and found that: "Many states have invested considerable resources in this area, and to date most of these programs are wallowing or failing."[130]
- A study conducted by Kudrie and Kite for the Hubert H. Humphrey Institute for Public Affairs in 1990 concluded that "an incomplete understanding of the impact of expenditures in one's own state and in others may be leading to quite a bit of 'shooting in the dark.'"[131]
- According to a 1990 study by Webster, Mathis, and Zech:

> Empirical testing revealed that in the aggregate the foreign export employment multiplier was almost five times larger than the domestic export multiplier. These findings offer support for states interested in shifting some of their scarce economic development funds to promote exports among manufacturers….[132]

- The U.S. Small Business Administration found that "Not only is it not possible to relate state export promotion activity to overall state exports, it is not possible to relate state export promotion activity to exports by those very firms which had been helped."[133]
- Turner found that "states which undertook more aggressive export promotion policies did worse than their less innovative competitors.…[S]tate export policy is probably best thought of as a compensatory strategy by states whose exports prospects are less favorable."[134]
- Work done by Johnson found little impact of state export promotion programs on state foreign trade. [135]

States have had problems with trying to develop an integrated public/private foreign trade system. Most often it has been the trade community itself, with the support of a state's governor, that has made the largest contribution to achieving a more coordinated network.[136]

A survey of small manufacturers' experiences with trade assistance (by the Kenan Institute of Private Enterprise at the University of North Carolina) found that:[137]

- Only 12-14 percent of exporters turned to state trade programs for basic information assistance.
- State programs reached about 20 percent of both small- and medium-sized exporters.
- Exporters who used a public or private export service rated private services as being the most valued and useful. State trade offices were the source of only about nine percent of the valued services.

A 1999 California Chamber of Commerce survey asked their members which resources they used to obtain trade assistance. The study permitted multiple check-offs and reported the following use pattern:[138]

- 38 percent industry/trade associations,
- 24 percent federal government resources,
- 14 percent state government programs,
- 12 percent national/state/local chamber of commerce,
- 6 percent local government,
- 6 percent World Trade Center.

According to a U.C. Berkeley study, "Only one firm [in their survey of the Bay Area computer industry and agriculture related firms] mentioned the California Council for

International Trade, while another made use of trade-related programs when smaller, but has no need for them as a large firm."[139]

These are very mixed findings. While most states have had foreign trade programs, it is unclear what the programs are intended to accomplish and what impact they may have. In most states there is minimal industry targeting, aside from sector-specific trade shows, and limited efforts to make small businesses more aware of the benefits of exporting. A 1992 overview of state export activities is worth quoting at length:[140]

> …[F]ew states have a clear sense of what these firms need or organize export assistance services to address those needs. The Urban Institute, for example, did a statistical analysis of export assistance programs in Illinois, which has a very large export promotion budget, and found virtually no difference between the export performance of firms that used state assistance and those that did not. The study concluded that the state had done little to understand the needs of the firms it hoped to help. Another assessment, of both state and federal export promotion programs, concluded that many appear to have been created without clear long-term goals, lack specific and thus measurable objectives, fail to target client groups carefully, and do not appear to be driven by felt needs. These overlapping programs, delivered by agencies lacking credibility with business, fail to incorporate the lessons of past experience and benefit from little or no evaluation of their effectiveness. The researchers concluded, "Often, high profile activities have prevailed over the high-yield activities.''

The Council of State Governments, in its 1997 overview of state trade policy, also stresses the importance of strategic services and targeted and measurable goals:[141]

> …[T]here is a growing trend for states and regional grouping with similar interests to work together. Joint trade missions, regional economic development initiatives and shared foreign trade offices are examples of this development. Similarly, states are looking to the private sector for assistance and partnerships, trying to reach critical mass by bringing the many actors in the international areas together. In some cases, states are looking across national borders for partners in the export and economic development race.…Unsuccessful programs are being scaled back or axed entirely.…And more and more, states are targeting specific markets where there is a clearly identified demand.

The International Trade and Investment Division of the California Trade and Commerce Agency publishes a yearly summary of its activities. In FY 1996-97, the Division stated that it facilitated "…over $1.22 billion in international business which in turn supported approximately 10,324 jobs for Californians," and in FY 1997-98 it claimed to have generated $1.93 billion in trade and foreign investment, supporting 4,000 jobs.[142] These estimates are derived from summing data from several sources:

- The value of purchase orders or letters of credit securing loan guarantees obtained with assistance from the Office of Export Finance;
- Company estimates of the value of export sales, generated primarily from attending a trade show or trade mission organized by the Office of Export Development;
- Company estimates of export sales and foreign investments in California that involved some level of assistance from a foreign trade office (Table 18).

Table 18
Trade and Commerce Agency,
International Trade and Investment Division
Estimated Foreign Trade Results for FY 1996-97

	Amount of Trade Generated ($Millions)	Number of Jobs
Office of Foreign Investment	$443.8	824
Office of Export Development	114.9	1,608
Environmental Export Program	76.3	1,068
Office Of California-Mexico Affairs	167.0	1,700
Export Finance Office	76.7	1,074
Taiwan Office	58.9	280
Israel Office	7.4	104
Mexico Office	315.5	4,403
Japan Office	3.8	53
Hong Kong Office	13.8	193
Europe Office	69.6	491
South Africa Office	3.4	125
Total for Foreign Trade Offices	472.9	5,654
Total for Division and Offices	1,226.2	10,324

Source: International Trade and Investment Division, California Trade and Commerce Agency, *Year in Review Summary*, Sacramento, 1998, pp. 3-16.

This data does not discriminate between contributions made by state programs and a firm's own efforts to make a sale. For example, a call by a trade office could have helped arrange a key meeting with the company following up with many hours of supporting activities to accomplish the sale or investment. An alternative accepted methodology, which compares a matched pair of firms that want to export (one receives state assistance and one does not), could clarify these results. Other weaknesses in the data include its reliance on post-trade show survey estimates, with no later follow-up to see if the jobs were actually generated. Company job estimates could be validated using Employment Development employer files, which would show any employment increases. A check similar to this was run by the California State Auditor, which found that companies participating in trade shows substantially overestimated job gains.[143]

A 1996 study by the California State Auditor found a lack of benchmarks and outcome measures by which to gauge the performance of the state's foreign trade programs and offices (Table 19). The greatest difficulties involved setting benchmarks for initiatives and measuring results, making it hard to determine how well the programs and offices were actually doing. Benchmarking and outcomes measurement issues appeared in the Agency's strategic plan developed in 1998.[144]

Table 19
California State Auditor's Review of the International Trade and Investment Division's Benchmarks and Performance Measures (1996)

	Did *Not* Establish Benchmarks For All Appropriate Objectives	Did *Not* Establish Benchmarks for Significant Objectives	Did *Not* Measure Results Achieved Against Benchmarks	Established Benchmarks that were too low.	Reported Results *Not* Related to Goals and Objectives
Office of Foreign Investment	x		x		
Office of Export Development	x	x	x		
Hong Kong Office	x	x	x		
Japan Office	x	x	x		x
Germany Office	x		x		
Mexico Office	x	x	x		x

Source: based on a study by the California State Auditor, *Trade and Commerce Agency: More Can Be Done To Measure the Return on the State's Investment and To Oversee Its Activities*, Sacramento, 1996, p. 13.

The Legislature has been concerned about the cost-effectiveness of the state's trade offices for several years. Language was included in the Supplemental Report of the 1998-1999 Budget Act requiring a report to Legislature by January 1, 1999, including:[145]

- Specified performance data for all the offices, including the number of private sector inquiries, the number of businesses served and types of assistance provided, and a breakdown of office income and expenditures.
- Performance measures (to be established by the Agency by July 1, 1998) that evaluate the performance of all the offices.
- By April 1, 1999, a report on the performance and rank of each foreign trade office.

In addition, the Legislature directed the Agency to (1) require all office directors to spend at least 75 percent of their time in the home country of their assigned office; (2) perform a cost-benefit analysis of each office to quantify its benefits; and (3) require office directors to possess prior international private sector experience with a major export

industry, as well as in-depth knowledge of the California economy and trade affecting California. As of September 1999, neither the Agency's Strategic Plan recommendations to establish benchmarks and measure them, nor the required report for the Legislature had been produced.

Other California Trade Programs

Trade and Commerce Agency foreign trade programs are part of a complex set of federal, state, local government, private sector, and international organizations that provide trade services to California businesses. These services are not integrated either loosely or formally into a statewide network, and only cooperate informally at the local level in some cases. Some programs offer similar assistance, resulting in confusing duplication of effort. These services concentrate their attention on small business, on the theory that large businesses have their own internal trade services. The following brief overview of some of the resources for small businesses includes federal, state, local and private, and international organizations.[*]

Federal Trade Programs

The federal government offers export assistance through a number of programs and locations. Examples of key programs include:

- U.S. Department of Agriculture, Foreign Agricultural Service
- Small Business Assistance Centers (six in California)
- U.S. Department of Commerce Export Assistance Centers (Long Beach and San Jose)
- Bureau of Export Administration Western Regional Offices (Newport Beach and San Jose)
- The U.S. Agency for International Development and the SBA have an international trade lead system accessible through the U.S. Department of Commerce centers.
- The Export Working Capital Program, a cooperative effort of the Small Business Administration and the Export-Import Bank, assists businesses to identify and obtain federal assistance for export financing.

Selected California State Government Programs

Small Business Development Centers (SBDC) provide basic foreign trade assistance at 45 locations throughout the state. The Trade and Commerce Agency and the California Community Colleges jointly manage about half of the centers, with the remainder managed by the Community Colleges alone. Some centers specialize in export assistance such as the Export Small Business Development Center in El Segundo (satellite offices in Ventura, El Monte, Santa Fe Springs and Long Beach). In addition, the Community Colleges have 14 centers for International Trade Development located in Chula Vista,

[*] Links to many of these programs can be found on the Trade and Commerce Agency's web site (http://commerce.ca.gov).

Ventura, Riverside, Glendora, Sacramento, Merced, Oakland, Saratoga, Oroville, San Mateo, Fresno, Torrance, and Long Beach. Several are co-located with SBDCs.

The Department of Food and Agriculture's California Agricultural Export Program promotes the export of foods and agricultural products. Policy and staffing decisions are coordinated with the Trade and Commerce Agency. Staff are co-located in the Trade and Commerce Agency's foreign trade offices in Hong Kong, Korea, Mexico City, and Japan.

The California Environmental Protection Agency and the Trade and Commerce Agency jointly manage the California Environmental Technology Partnership, which promotes environmental technology transfer in the global marketplace.

The California Energy Commission manages the Energy Technology Export Program. This program promotes and assists with the export of energy efficiency technologies.

Local Government and Private Sector Trade Organizations

Some California local governments actively promote international trade. For example, the San Francisco City and County Bay Area Minority Business Enterprise helps minority businesses to develop their exporting capabilities.

Numerous non-profit organizations provide trade assistance to California businesses including: BAYTRADE, the Foreign Trade Association of Southern California, the Monterey Bay International Trade Association, and Women in International Trade. There are at least 16 international trade associations in the state, including the International Business Association of Long Beach, the Mexico Women in World Trade, and the Valley International Trade Association.[*]

Private industry international trade associations support their members' international trade activities. California-based industry foreign trade associations include the California Dried Fruit Export Association, the British Academy of Film and Television Arts, Export Managers Association of California, International Seafarers Center, and the United Agribusiness League. In addition, international associations of support services that businesses to transport their products around the world including the Customs Brokers and Forwarders, the Pacific Transportation Association, the Propeller Club, and the Information System Agreement.

National organizations representing export industries (there are at least 37) include: the American Association of Exporters and Importers, the Committee for Small Business Exports, the Engineering Export Promotion Council, the International Traders Association, the Labor-Industry Coalition for International Trade, the Overseas Sales and Marketing Association of America, and the Small Business Exporters Association.

[*] The Federation of International Trade Associations lists many California non-profit associations at: http://www.fita.org/.

Foreign International Trade Offices in California

There are at least 15 bilateral chambers of commerce in California representing Asia, South East Asia, Australia, Belgium, United Kingdom, Germany, Hong Kong, Indonesia, Iran, Peru, and Singapore. Many countries, such as Germany and Japan, maintain consulates in California. Even the United Nations has a local trade office called Trade Point San Diego. The mission of the U.N. office is "to assist San Diego and Baja businesses in enhancing exports through electronic commerce solutions by linking them to the United Nations electronic network. Our ultimate goal is to support the United Nations in creating a centralized system of world trade, thereby enhancing global understanding through electronic commerce."[146]

ADMINISTRATIVE AND LEGISLATIVE OPTIONS

While not necessarily recommendations of the author, the Bureau or the Trade and Commerce Agency, the following are potential options for action. The options are meant to serve as a basis for dialogue.

Options are grouped under three categories:

1. *Developing a state trade policy and strategy.*

2. *Developing a state foreign affairs capacity.*

3. *Establishing a hierarchy of public-private services for small- and medium-sized firms to promote interest in trade, and to target marketing assistance to trade-ready firms.*

Develop a State Trade Policy and Strategy

It is time to rethink the state's foreign trade policy to align it with the emerging 21st century global trade system. California's nation-state size economy is challenged by major changes brought about by new global business and trade structures, regional treaties such as NAFTA and GATT, and the rapid development of e-commerce. Networked relationships within and between multinational enterprises and their parts and services suppliers are emerging. New California high-tech industries, such as biotechnology and e-commerce, have unique dynamics and needs. Even agriculture, a traditionally strong California business sector, is changing due to new technologies; agribiotechnology; distribution; and marketing systems. These complex, overarching and industry-sector specific changes cannot be successfully addressed by state programs using a generalized trade promotion approach.

A key option is that the state develop a comprehensive economic trade development strategy to address issues that are central to the dynamics of foreign trade, and define the state's role. The process developed by the Trade and Commerce Agency's Economic Strategy Panel, which focuses on regions and industries, offers a model for developing a state trade strategy.* Important issues include:

- How can the five state government agencies that manage ten state foreign trade programs best be coordinated with local, regional and federal in-state programs to create a collaborative, seamless, customer driven and agile foreign trade program?
- How might the state's foreign trade programs be changed into a flexible, responsive structure that innovates along with California's dynamic businesses? It would need, for example, to quickly anticipate and respond to global

* Carol Conway and William Nothdurft, in their book *The International State: Crafting a Statewide Trade Development System* (Boulder: Aspen Institute, 1996) provide a useful step-by-step approach for developing a state trade policy and vision and offer specific guidance for reinventing state trade programs, building a state foreign affairs capacity, and leveraging local public and private civic entrepreneurial capacity.

developments such as the recent collapse of the Asian economy, the emergence of e-commerce and changes in agribiotech.

- How might the state best design a data system to continuously chart the flow of exports/imports, analyze their significance for California industries and their employment structures, and disseminate that information to maximize the number of competitive firms and California jobs?
- How can the state best consider and communicate its interests in regional or international trade policy discussions that, for example, impact Internet and e-commerce standards, labor rights, environmental quality, and intellectual property rights?
- Should California join with other states or the Western Governor's Association in sovereignty-related regulation litigation associated with World Trade Organization? Should California jointly formulate and pursue policy initiatives, with other states relative to the North American Free Trade Agreement (NAFTA), General Agreement on Tariffs and Trade (GATT) and other proceedings that might affect the state's tax base, or state business competitiveness?[147]
- How might foreign direct investment best be attracted to the state?
- What shipping, air, and surface state infrastructure investment is needed to keep pace with the export and import requirements for the 21st century, including across the Mexican border?
- How will e-commerce-driven foreign trade affect California, and what can be done to rapidly increase the state's advantage as a "first mover" in emerging foreign e-commerce markets?
- What might be the state's role, in contrast to the private sector, to partner and prepare businesses to export, and to help export-ready firms to do so?
- What role might state trade offices, or other organized state efforts, play, and what is the most cost-effective model to staff the offices on a country-by-country basis?

Develop a California Foreign Affairs Capacity

Although the U.S. Constitution clearly reserves foreign relations to the national government, rulings by the Supreme Court over the last 100 years have expanded cross border state options. States may enter into voluntary, cooperative agreements with each other and reach agreements with foreign nations that are primarily consultative in nature. The primary goal of many such agreements is to create channels of communication.[148] For example, Texas has a state office in Mexico City to foster intergovernmental communication. Other nations, for example Korea, send key policymakers and administrators abroad for as many as two years so that they can be fully exposed to the government, culture and trade operations of key trading partners. These efforts provide the kind of depth needed at home and abroad to develop and carry out a successful trade policy.

- California's Mexico City trade office could be upgraded to a central communications link between state government and the Mexican government. Other important offices, such as London's, might merit similar upgrades to deal with a range of issues such as international finance.

- To coordinate strategy and execution, a "foreign affairs" research capacity and office could be created in the Governor's Office of Planning and Research.
- A one-year foreign trade executive exchange program could be established to provide long term experience to the state's trade policy development and implementation efforts. Key Trade and Commerce Agency officials could be sent to important trading countries that have vital industry cluster linkages to California. One year would provide sufficient time for a person to sharpen language skills, make personal contacts, and gain an understanding of the country's trade policy and structures important to California.

Reorganize State Trade Operations

Foreign trade is very important to the state's current and long-term prosperity. It may be time to reexamine what the state's trade policy should be and the best allocation of resources to accomplish it. The following are options to consider:

- Revitalize the World Trade Commission by creating a single, well-qualified forum of policymakers and professional staff. Commissioners and staff could be required to have significant international trade or finance experience. The Commission could also coordinate its work with the Trade and Commerce Agency's Economic Strategy Panel.[149]
- Focus state government trade-related programs on key regional industry clusters that could benefit from an intensified trade effort (such as biotechnology), or that are deeply embedded in emerging trade structures (such as information technology and multimedia). Trade offices could become industry promotion specialists. In-country contract consultants, under the direction of a state-appointed administrator and linked to specific California industry associations, might also be an effective organizational structure.
- Create a coordinating council of key decision-makers from the five agencies that have foreign trade programs, and ensure that any state strategy encompasses the full range of their responsibilities.

The following options focus on improving performance and enhancing the ability of policymakers and administrators to act quickly in response to changing economic opportunities and conditions. Performance measures and public-private partnerships are central themes.

- The Legislature has requested that the Trade and Commerce Agency specify performance targets and competitive benchmarks for the trade division and foreign trade offices. To facilitate the Agency's delayed response the Legislature could request the State Auditor and the California Research Bureau to assist the Agency. A regular assessment of state trade offices and their performance by an independent evaluator could also be useful.
- The World Trade Commission could improve upon its initial empirically-based method for determining state trade office location. Key variables might include measurements of global supplier networks, production-sharing, research capacity and needs of California firms, contacts between California's ethnic minorities and their home countries, and e-commerce.

- Trade offices could both respond to general trade inquiries and employ or contract with specialists to carry out specialized trade projects. For example, "Official State Trade Representatives" could be responsible for identifying and developing direct foreign investment opportunities and promoting strategic alliances with California supplier and manufacturing networks.[150] These contract trade representatives could also provide critical market intelligence. Possible locations include countries that are home to multinational enterprises (Japan, Korea, and Europe), and global financial centers (London and Hong Kong). They could also assist with marketing the capacity of California's export-ready manufacturing or service networks.
- The Trade and Commerce Agency could charge its International Trade and Finance Division to identify and develop partnerships with federal trade agencies. For example, a Memorandum of Understanding has been developed between California and the federal trade offices in Jakarta, Indonesia. Partnerships with other states could be developed, including co-ventures by sharing offices.
- The Trade and Commerce Agency could amplify and enhance its partnerships with local government and regional initiatives, and the government of Mexico, to facilitate development of cross-border regional partnerships, to support cross-border industry clusters, and to create mutually sustainable communities.
- The Legislature or the Governor could establish an "Office of Global E-Trade" in the Trade and Commerce Agency's International Trade and Finance Division. The purpose of the Office would be to position California's small- and medium-sized manufacturers and service providers to anticipate and take advantage of global e-trade opportunities as they emerge. The office could also develop expertise in e-commerce foreign trade opportunities and disseminate that information to state trade specialists and policymakers.

Develop Public-Private Services to Promote Foreign Trade and to Provide Market Assistance to Trade-Ready Firms

A well-crafted California trade strategy could balance export market development with promotional activities.[151] Export *promotion* involves generating interest among small- and medium-sized businesses in exporting, and participating in sponsored trade shows and other events that showcase products and services. *Market development* involves identifying or creating product niches (including those associated with e-commerce) and gathering the necessary market intelligence (data, personal contacts, distributors, etc.) to develop, protect and exploit them. Market development builds on promotional experiences and supports trade-ready firms as they look for new opportunities.

- The state could manage a limited number of high-profile promotional activities like the European Investment and Partnering Forums. It would not directly provide trade promotional services such as trade shows, but would instead provide grants to non-profits, trade organizations, and others for this purpose.
- The state would most effectively concentrate its export promotion resources on small-to-medium-sized trade-ready firms. Private industry consultants use objective methods to determine trade-readiness and standard industry practices could be adopted. Consideration should be given to charging a fee for the service.

Short-term loan or other options could be developed to help small firms obtain assistance.

- The Trade and Commerce Agency could maintain an inventory of organizations that specialize in trade assistance and direct businesses to their services. This might reduce duplication and improve efficiency.
- A cost-benefit analysis could be conducted by outside consultants for the Agency comparing existing public-private partnerships with state-based programs to see which strategy is most useful to address the same client mix.[152]

Market Development

- In order to cultivate "areas of influence" with specific foreign market segments, the state could focus on key California industries such as aerospace, space technology, biotechnology, agriculture, telecommunications, entertainment, and computers. This could require some organization on the part of industries. For example, the state could promote the formation of industry-cluster trade advisory groups to develop trade policy with customized marketing services. Such an approach would be particularly useful for groups of small and medium-sized manufacturers and service providers who could join together and compete for contracts with large multinational enterprises.
- The state could partner with the advisory group and networks and promote their activities in foreign countries by contacting and working with foreign chambers of commerce and industry organizations. Other more direct government-to-government relationships, such as with foreign state economic development agencies, are also possible.
- State trade officials could promote a "substitution strategy" to multinational enterprises to substitute California suppliers for foreign suppliers in their production processes or to meet their service needs.
- California's diverse ethnic groups could contribute significantly to the Trade and Commerce Agency's trade strategy by offering information on how to export to their ancestral countries. The state's trade offices could effectively leverage these contacts and information when negotiating with foreign-based multinational enterprises, or to work effectively with local marketing networks. Honorary in-state trade consultants might be named to take advantage of this expertise.
- Today's emerging industries often combine research and production resources in new ways. For example, Internet development merges companies that produce hardware, software, and software content. Typically, each industry is geographically separate from the other, often being located in other states or nations, yet they leverage each other's development. The Trade and Commerce Agency could facilitate regional efforts to cooperatively leverage regional diverse industry cluster components to improve overall trade competitiveness.
- The state could evaluate the importance of infrastructure investments in California's sea and air ports, telecommunications, rail roads and highways to improve business competitiveness, such as meeting the time and cost requirements associated with exporting and participation in e-commerce.

Capacity and Culture Building

- The state could provide matching grants to form public-private collaboratives (academia, business, and government), modeled after the University of Texas' IC2 program which trains executives, provides business assistance through a foreign trade incubator, and offers matchmaking services to small high-tech firms wishing to partner with foreign universities or firms.
- California students could be encouraged to learn foreign languages, such as Japanese, with the state offering internships to place students in trade-related activities abroad. Funding could come from a combination of state, local, foreign, and private sources.
- The Legislature could charge the Trade and Commerce Agency's Policy and Planning Division with the responsibility for tracking foreign commercial developments, including e-commerce, that might affect the state's economy. This information could be disseminated in short country-specific reports over the Internet.
- The Trade and Commerce Agency could coordinate in business development, manufacturing improvement, and other resources to help trade-ready companies meet international production and product standards. Such an effort could also support innovation and product development efforts to increase their competitiveness.

ATTACHMENT 1:
"CHRONOLOGY OF CALIFORNIA'S INTERNATIONAL TRADE EFFORTS"*

1978 • California Office of International Trade created.

1982 • AB 3757 (W. Brown) World Trade Commission legislation signed.

• Senate International Trade Conference held at UCLA (Roberti)

1983 • World Trade Commission established.

• Senate Office of Research hires trade specialist.

1984 • SB 1196 (Vuich) established Export Finance Program.

• AB 3313 (Moore) ordered a study of feasibility of overseas offices.

1985 • Assembly Subcommittee on International Trade, Investment & Tourism created.

• Mentor International Report issued on overseas offices.

• AB 1423 (N. Waters) creates Agricultural Export Promotion Program

• SB1121 (Garamendi) would have established offices in Tokyo & People's Republic of China (failed).

1986 • 1986 Creation of Senate Select Committee on the Pacific Rim.

• AB 2685 (Killea) a Tokyo office bill, later was amended to become the World Trade Reorganization bill.

• SB 1635 (Petris) and AB 3697 (Wright) were identical bills to establish a foreign office in Mexico City. Petris bill was vetoed. Wright bill was amended to create a task force to study the issue.

• Governor Deukmejian proposed $700,000 in 1986-87 budget for overseas offices in Tokyo and London.

• World Trade Commission established Trade Representative's Office in Washington, DC.

• California participated in first-ever World's Fair in Vancouver as result of AB 1450 (Killea: 1985).

• Assembly Office of International Relations created.

• Passage of SB 85 (Alquist) reformed California's unitary tax method and potentially provided additional long-term funding to state trade programs.

• Publication of an International Trade Policy for California by Lieutenant Governor Leo T. McCarthy.

1987 • Senate Office of Protocol and International Relations was established.

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* California Senate Office of Research, *Tapping New Markets: California's Role in Promoting International Trade*, September 1993.

- Assembly Committee on International Trade and Intergovernmental Relations created.
- SB 1154 (Alquist) formally established the Office of Export Development, created the $100,000 working capital revolving fund for the office, and called for the development of a five-year marketing plan.
- Opening of California office in Tokyo.
- Opening of California office in London.
- Little Hoover Commission Report on the organization and administration of California's overseas trade and investment offices.

1988
- California participated in second World's Fair in Brisbane, Australia, as result of SB 104 (Petris: 1987).
- SB 507 (Rosenthal) codified alternative energy export promotion program in the California Energy Commission.

1989
- Mexico City Trade and Investment Office opened.
- Joint Committee on International Trade created as a result of SCR 57 (Vuich, Roberti: 1989)
- Joint meeting of World Trade Commission and Joint Committee on International Trade on the organization of the state's international programs.
- Frankfurt Trade and Investment Office opened.

1990
- Hong Kong Trade and Investment Office opened.
- Then-Governor Deukmejian signed Executive Order D-84-90, which established a Coordinating Council for Trade and Investment (CCIP) to be chaired by the governor's trade representative.
- Publication of Mentor International assessment of the state's overseas offices.

1992
- Senate Special Committee on Global Competition and International Trade created.
- SB 1909 (Vuich), the Trade and Commerce Agency bill, signed.

1993
- Trade and Commerce Agency established.

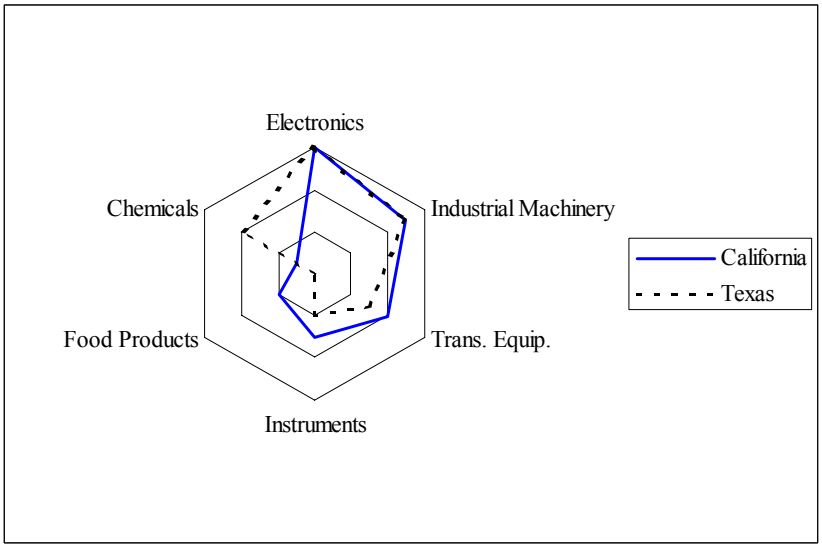
ATTACHMENT 2:
1999-2000 FOREIGN TRADE OFFICE RELATED STATE LEGISLATION

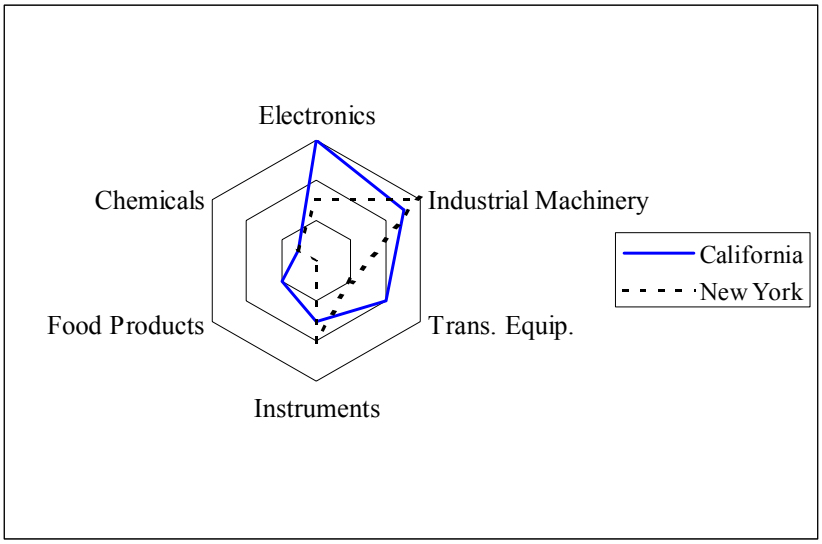
The following trade office related bills, including their current location identified in parenthesis were introduced during this session:

- **AB 175 (Pacheco) (Assembly)** would establish a trade office in Manila, Philippines.
- **AB 1619 (Havice) (Assembly)** would establish a trade office in an appropriate location in an unspecified location.
- **AB 61 (Cardoza) (Enrolled)** would enact the Rural Development Export Act of 1999 requiring the California Office of Export to develop and implement a Rural Export Strategy program.
- **AB 965 (Pacheco) (Assembly)** would establish the Technology Export Market Development Program to aid the export efforts of small- and medium-sized high technology businesses.
- **AB 1601 (Pacheco) (Senate)** would establish an Office of California-Japanese Affairs.
- **AB 180 (Wright) (Enrolled)** would require the Trade and Commerce to develop a statewide alliance of public-private trade development organizations.
- **AB 1615 (Havice) (Senate)** would require the Agency to coordinate and develop a state foreign trade policy and strategy plan.
- **SB 369 (Solis) (Assembly)** would require the Lieutenant Governor to convene a task force to develop a five-year Asia trade strategic exports plan.
- **AB 580 (Firebaugh) (Enrolled)** would require the World Trade Commission to conduct a California-Mexico trade relations study.
- **AB 1240 (Ashburn) (Chaptered)** would establish a California Central Valley International Trade Center.
- **AB 1616 (Havice) (Enrolled)** would require the Trade and Commerce Agency's Office of Economic Research to conduct an annual study of other state's tax and international trade strategies to attract and retain businesses.
- **AB 1617 (Havice) (Chaptered)** would require the Agency to review the state's international trade programs and to submit a plan for increasing the state's international competitiveness.
- **SB 897 (Polanco) (Assembly)** would require the World Trade Commission to engage an independent contractor to evaluate the state's overseas trade offices, and to make recommendations for increasing their effectiveness. The bill would also require that the director and professional staff members of a trade office meet certain professional and foreign language skills in order to be appointed.
- **AJR 37 (Lonville, Senator Baca)** would memorialize the President to not impose import restrictions on steel slabs.

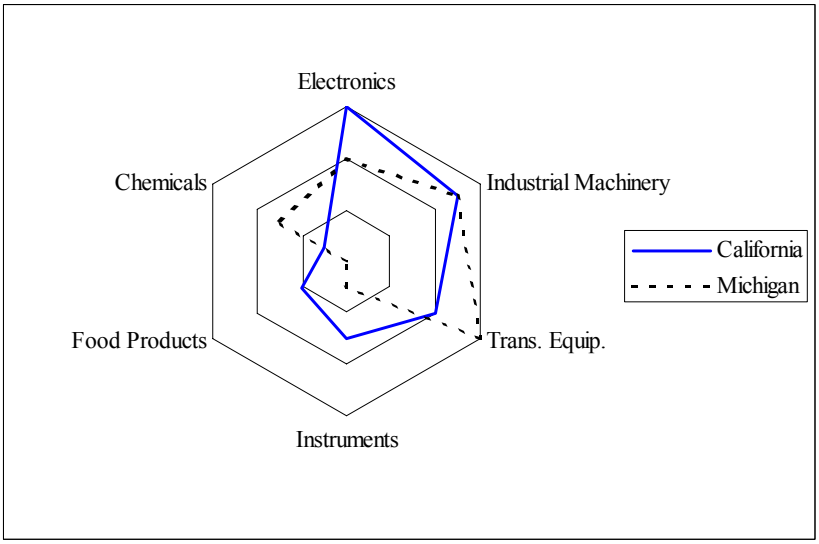
ATTACHMENT 3:
COMPARISON OF CALIFORNIA'S TOP SIX EXPORTS WITH OTHER KEY EXPORTING STATES

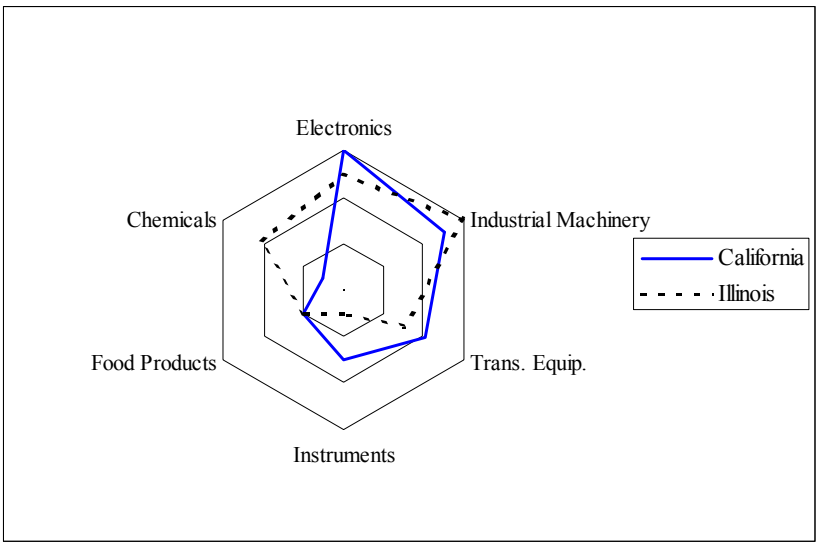
California's top six exports in rank order are: electronics, industrial machinery, transportation equipment, instruments, food products, and chemicals (traced in this order by the bold black line in the radar diagrams below). California's industry export rankings are compared with six other states for these industries (Texas, New York, Michigan, Illinois, and Washington). Comparing each state using the radar diagram provides unique competitiveness profiles.*

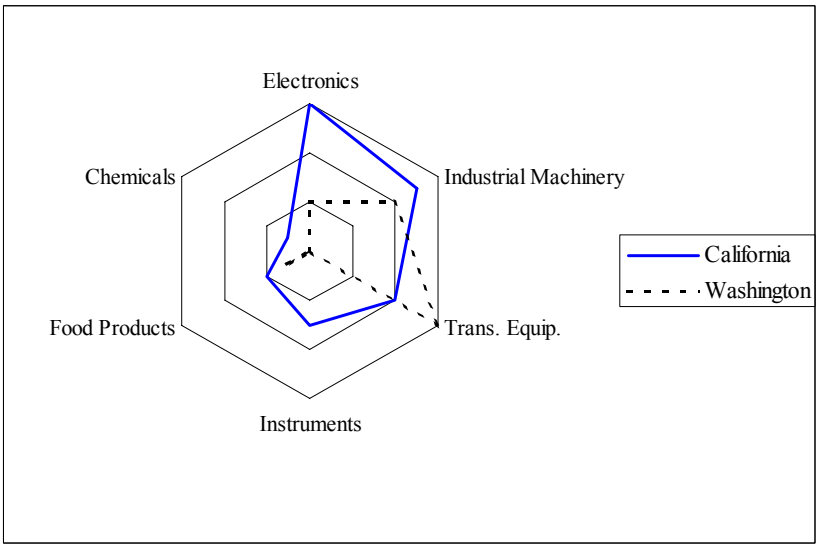




* The lowest rank of "0" is at the center of the radar image with each pointed end representing the next industry around the pentagon. The highest rank is on the outer edge. For example, California and Texas rank electronics exports highly but differ in their relative priority (not volume of trade) in chemicals, Texas giving it a higher ranking. Source: Office of Trade and Economic Analysis, International Trade Administration, Department of Commerce, Exporter Location Series, U.S. Census Burau.


Electronics
Industrial Machinery
Trans. Equip.
Instruments
Food Products
Chemicals
California
Michigan


Electronics
Industrial Machinery
Trans. Equip.
Instruments
Food Products
Chemicals
California
Illinois


Electronics
Industrial Machinery
Trans. Equip.
Instruments
Food Products
Chemicals
California
Washington

ATTACHMENT 4:
RANK ORDER OF COUNTRIES WITH U.S. STATE FOREIGN TRADE OFFICES OR OTHER REPRESENTATIVE FOR 1995 AND 1997

	Number of Offices 1995	Rank 1995	Number of Offices 1997	Rank 1997
Japan	32	1	31	1
Mexico	24	2	27	2
Taiwan	18	3	14	3
Germany	15	4	16	4
Korea	13	5	14	3
Belgium	10	6	9	7
Canada	10	7	10	6
Hong Kong	8	8	6	10
England	6	9	11	5
China	5	10	3	13
Israel	3	11	6	10
Netherlands	2	12	2	14
Australia	1	13	2	14
Brazil	1	13	8	8
Chile	1	13	4	12
France	1	13	2	14
Malaysia	1	13	2	14
Singapore	1	13	5	11
Argentina	0		2	14
Indonesia	0		1	15
Poland	0		1	15
Norway	0		1	15
Russia	0		1	15
Sweden	0		1	15

Source: National Association of State Development Agencies, 1995 and 1997.

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