



**Economic Development
Alliance For Business**

*Building Resources,
Businesses & Quality Jobs*

**EAST BAY INDUSTRY
& CLUSTER
ANALYSIS
1995-1999**

Cluster and Industry Analysis—East Bay

Page 1

- Environmental Technology Cluster Analysis and Data
- Healthcare Technology Business Cluster Analysis and Data
- Multimedia Technology Cluster Analysis and Data
- Motion Picture/Television Industry Cluster Analysis and Data
- Telecommunications Services Cluster Analysis and Data
- Computers/Related Electronics Industry Cluster Analysis and Data
- Food Processing Cluster Analysis and Data
- East Bay Industry Cluster Chart Analysis and Data
- East Bay Industry Employment Chart Analysis and Data
- East Bay Number of Businesses by Industry Chart Analysis and Data

Cluster and Industry Charts—East Bay

Page 16

Cluster and Industry Charts—Alameda County

Page 24

Cluster and Industry Charts—Contra Costa County

Page 32

Cluster and Industry Charts—Alameda County Sub-Regions

Page 40

Cluster Analysis by EDAB

Prepared by: Patrick Foudy, Jessica Liu, Jason Waller

Data Source: Employment Development Department, State of California



**Economic Development
Alliance For Business**

*Building Resources,
Businesses & Quality Jobs*

**EAST BAY
CLUSTER ANALYSIS
AND DATA**

Environmental Technology Cluster

The Environmental Industry Cluster in the Bay Area includes companies that commercially sell products and services that mitigate or prevent detrimental effects in the current and future environment.

Difficult to define and track, the environmental industry in the Bay Area is estimated to include about 1,200 companies employing 13,000 people. The cluster is comprised of both service and product sectors. While the services sectors dominate, the product sectors are growing. Key service sectors include waste management, recycling, consulting/engineering, and analytic services. Key product sectors include environmental instrumentation, waste management equipment, control/monitoring equipment, and treatment/abatement equipment.

The cluster is supported by an economic infrastructure that includes research organization, education/training institutions, specialized business services, environmental advocacy organization, regulatory agencies, and the media.

New Organizations in Bay Area that support this industry have recently been established: Alameda Center for Environmental Technology, Bay Area Economic Forum's Environmental Technology Project, and the Silicon Valley Environmental Partnership.

Cautious optimism should prevail regarding the future of the environmental industry in the Bay Area. No other industry owes as much of its "raison d'être" directly to government legislation and regulation. In the past, a steady succession of legislation and regulation fueled double/digit annual growth. The 1990's brought dramatic slowdown due to recession and over capacity. The industry is now in the midst of a major paradigm shift: from "clean up" the "sins of past" to treatment and prevention.

Opportunities for future growth will require addressing some key industry needs: reduced market fragmentation, funding for technology demonstration, technology certification programs, incentive-based regulation, networks to promote partnership, reformed public procurement processes, low-cost manufacturing space, accelerated base clean-up, training linked to real jobs, and access to research.

Nevertheless, building on the Bay Area's rich technical base and unique demands, this region could become a global center of excellence in areas like environmental instrumentation, pollution prevention (equipment, material, processes), toxic management, waste reduction and reuse, and water conservation and reclamation.

Environmental industry linkages to closing military bases include a few select opportunities: targeted land reuse for low cost environmental facilities; use of base clean-up to stimulate the local remediation industry; increasing environmental retraining program opportunities for displaced military workers; and finally, using the military facilities as focal points for technology demonstrations and commercialization.

**ENVIRONMENTAL TECHNOLOGY CLUSTER
EMPLOYMENT**

| ENVIRONMENTAL TECHNOLOGY | | | | | | | | | | | | |
|---------------------------------------|------|------|------|------|------|------|-------|--------|--------|--------|--------|--------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Analytical instruments | 3826 | 128 | 108 | 144 | 255 | 551 | 10 | 12.8 | 10.8 | 14.4 | 25.5 | 55.1 |
| Industrial instruments | 3823 | 917 | 801 | 857 | 644 | 865 | 20 | 183.4 | 160.2 | 171.4 | 128.8 | 173 |
| Misc. service industry machinery, nec | 3589 | 152 | 184 | 216 | 217 | 213 | 10 | 15.2 | 18.4 | 21.6 | 21.7 | 21.3 |
| Laboratory apparatus and furniture | 3821 | 11 | 16 | 18 | 21 | 13 | 15 | 1.65 | 2.4 | 2.7 | 3.15 | 1.95 |
| Blowers and fans | 3564 | 235 | 196 | 224 | 232 | 59 | 50 | 117.5 | 98 | 112 | 116 | 29.5 |
| | | | | | | | Total | 330.55 | 289.8 | 322.1 | 295.15 | 280.85 |
| | | | | | | | : | | | | | |

| ENVIRONMENTAL SERVICES | | | | | | | | | | | | |
|------------------------------|------|------|------|------|------|------|-------|---------|---------|---------|---------|---------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Sanitary services, nec | 4959 | 550 | 464 | 485 | 588 | 835 | 75 | 412.5 | 348 | 363.75 | 441 | 626.25 |
| Engineering services | 8711 | 7096 | 7100 | 7276 | 6956 | 7578 | 7 | 496.72 | 497 | 509.32 | 486.92 | 530.46 |
| Testing laboratories | 8734 | 1002 | 1123 | 992 | 1271 | 1596 | 40 | 400.8 | 449.2 | 396.8 | 508.4 | 638.4 |
| Commercial physical research | 8731 | 4433 | 4523 | 4910 | 5010 | 4848 | 5 | 221.65 | 226.15 | 245.5 | 250.5 | 242.4 |
| | | | | | | | Total | 1531.67 | 1520.35 | 1515.37 | 1686.82 | 2037.51 |
| | | | | | | | : | | | | | |

| WHOLESALE TRADE | | | | | | | | | | | | |
|---------------------------|------|------|------|------|------|------|-----|--------|--------|--------|--------|--------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Scrap and waste materials | 5093 | 1788 | 1704 | 1756 | 1919 | 1895 | 100 | 1788 | 1704 | 1756 | 1919 | 1895 |

Total Environmental: 3650.22 3514.15 3593.47 3900.97 4213.36

Healthcare Technology Business Cluster

The health care technology cluster is one of the fastest-growing set of industries in the Bay Area, more than doubling in size since 1986. It is comprised of three driving sectors: biotechnology, medical devices, and pharmaceuticals. Biotechnology and medical devices each constitute about one-third of cluster employment with pharmaceuticals and miscellaneous support sectors employing the remaining one-third of workforce. The cluster is widely dispersed across the Bay Area.

It is supported by an economic infrastructure that includes the following major elements: universities and other research institutions, venture capital, higher education including community colleges and private training, specialized construction, engineering, legal and accounting services, other professional services, and the Bay Area Bioscience Center.

Key forces shaping the cluster include the following: uncertainties in R&D financing and government regulations, pressures for cost containment and national healthcare reform, changing demographics in the marketplace, the growing need for specialized workers; and opportunities for new health care applications of technologies that are Bay Area strengths.

Opportunities for growth are as follows: continued close cooperation with local universities and colleges; competitive environmental regulations; timely local and federal permitting; access to reasonably priced land for expansion; opportunities for regional networking; and supportive federal policies. The key issues faced by the health care technology industry include an uncertain investment climate and federal regulatory backlogs on medical service applications.

The next decade will be a transition period, as many companies now in the R&D stage move into manufacturing and add employment. The Bay Area can support and benefit from this transition.

The merging of new technologies and biological/medical sciences will likely produce a wealth of new product opportunities in the years ahead. The Bay Area has a rich mix of leading electronics and information technology companies and establishes leaders in scientific research on which to build.

The growing pressures for cost containment will put increasing value on products and services targeted at health promotion and disease prevention. The Bay Area has a strong foundation of companies focusing on cost-saving technology applications on which to build – including diagnostic and health monitoring devices.

Three key areas may link this industry to closing military bases: use of available military land for manufacturing within close proximity to biotechnology R&D efforts; specialized incubator and other facilities for start-ups; use of military bases and focal points for partnering the region's scientific and technology strengths.

**HEALTHCARE TECHNOLOGY BUSINESS CLUSTER
EMPLOYMENT**

| PHARMACEUTICAL | | | | | | | | | | | | | |
|-----------------------------|------|------|------|------|------|------|-------|--------|--------|--------|--------|--------|--|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp | |
| Medicinals and botanicals | 2833 | 308 | 310 | 325 | 301 | 290 | 100 | 308 | 310 | 325 | 301 | 290 | |
| Pharmaceutical preparations | 2834 | 1436 | 1429 | 1499 | 1529 | 1647 | 100 | 1436 | 1429 | 1499 | 1529 | 1647 | |
| Diagnostic substances | 2835 | 314 | 40 | 522 | 511 | 444 | 100 | 314 | 40 | 522 | 511 | 444 | |
| | | | | | | | Total | 2058 | 1779 | 2346 | 2341 | 2381 | |
| | | | | | | | : | | | | | | |

| MEDICAL DEVICES | | | | | | | | | | | | | |
|--------------------------------------|------|------|------|------|------|------|-------|---------|---------|---------|---------|---------|--|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp | |
| Special industry machinery, nec | 3559 | 2245 | 3887 | 3500 | 3125 | 3452 | 3 | 67.35 | 116.61 | 105 | 93.75 | 103.56 | |
| Radio and TV communication equipment | 3663 | 761 | 732 | 670 | 746 | 1327 | 4 | 30.44 | 29.28 | 26.8 | 29.84 | 53.08 | |
| Electric Components, nec | 3679 | 1232 | 1726 | 2027 | 3099 | 2873 | 3 | 36.96 | 51.78 | 60.81 | 92.97 | 86.19 | |
| Surgical and medical instruments | 3841 | 1115 | 1035 | 1601 | 1958 | 1832 | 100 | 1115 | 1035 | 1601 | 1958 | 1832 | |
| Surgical appliances and supplies | 3842 | 497 | 595 | 585 | 631 | 466 | 80 | 397.6 | 476 | 468 | 504.8 | 372.8 | |
| Electromedical equipment | 3845 | 128 | 95 | 190 | 118 | 107 | 100 | 128 | 95 | 190 | 118 | 107 | |
| | | | | | | | Total | 1775.35 | 1803.67 | 2451.61 | 2797.36 | 2554.63 | |
| | | | | | | | : | | | | | | |

| BIOTECHNOLOGY | | | | | | | | | | | | |
|--------------------------------------|------|------|------|------|------|------|-------|--------|--------|--------|---------|---------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Biological products exc. Diagnostics | 2836 | 21 | 46 | 50 | 35 | 50 | 100 | 21 | 46 | 50 | 35 | 50 |
| Analytical instruments | 3826 | 128 | 108 | 144 | 255 | 551 | 25 | 32 | 27 | 36 | 63.75 | 137.75 |
| Medical Laboratories | 8071 | 1398 | 1355 | 1325 | 1232 | 1247 | 100 | 1398 | 1355 | 1325 | 1232 | 1247 |
| Commercial physical research | 8731 | 4433 | 4523 | 4910 | 5010 | 4848 | 30 | 1329.9 | 1356.9 | 1473 | 1503 | 1454.4 |
| | | | | | | | Total | 2780.9 | 2784.9 | 2884 | 2833.75 | 2889.15 |
| | | | | | | | : | | | | | |

**Total Healthcare
Tech: 6614.25 6367.57 7681.61 7972.11 7824.78**

Multimedia Technology Cluster

The multimedia cluster is defined broadly as the creators, producers, and distributors of the software and hardware that integrate video, sound, text, and graphics to produce a multimedia product or service. An estimated 62,000 people representing more than 2,200 firms are engaged in multimedia-related activities in the Bay Area.

These jobs pay 38% more than the average Bay area salary.

The four major components of the cluster include technology companies, multimedia developers, content providers and a specialized economic infrastructure that includes research labs and related professional service providers.

Each of the nine Bay Area counties contributes uniquely to the region's multimedia cluster.

North Bay counties have high concentrations of printing, publishing, and motion picture production. East Bay counties thrive on computer programming and software development. San Francisco boasts art and graphic design, printing and advertising.

Silicon Valley is home to computers, semiconductors, and software.

Multimedia cluster growth will require employees with experience and skills in film and video production, digital assembly and animation. Technical barriers to industry advancement include the elimination of incompatible multimedia platforms and the reduction of data volume.

It is expected to grow due to new applications of recent technological advances that have yet to be applied and incorporated widely into the multimedia industry, and increased uses and development of telecommunication technologies, specifically the internet, cable television, and telephone lines. The future development of the industry will involve seeking and obtaining unique content expertise; developing relationships across public, private, and non-profit domains.

A significant strength of the Bay Area is its concentration of technology-related services, specifically in the area of digital post-production leveraging synergies with Silicon Valley firms. An additional strength is the high concentration of firms in the graphic arts and education field, a growing activity within this cluster. Other industries are expanding their use and demands for film and video production, including sports broadcasting and national advertising.

Potential linkages to military bases include job opportunities for former military programmers; base facility use for multimedia centers; and use of military communications infrastructure for multimedia activities.

**MULTIMEDIA TECHNOLOGY
CLUSTER**

| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 |
|---------------------------------------|------|--------------|--------------|--------------|--------------|--------------|
| Miscellaneous publishing | 2741 | 424 | 463 | 529 | 497 | 528 |
| Commercial printing, lithographic | 2752 | 1819 | 1848 | 1998 | 2166 | 2246 |
| Commercial printing, nec | 2759 | 2288 | 2421 | 2432 | 2474 | 1548 |
| Electronic computers | 3571 | 1122 | 948 | 839 | 855 | 2765 |
| Computer storage devices | 3572 | 427 | 391 | 457 | 456 | 934 |
| Computer terminals | 3575 | 224 | 281 | 272 | 277 | 123 |
| Computer peripheral equipment, nec | 3577 | 1873 | 2394 | 2451 | 3561 | 1987 |
| Household audio and video equipment | 3651 | 302 | 370 | 229 | 229 | 248 |
| Prerecorded records and tapes | 3652 | 460 | 1221 | 946 | 713 | 607 |
| Telephone and telegraph apparatus | 3661 | 573 | 980 | 1169 | 1668 | 2344 |
| Radio and TV communications equipment | 3663 | 761 | 732 | 670 | 746 | 1327 |
| Communications equipment, nec | 3669 | 685 | 554 | 572 | 391 | 289 |
| Magnetic and optical recording media | 3695 | 1395 | 1476 | 1799 | 1881 | 923 |
| Advertising agencies | 7311 | 834 | 1193 | 657 | 798 | 874 |
| Photocopying and duplicating services | 7334 | 795 | 755 | 1079 | 1050 | 951 |
| Commercial art and graphic design | 7336 | 443 | 502 | 477 | 547 | 713 |
| Computer programming services | 7371 | 3594 | 4061 | 4771 | 5731 | 9036 |
| Prepackaged software | 7372 | 5125 | 5817 | 6460 | 6962 | 2158 |
| Computer integrated systems design | 7373 | 1274 | 1431 | 1358 | 1529 | 3229 |
| Information retrieval services | 7375 | 154 | 419 | 622 | 918 | 2339 |
| Computer related services, nec | 7379 | 2578 | 2732 | 4179 | 5026 | 5567 |
| Motion picture and video production | 7812 | 460 | 638 | 527 | 389 | 698 |
| Services allied to motion pictures | 7819 | 44 | 45 | 126 | 245 | 450 |
| Total Multimedia Tech: | | 27654 | 31672 | 34619 | 39109 | 41884 |

Motion Picture/Television Industry Cluster

Many regions are interested in developing a strong film and television industry, because it provides desirable employment opportunities to the region's labor force, as well as indirect economic benefits to the regional economy. As a result, there is significant competition between regions for this industry.

The Bay Area's comparative advantages include a diverse economy with a significant technology and arts presence, and its leading position in the development and application of digital technology to film and television production. The area's skilled labor force, leading educational institutions, quality of life, cultural and recreational activities, and good public transportation, are also important. Prior to the recent series of local base closures, availability of production facilities in the Bay Area was very limited. Because their closure, production shoots have been concentrated at bases which offer the large open-plan spaces that are required, including Alameda Naval Air Station, Treasure Island, Mare Island, and Hunter's Point.

Many organizations and institutions support this industry from the regional research and teaching institutions to professional service providers with a focus on meeting industry needs. One new regional organization, the Bay Area Multimedia Partnership (BAMP), is working with Pacific Bell and others to develop "Digital Diamond", an initiative to connect the North Bay, East Bay, Silicon Valley, and San Francisco through Regional Multimedia Centers (RMC). The goal of this initiative is to connect the entire Bay Area and allow for the high speed transfer of data at a reasonable cost. The initial partners of the East Bay RMC are the Rotunda Project in Oakland, and CSU Hayward. BAMP (in collaboration with LA-based Alliance of Movie and Television Producers) is also involved in developing an interregional training model, SkillsNet, to help remedy the shortage of qualified workers in this industry, in specific areas such as digital assembly and video production, animation, computer programming languages, and communication/storytelling.

**MOTION PICTURE/TELEVISION INDUSTRY
CLUSTER**

| BROADCASTING AND CABLE TV DISTRIBUTION | | | | | | | | | | | | |
|--|------|------|------|------|------|------|-------|--------|--------|--------|--------|--------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Television broadcasting stations | 4833 | 297 | 323 | 329 | 346 | 386 | 100 | 297 | 323 | 329 | 346 | 386 |
| Cable and other pay TV services | 4841 | 1387 | 1208 | 1575 | 1173 | 1374 | 100 | 1387 | 1208 | 1575 | 1173 | 1374 |
| | | | | | | | Total | 1684 | 1531 | 1904 | 1519 | 1760 |

| TECHNOLOGY RELATED PRODUCTS, SERVICES AND DISTRIBUTION | | | | | | | | | | | | |
|--|------|------|------|------|------|------|-------|--------|--------|---------|---------|---------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Electronic computers | 3571 | 1122 | 948 | 839 | 855 | 2765 | 5 | 56.1 | 47.4 | 41.95 | 42.75 | 138.25 |
| Computer programming services | 7371 | 3594 | 4061 | 4771 | 5731 | 6600 | 30 | 1078.2 | 1218.3 | 1431.3 | 1719.3 | 1980 |
| Prepackaged software | 7372 | 5125 | 5817 | 6460 | 6962 | 8462 | 20 | 1025 | 1163.4 | 1292 | 1392.4 | 1692.4 |
| Computer integrated systems design | 7373 | 1274 | 1431 | 1358 | 1529 | 2158 | 10 | 127.4 | 143.1 | 135.8 | 152.9 | 215.8 |
| Computer related services, nec | 7379 | 2578 | 2732 | 4179 | 5026 | 5567 | 25 | 644.5 | 683 | 1044.75 | 1256.5 | 1391.75 |
| Radio and TV communications equipment | 3663 | 761 | 732 | 670 | 746 | 1327 | 10 | 76.1 | 73.2 | 67 | 74.6 | 132.7 |
| Photographic equipment and supplies | 3861 | 41 | 50 | 66 | 54 | 32 | 20 | 8.2 | 10 | 13.2 | 10.8 | 6.4 |
| Photographic equipment and supplies | 5043 | 246 | 601 | 114 | 106 | 54 | 20 | 49.2 | 120.2 | 22.8 | 21.2 | 10.8 |
| Electronic parts and equipment | 5065 | 2386 | 3787 | 3614 | 3977 | 4094 | 10 | 238.6 | 378.7 | 361.4 | 397.7 | 409.4 |
| | | | | | | | Total | 3303.3 | 3837.3 | 4410.2 | 5068.15 | 5977.5 |

| MOTION PICTURE PRODUCTION | | | | | | | | | | | | |
|-------------------------------------|------|------|------|------|------|------|-------|--------|--------|--------|--------|--------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Motion picture and video production | 7812 | 448 | 638 | 527 | 389 | 698 | 100 | 448 | 638 | 527 | 389 | 698 |
| Services allied to motion pictures | 7819 | 44 | 45 | 126 | 245 | 450 | 100 | 44 | 45 | 126 | 245 | 450 |
| | | | | | | | Total | 492 | 683 | 653 | 634 | 1148 |

| MOTION PICTURE DISTRIBUTION | | | | | | | | | | | | |
|-----------------------------|------|------|------|------|------|------|-------|--------|--------|--------|--------|--------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Motion picture distribution | 7822 | 77 | 92 | 27 | 17 | 33 | 100 | 77 | 92 | 27 | 17 | 33 |
| | 7829 | | | | | | | | | | | |
| | | | | | | | Total | 77 | 92 | 27 | 17 | 33 |

| RELATED ENTERTAINMENT | | | | | | | | | | | | |
|---------------------------------------|------|------|------|------|------|------|-------|--------|--------|--------|--------|--------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Theatrical producers and services | 7922 | 480 | 611 | 704 | 1004 | 842 | 40 | 192 | 244.4 | 281.6 | 401.6 | 336.8 |
| Entertainers and entertainment groups | 7929 | 536 | 386 | 541 | 507 | 444 | 70 | 375.2 | 270.2 | 378.7 | 354.9 | 310.8 |
| Vocational schools, nec | 8249 | 1197 | 742 | 657 | 828 | 719 | 10 | 119.7 | 74.2 | 65.7 | 82.8 | 71.9 |
| | | | | | | | Total | 686.9 | 588.8 | 726 | 839.3 | 719.5 |

| SPECIALIZED SERVICES | | | | | | | | | | | | |
|-----------------------------------|------|------|------|-------|------|------|-------|---------|--------|--------|--------|---------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Commercial art and graphic design | 7336 | 443 | 502 | 477 | 547 | 713 | 25 | 110.75 | 125.5 | 119.25 | 136.75 | 178.25 |
| Business services, nec | 7389 | 9015 | 9674 | 10052 | 9639 | 8458 | 10 | 901.5 | 967.4 | 1005.2 | 963.9 | 845.8 |
| Engineering services | 8711 | 7096 | 7100 | 7276 | 6956 | 7578 | 15 | 1064.4 | 1065 | 1091.4 | 1043.4 | 1136.7 |
| Services, nec | 8999 | 350 | 266 | 349 | 633 | 278 | 5 | 17.5 | 13.3 | 17.45 | 31.65 | 13.9 |
| | | | | | | | Total | 2094.15 | 2171.2 | 2233.3 | 2175.7 | 2174.65 |

| ADVERTISING RELATED ACTIVITY | | | | | | | | | | | | |
|--------------------------------------|------|------|------|------|------|------|-------|--------|--------|--------|--------|--------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Advertising agencies | 7311 | 834 | 1193 | 657 | 798 | 874 | 25 | 208.5 | 298.25 | 164.25 | 199.5 | 218.5 |
| Radio, TV, publisher representatives | 7313 | 272 | 286 | 84 | 89 | 99 | 100 | 272 | 286 | 84 | 89 | 99 |
| Advertising, nec | 7319 | 60 | 69 | 193 | 210 | 513 | 25 | 15 | 17.25 | 48.25 | 52.5 | 128.25 |
| | | | | | | | Total | 495.5 | 601.5 | 296.5 | 341 | 445.75 |

| COMMERCIAL COMMUNICATIONS EQUIPMENT | | | | | | | | | | | | |
|---------------------------------------|------|------|------|------|------|------|-------|--------|--------|--------|--------|--------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Telephone and telegraph apparatus | 3661 | 573 | 980 | 1169 | 1668 | 2344 | 100 | 573 | 980 | 1169 | 1668 | 2344 |
| Radio and TV communications equipment | 3663 | 761 | 732 | 670 | 746 | 1327 | 90 | 684.9 | 658.8 | 603 | 671.4 | 1194.3 |
| Communications equipment, nec | 3669 | 685 | 554 | 572 | 391 | 289 | 100 | 685 | 554 | 572 | 391 | 289 |
| | | | | | | | Total | 1942.9 | 2192.8 | 2344 | 2730.4 | 3827.3 |

| SPECIAL COMPONENTS AND EQUIPMENT | | | | | | | | | | | | |
|--|------|------|------|------|------|------|-------|--------|--------|---------|--------|---------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Electron tubes | 3671 | 227 | 229 | 255 | 261 | 0 | 60 | 136.2 | 137.4 | 153 | 156.6 | 0 |
| Printed circuit boards | 3672 | 2005 | 2587 | 2546 | 2949 | 2972 | 30 | 601.5 | 776.1 | 763.8 | 884.7 | 891.6 |
| Semiconductors and related devices | 3674 | 1443 | 2239 | 4559 | 4224 | 4923 | 25 | 360.75 | 559.75 | 1139.75 | 1056 | 1230.75 |
| Electronic connectors | 3678 | 34 | 146 | 211 | 293 | 373 | 75 | 25.5 | 109.5 | 158.25 | 219.75 | 279.75 |
| Electronic components, nec | 3679 | 1232 | 1726 | 2027 | 3099 | 2873 | 40 | 492.8 | 690.4 | 810.8 | 1239.6 | 1149.2 |
| Electrical equipment and supplies, nec | 3699 | 589 | 529 | 555 | 541 | 1257 | 25 | 147.25 | 132.25 | 138.75 | 135.25 | 314.25 |
| Search and navigation equipment | 3812 | 334 | 378 | 500 | 431 | 533 | 100 | 334 | 378 | 500 | 431 | 533 |
| | | | | | | | Total | 2098 | 2783.4 | 3664.35 | 4122.9 | 4398.55 |

| RELATED COMPUTER PROGRAMMING AND SOFTWARE | | | | | | | | | | | | |
|---|------|------|------|-------|------|------|-------|---------|---------|---------|---------|---------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Computer programming services | 7371 | 3594 | 4061 | 4771 | 5731 | 6600 | 30 | 1078.2 | 1218.3 | 1431.3 | 1719.3 | 1980 |
| Prepackaged software | 7372 | 5125 | 5817 | 6460 | 6962 | 8462 | 20 | 1025 | 1163.4 | 1292 | 1392.4 | 1692.4 |
| Computer integrated systems design | 7373 | 1274 | 1431 | 1358 | 1529 | 2158 | 15 | 191.1 | 214.65 | 203.7 | 229.35 | 323.7 |
| Information retrieval services | 7375 | 154 | 419 | 622 | 918 | 2339 | 40 | 61.6 | 167.6 | 248.8 | 367.2 | 935.6 |
| Computer related services, nec | 7379 | 2578 | 3032 | 4179 | 5026 | 5567 | 16 | 412.48 | 485.12 | 668.64 | 804.16 | 890.72 |
| Business services, nec | 7389 | 9015 | 9674 | 10052 | 9639 | 8458 | 10 | 901.5 | 967.4 | 1005.2 | 963.9 | 845.8 |
| | | | | | | | Total | 3669.88 | 4216.47 | 4849.64 | 5476.31 | 6668.22 |

| RELATED ENGINEERING AND TECHNOLOGICAL RESEARCH | | | | | | | | | | | | |
|--|------|------|------|------|------|------|-------|--------|--------|---------|---------|--------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Engineering services | 8711 | 7396 | 7100 | 7276 | 6956 | 7578 | 30 | 2218.8 | 2130 | 2182.8 | 2086.8 | 2273.4 |
| Commercial physical research | 8731 | 4433 | 4523 | 4910 | 5010 | 4849 | 30 | 1329.9 | 1356.9 | 1473 | 1503 | 1454.7 |
| Services, nec | 8999 | 350 | 266 | 349 | 633 | 278 | 5 | 17.5 | 13.3 | 17.45 | 31.65 | 13.9 |
| | | | | | | | Total | 3566.2 | 3500.2 | 3673.25 | 3621.45 | 3742 |

Total Motion Picture:

20109.8 22197.7 24781.2 26545.2 30894.47

Telecommunications Services Cluster

Future growth in the telecommunications industry will be related to the continued growth of wireless services, as well as changes in existing and developing new technologies including data compression, signal conditioning and validation, and higher speed transmission of data through improved telephone service. Additional trends that will influence the industry include regulation of broadband services that could result in reducing costs of services, easing access to networked multimedia; and continued growth in interactive applications and services, which is one of the fastest growing sectors in the industry.

TELECOMMUNICATION INDUSTRY CLUSTER

| TELECOMMUNICATIONS SERVICES INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
|---|------|------|------|------|------|------|-----|--------|--------|--------|--------|--------|
| Radiotelephone communications | 4812 | 2361 | 2328 | 2902 | 2933 | 2837 | 100 | 2361 | 2328 | 2902 | 2933 | 2837 |
| Communication services, nec | 4899 | 305 | 322 | 409 | 651 | 870 | 100 | 305 | 322 | 409 | 651 | 870 |
| Electronic parts and equipment | 5065 | 2386 | 3787 | 3614 | 3977 | 4094 | 10 | 238.6 | 378.7 | 361.4 | 397.7 | 409.4 |

Total Telecommunication:

2904.6 3028.7 3672.4 3981.7 4116.4

Computers/Related Electronics Industry Cluster

Future growth in this industry will focus on developing products and services for use on the Internet and distributed computing, specifically the consumerization of computers and the Internet. The Bay Area has the highest concentration of “wired” Internet account holders in the world, as well as Internet software providers, and is well positioned to lead the nation in the growth of this industry. One key trend is that more and more advance communications are increasingly moving to digital standards, and there will soon be small, digital, personal communication systems (PCS) available on the market. This industry will continue to develop enabling technologies that will increase productivity and efficiencies of manufacturing services companies across all industries.

COMPUTERS/RELATED ELECTRONICS INDUSTRY CLUSTER

| COMPUTER RELATED MANUFACTURING EQUIPMENT INDUSTRY | | | | | | | | | | | | |
|---|------|------|------|------|------|------|----|--------|--------|--------|--------|--------|
| | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Special industry machinery, nec | 3559 | 2245 | 3887 | 3500 | 4449 | 3452 | 10 | 224.5 | 388.7 | 350 | 444.9 | 345.2 |

| COMPUTER MANUFACTURING AND ASSEMBLY INDUSTRY | | | | | | | | | | | | |
|--|------|------|------|------|------|------|-----|--------|--------|--------|--------|--------|
| | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Electronic computers | 3571 | 1122 | 948 | 839 | 855 | 2765 | 100 | 1122 | 948 | 839 | 855 | 2765 |

| COMPUTER PERIPHERAL AND DISK DRIVE EQUIPMENT INDUSTRY | | | | | | | | | | | | |
|---|------|------|------|------|------|------|--------|--------|--------|--------|--------|--------|
| | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Computer terminals | 3575 | 224 | 281 | 272 | 277 | 123 | 100 | 224 | 281 | 272 | 277 | 123 |
| Computer peripheral equipment, nec | 3577 | 1873 | 2394 | 2451 | 3561 | 1987 | 100 | 1873 | 2394 | 2451 | 3561 | 1987 |
| Magnetic and optical recording media | 3695 | 1395 | 1476 | 1799 | 1881 | 923 | 30 | 418.5 | 442.8 | 539.7 | 564.3 | 276.9 |
| | | | | | | | Total: | 2515.5 | 3117.8 | 3262.7 | 4402.3 | 2386.9 |

| BOARDS AND SUBASSEMBLIES INDUSTRY | | | | | | | | | | | | |
|------------------------------------|------|------|------|------|------|------|--------|--------|--------|--------|--------|--------|
| | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Printed circuit boards | 3672 | 2005 | 2587 | 2546 | 2949 | 29 | 70 | 1403.5 | 1810.9 | 1782.2 | 2064.3 | 20.3 |
| Semiconductors and related devices | 3674 | 1443 | 2239 | 4559 | 4224 | 4923 | 70 | 1010.1 | 1567.3 | 3191.3 | 2956.8 | 3446.1 |
| | | | | | | | Total: | 2413.6 | 3378.2 | 4973.5 | 5021.1 | 3466.4 |

| RELATED ELECTRONIC COMPONENTS AND EQUIPMENT | | | | | | | | | | | | |
|---|------|------|------|------|------|------|--------|--------|--------|--------|--------|--------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Electronic resistors | 3676 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 |
| Electronic coils and transformers | 3677 | 52 | 53 | 181 | 59 | 77 | 20 | 10.4 | 10.6 | 36.2 | 11.8 | 15.4 |
| Electronic components, nec | 3679 | 1232 | 1726 | 2027 | 3099 | 2873 | 15 | 184.8 | 258.9 | 304.05 | 464.85 | 430.95 |
| Electronic equipment and supplies, nec | 3699 | 589 | 529 | 555 | 541 | 1257 | 10 | 58.9 | 52.9 | 55.5 | 54.1 | 125.7 |
| | | | | | | | Total: | 254.1 | 322.4 | 395.75 | 530.75 | 572.05 |

| RELATED PROGRAMMING SERVICES AND SOFTWARE | | | | | | | | | | | | |
|---|------|------|------|------|------|------|--------|---------|---------|---------|---------|--------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Computer programming services | 7371 | 3594 | 4061 | 4771 | 5731 | 6600 | 25 | 898.5 | 1015.25 | 1192.75 | 1432.75 | 1650 |
| Prepackaged software | 7372 | 5125 | 5817 | 6460 | 6962 | 8462 | 5 | 256.25 | 290.85 | 323 | 348.1 | 423.1 |
| | | | | | | | Total: | 1154.75 | 1306.1 | 1515.75 | 1780.85 | 2073.1 |

| COMPUTER DISTRIBUTION, MAINTENANCE, SYSTEM DESIGN | | | | | | | | | | | | |
|---|------|------|------|------|------|------|--------|--------|--------|--------|---------|---------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 | % | 95 Emp | 96 Emp | 97 Emp | 98 Emp | 99 Emp |
| Computers, peripherals, software | 5045 | 4308 | 4434 | 4801 | 5715 | 7851 | 100 | 4308 | 4434 | 4801 | 5715 | 7851 |
| Computer integrated systems design | 7373 | 1274 | 1431 | 1358 | 1529 | 2158 | 50 | 637 | 715.5 | 679 | 764.5 | 1079 |
| Computer facilities management | 7376 | 44 | 15 | 15 | 22 | 25 | 100 | 44 | 15 | 15 | 22 | 25 |
| Computer related services, nec | 7379 | 2578 | 2732 | 4179 | 5026 | 5567 | 70 | 1804.6 | 1912.4 | 2925.3 | 3518.2 | 3896.9 |
| | | | | | | | Total: | 6793.6 | 7076.9 | 8420.3 | 10019.7 | 12851.9 |

Total Computers/Related Electronics: 14478.1 16538.1 19757 23054.6 24460.55

Food Processing Cluster

The food processing industry has been referred to as a “traditional” manufacturing sector. Interviews and data research shows the importance of this “traditional” industry as a somewhat recession-proof employer and as a contributor to the economic vitality of other business sectors in the Alameda County Economy of the 21st century. Interviews and data research also reveals that the food processing industry is in flux both nationally and locally.

In the last ten years, many large-scale food manufacturers have either closed or consolidated operations within Alameda County. Large supermarket chains have made significant changes in their operations. These changes have had two major effects: to narrow cost margins in this already low margin industry and to create demands for new systems of delivery, merchandising, and marketing products. Changes in consumer taste have increased the demand for new kinds of food products (e.g., daily fresh baked breads, organic, and ethnic foods).

Technological and structural changes in the food industry also are beginning to be felt locally. Real-time product testing during actual manufacturing is a feature of the automated plants. Radio waves to indicate moistness, viscosity sensors, measurement of the degree the light bends as an indication of sweetness, are used to provide continuous process control. Many techniques that were developed for pharmaceutical plants have been adapted to food manufacturing. However, advanced methods of food production, the search for greater efficiencies in cost and productivity, and an ever evolving consumer market are some of the challenges facing local food companies. In addition, the consolidation of national scale manufacturers and an emphasis on brand identities have narrowed distribution networks and export channels for smaller, more locally based food companies.

Many of the companies interviewed mentioned that expansion could not occur in Alameda County because of the perceived cost of doing business in the County. Alameda County can encourage businesses to expand here by assisting companies to develop new markets for their products, while at the same time, working to provide cost-effective site services and facilities for redeveloping and expanding food companies. Specific actions such as delivering assistance through a variety of forums focusing on marketing issues such as labeling, developing brand identity. Or through cooperative marketing strategies on selling Alameda County products nationally to establish similar recognition as Berkeley’s reputation for gourmet specialty foods.

Despite these downward trends, Alameda County has remained a major center for food manufacturing in the region and state. During the last 15 years, Alameda County has experienced real growth in small to medium sized firms. On one hand, the reason for the continued strength of the food manufacturing sector in Alameda County can be attributed to the strong network of existing suppliers, producers, and customers. On the other hand, Alameda County is in the forefront of several new trends in American food (e.g., gourmet roasted coffee, artisan breads, ethnic foods and nouvelle cuisine—the school of cooking founded by Alice Waters of Berkeley’s Chez Panisse Restaurant). As a result, Alameda County’s contribution to the food industry is renown. It makes sense to build upon that asset.

FOOD PROCESSING

| FOOD MANUFACTURING | | | | | | |
|--------------------------------------|------|------|------|------|------|------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 |
| Bread, cake, and related products | 2051 | 2630 | 3344 | 3185 | 4070 | 2188 |
| Candy & other confectionery products | 2064 | 697 | 712 | 709 | 762 | 631 |
| Wines, brandy, and brandy spirits | 2084 | 412 | 464 | 498 | 483 | 727 |
| Food preparations, nec | 2099 | 1008 | 952 | 1017 | 1081 | 915 |
| Retail bakeries | 5461 | 2064 | 1234 | 1427 | 1595 | 2270 |
| Total: | | 6811 | 6706 | 6836 | 7991 | 6731 |

| GROCERIES AND RELATED PRODUCTS | | | | | | |
|--------------------------------------|------|-------|-------|-------|-------|-------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 |
| Groceries, general line | 5141 | 2557 | 2435 | 2501 | 2201 | 3408 |
| Dairy products, exc. dried or canned | 5143 | 430 | 355 | 459 | 306 | 476 |
| Groceries and related products, nec | 5149 | 3454 | 2802 | 3412 | 4173 | 4983 |
| Grocery stores | 5411 | 20210 | 17449 | 18775 | 19265 | 20668 |
| Total: | | 26651 | 23041 | 25147 | 25945 | 29535 |

| BEVERAGES | | | | | | |
|------------------------------|------|------|------|------|------|------|
| INDUSTRY | SIC | 1995 | 1996 | 1997 | 1998 | 1999 |
| Beer and ale | 5181 | 466 | 366 | 422 | 416 | 444 |
| Wine and distilled beverages | 5182 | 1104 | 871 | 1204 | 1456 | 1232 |
| Total: | | 1570 | 1237 | 1626 | 1872 | 1676 |

Total Food Processing: 35032 30984 33609 35808 37942

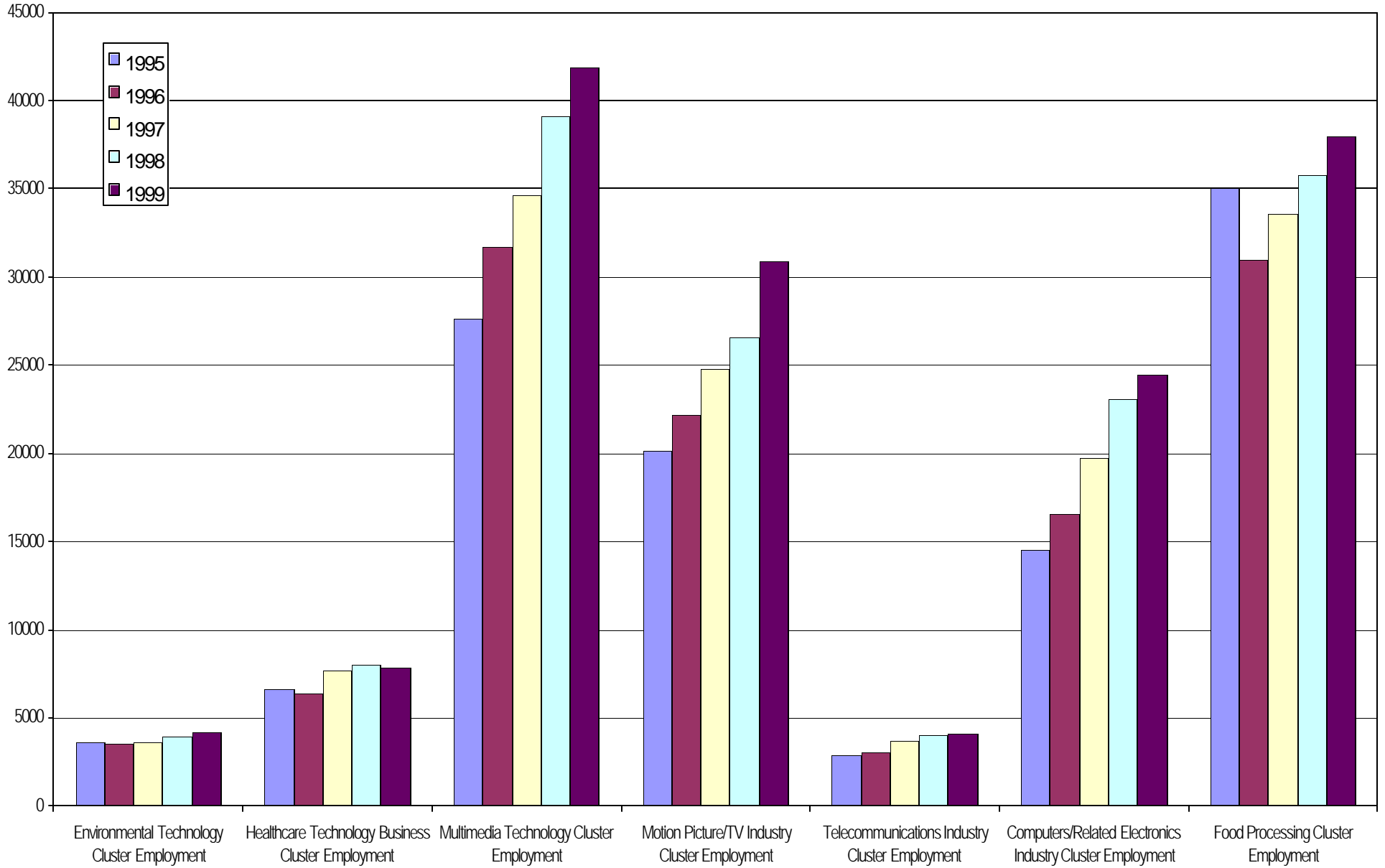


**Economic Development
Alliance For Business**

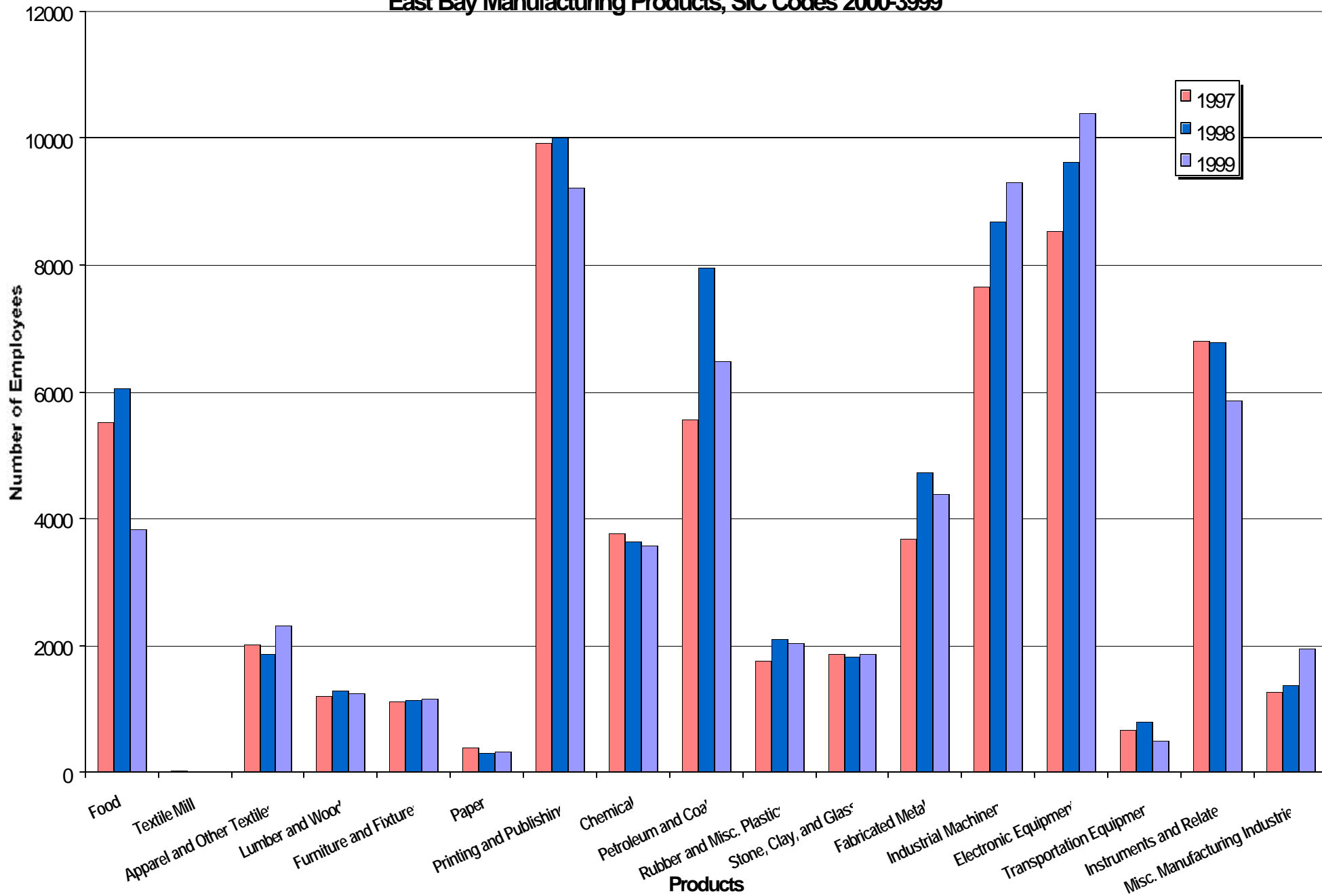
*Building Resources,
Businesses & Quality Jobs*

**EAST BAY CLUSTER &
INDUSTRY CHARTS**

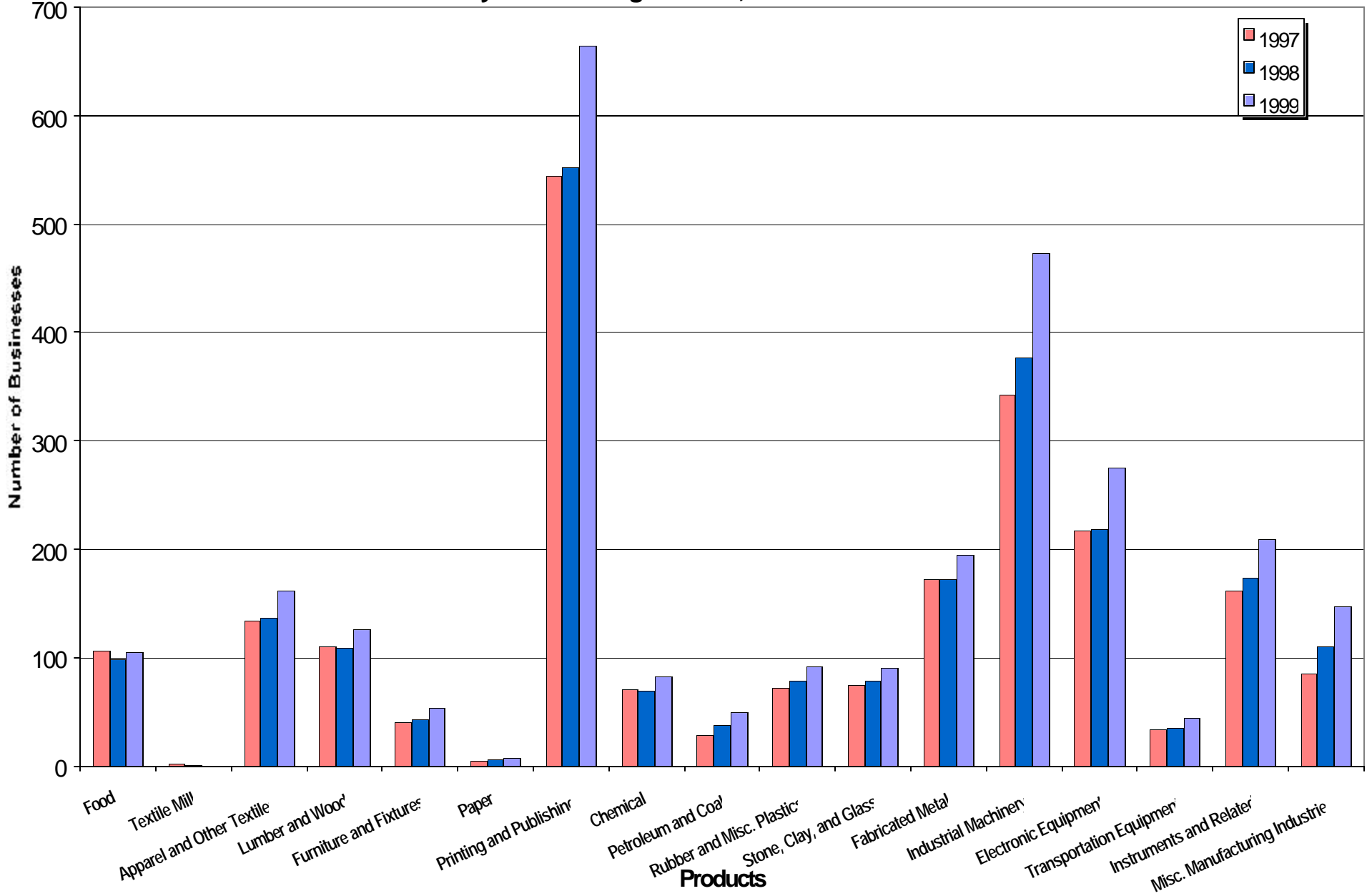
East Bay Cluster Employment 1995-1999



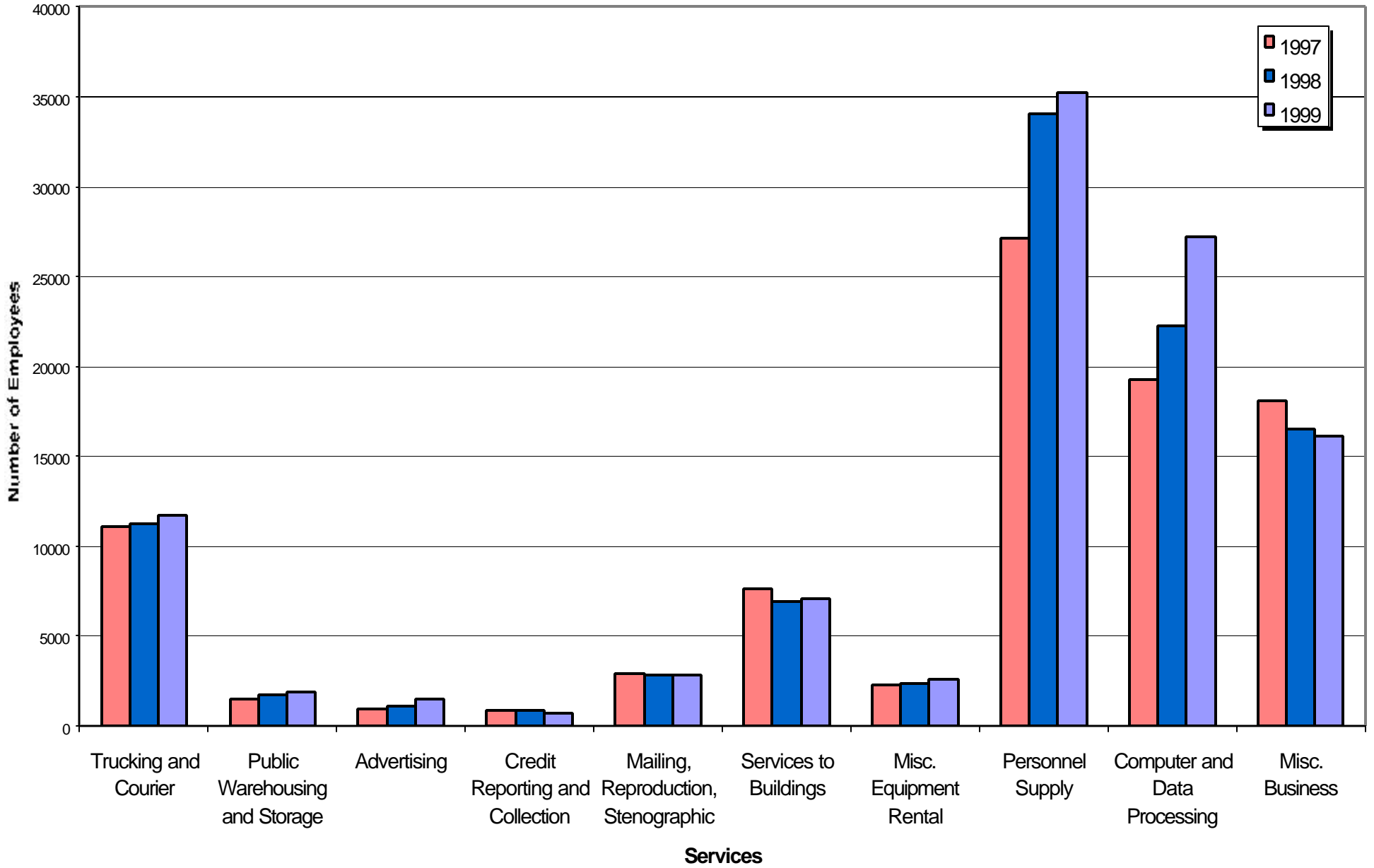
East Bay Manufacturing Products, SIC Codes 2000-3999



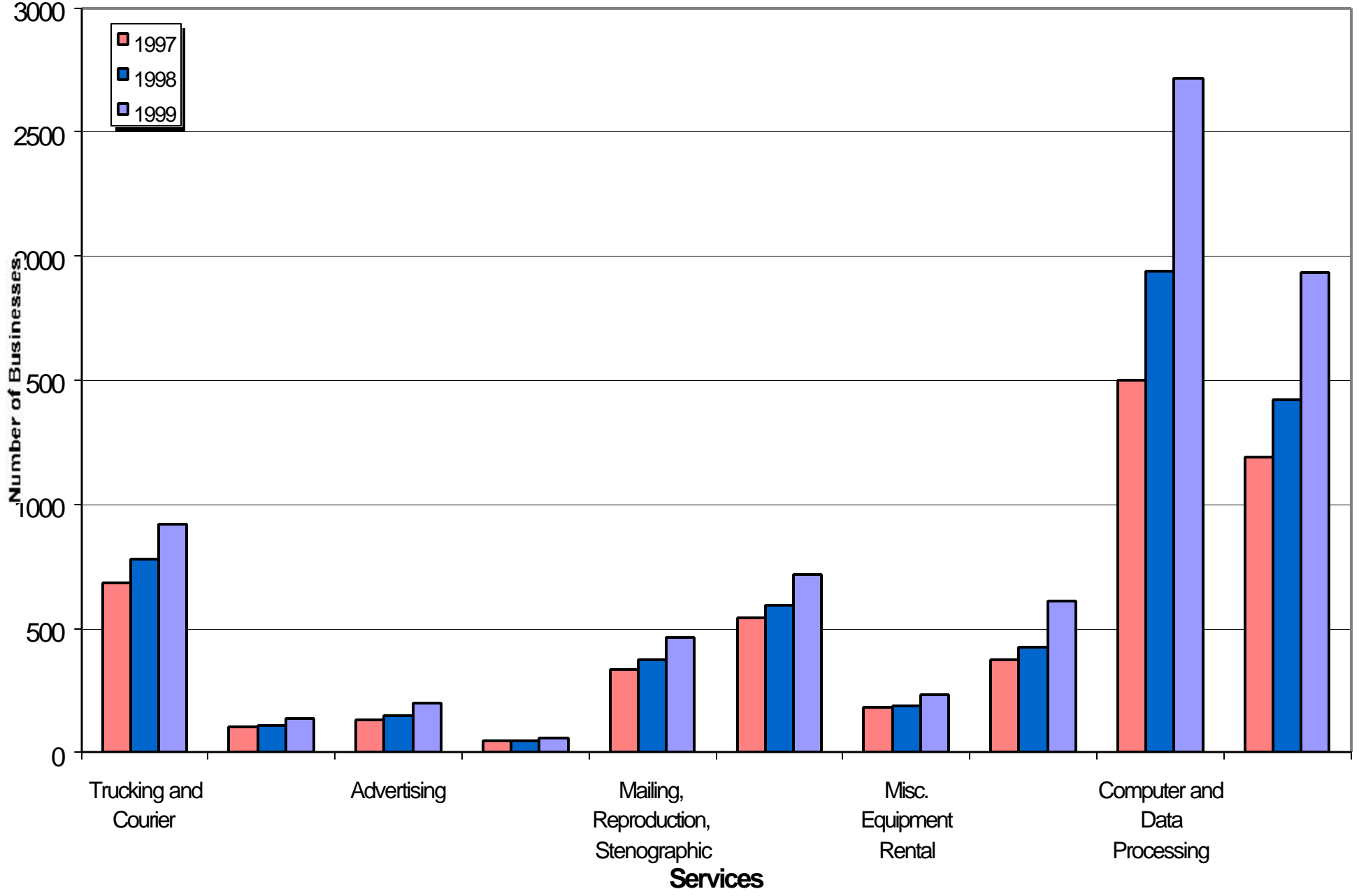
East Bay Manufacturing Products, SIC Codes 2000-3999



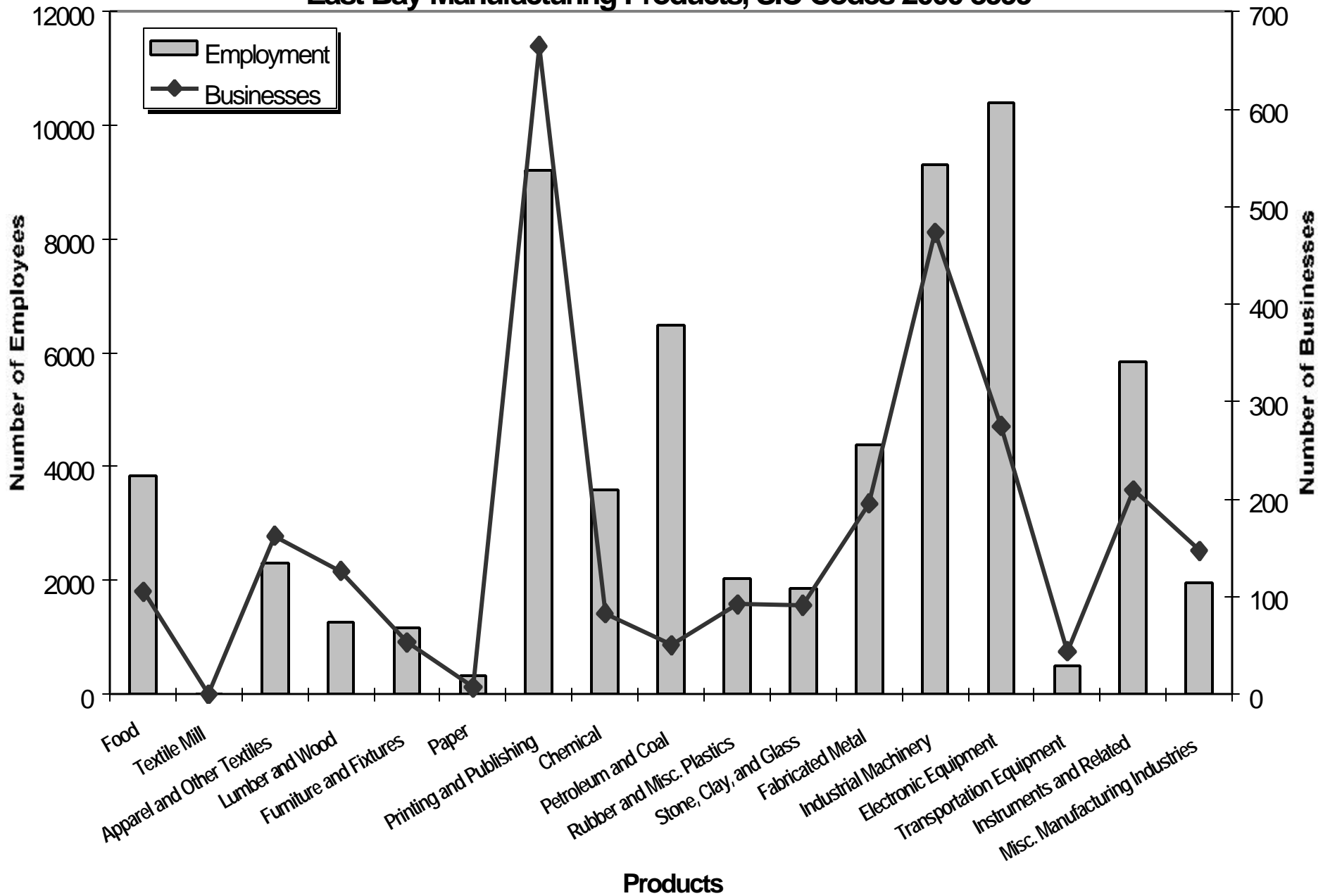
East Bay Distribution Services, SIC Codes 4200-4299; Business Services, SIC Codes 7300-7399



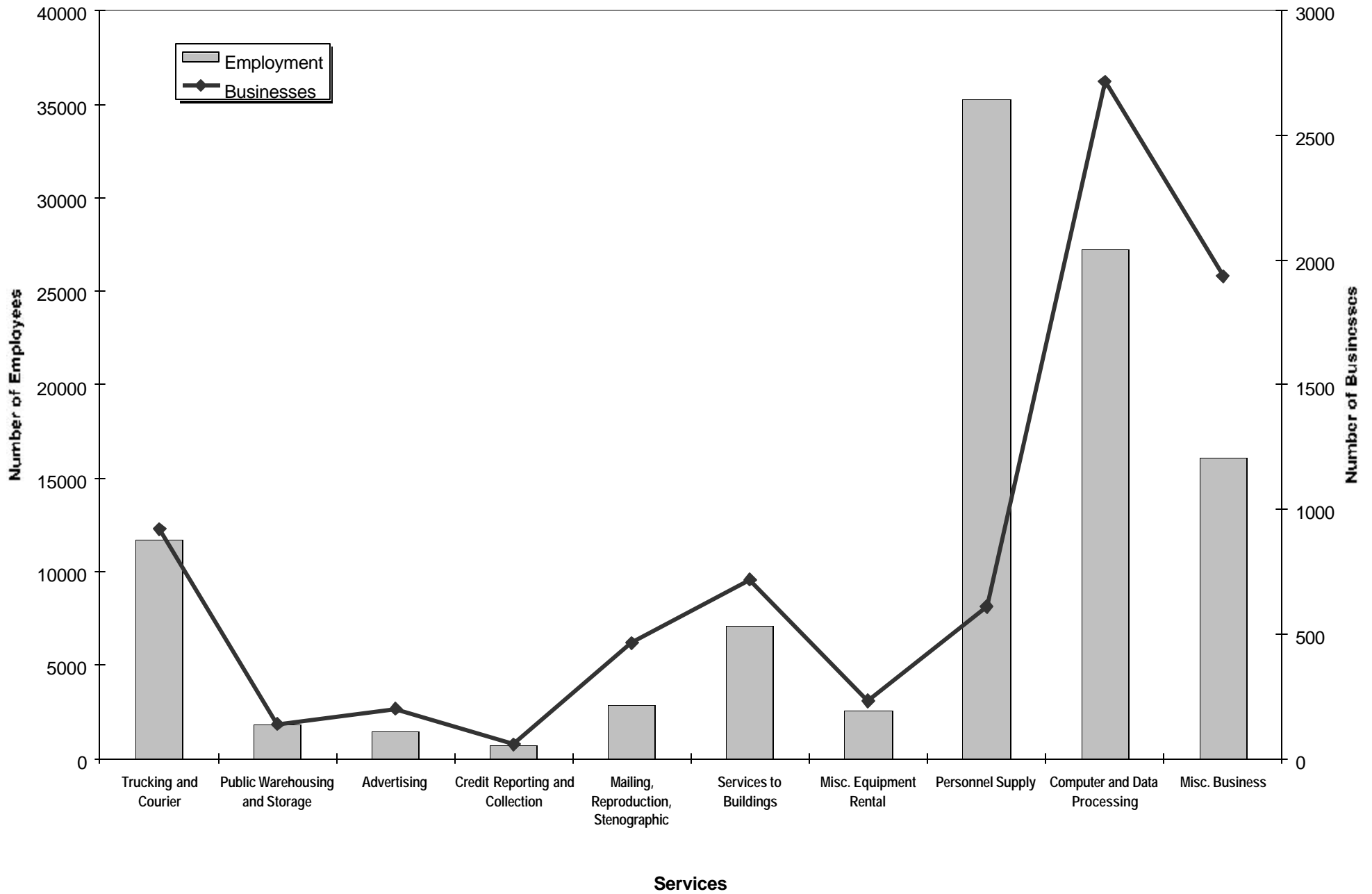
East Bay Distribution Services, SIC Codes 4200-4299; Business Services, SIC Codes 7300-7399



East Bay Manufacturing Products, SIC Codes 2000-3999



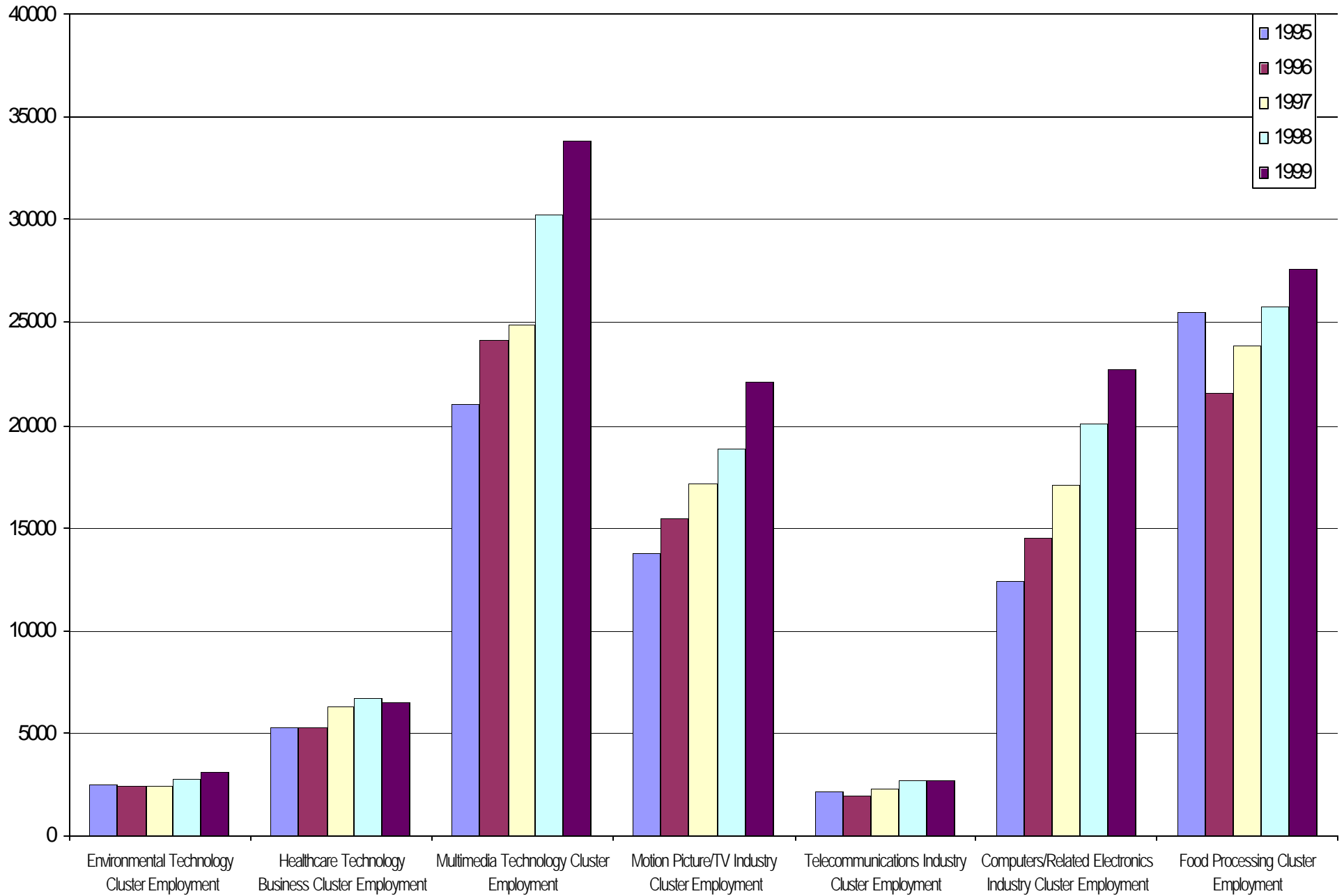
East Bay Distribution Services, SIC Codes 4200-4299; Business Services, SIC Codes 7300-7399



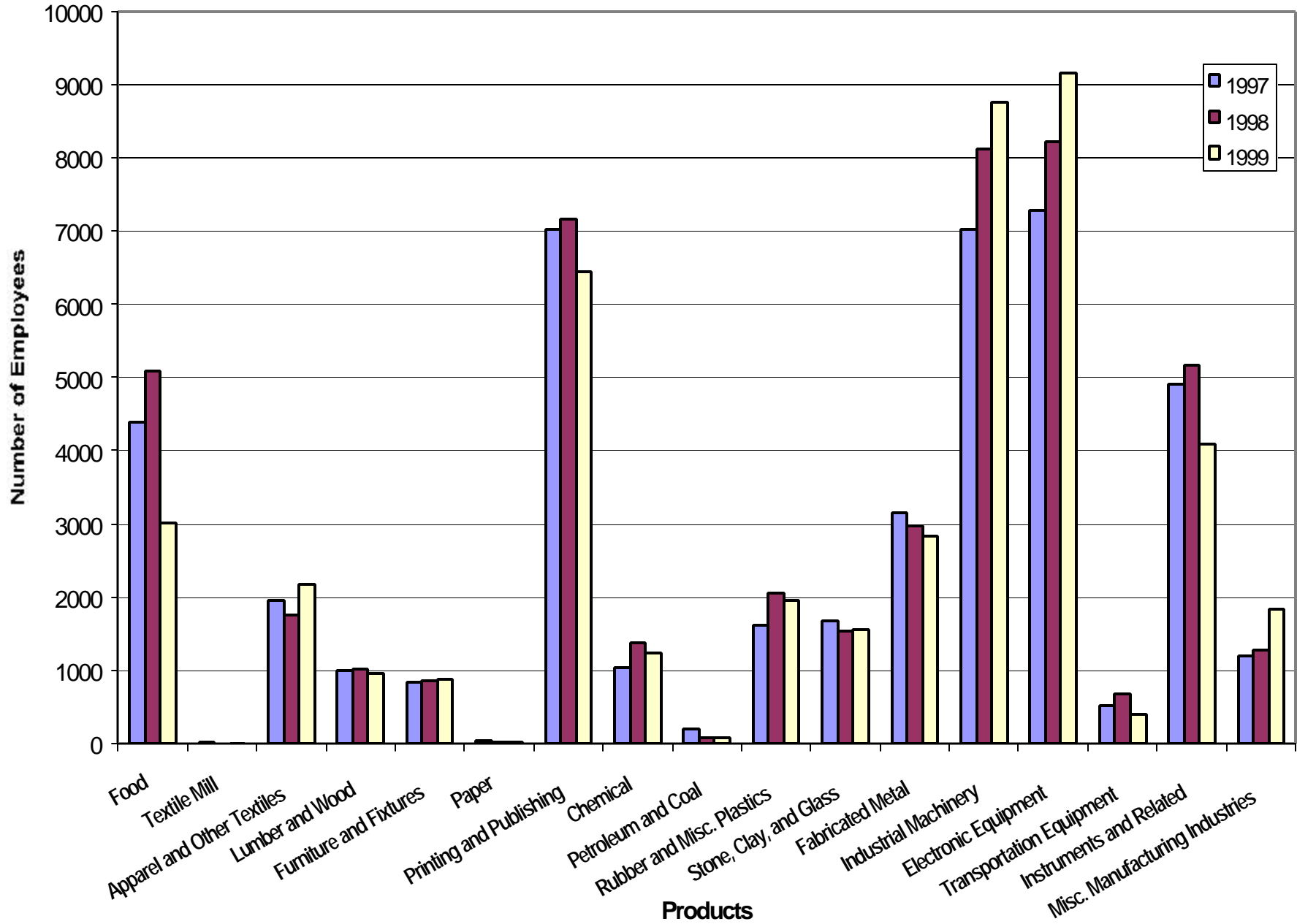


ALAMEDA COUNTY INDUSTRY & CLUSTER CHARTS

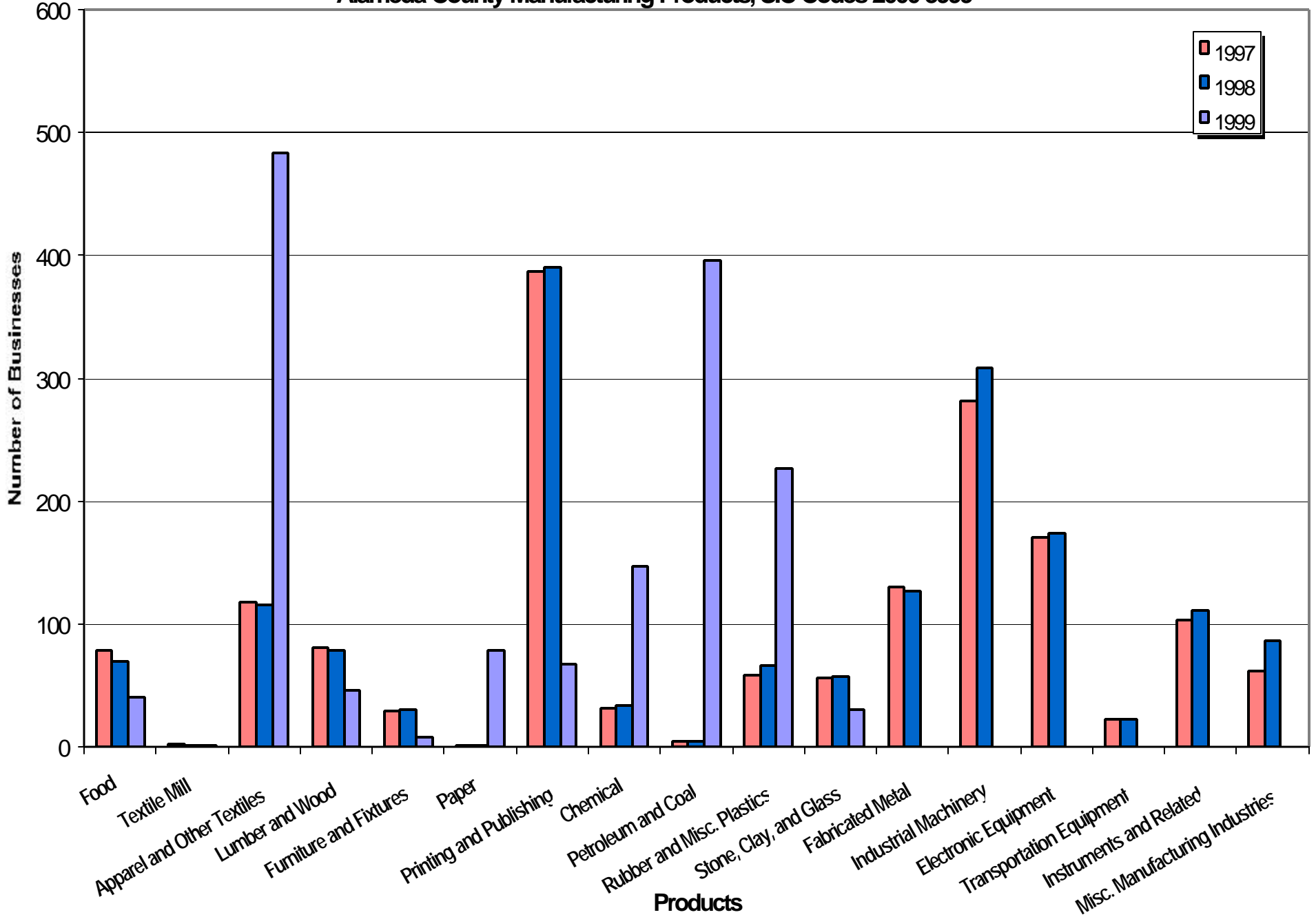
Alameda County Cluster Employment 1995-1999



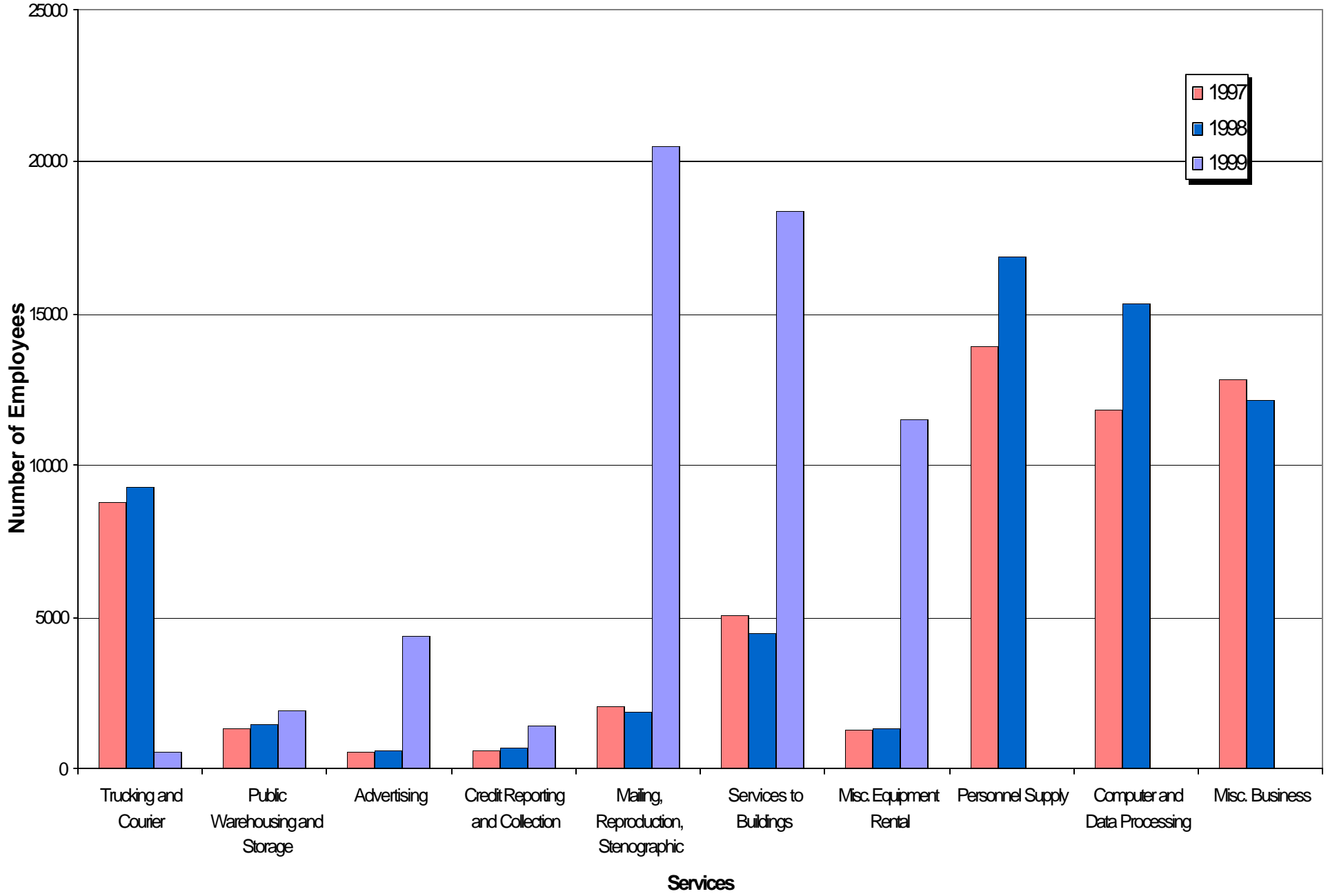
Alameda County Manufacturing Products, SIC Codes 2000-3999



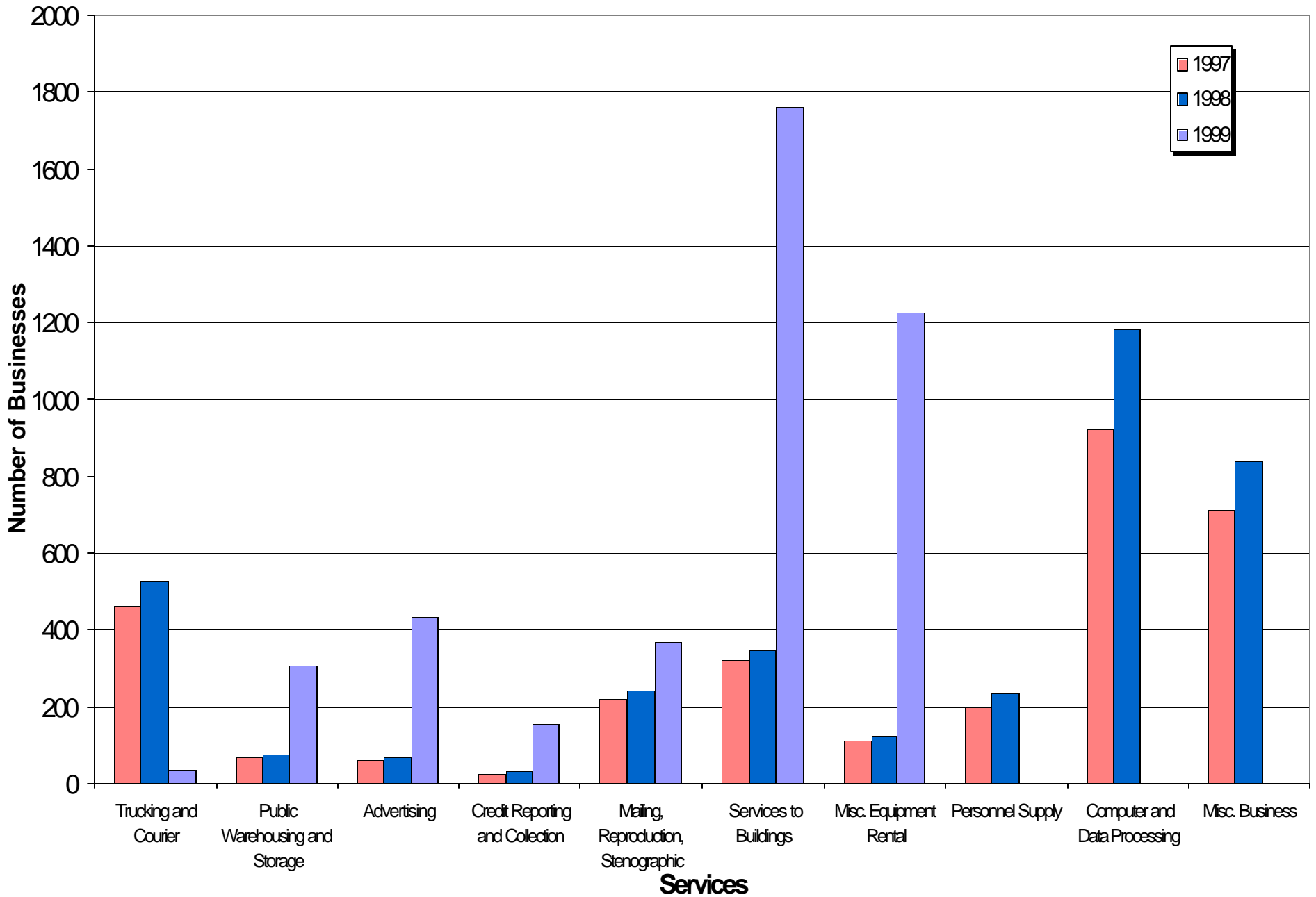
Alameda County Manufacturing Products, SIC Codes 2000-3999



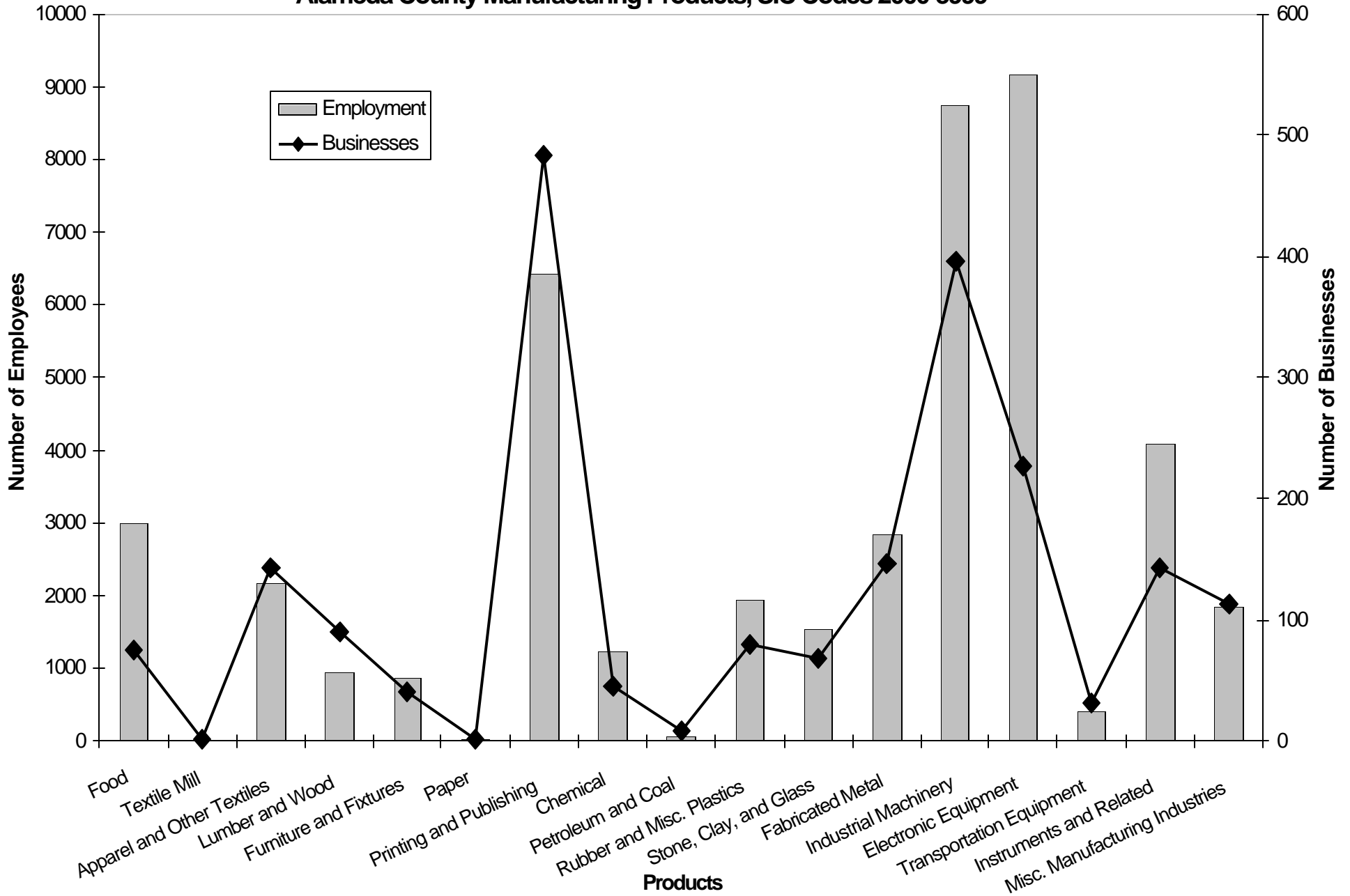
Alameda County Distribution Services, SIC Codes 4200-4299; Business Services, SIC Codes 7300-7399



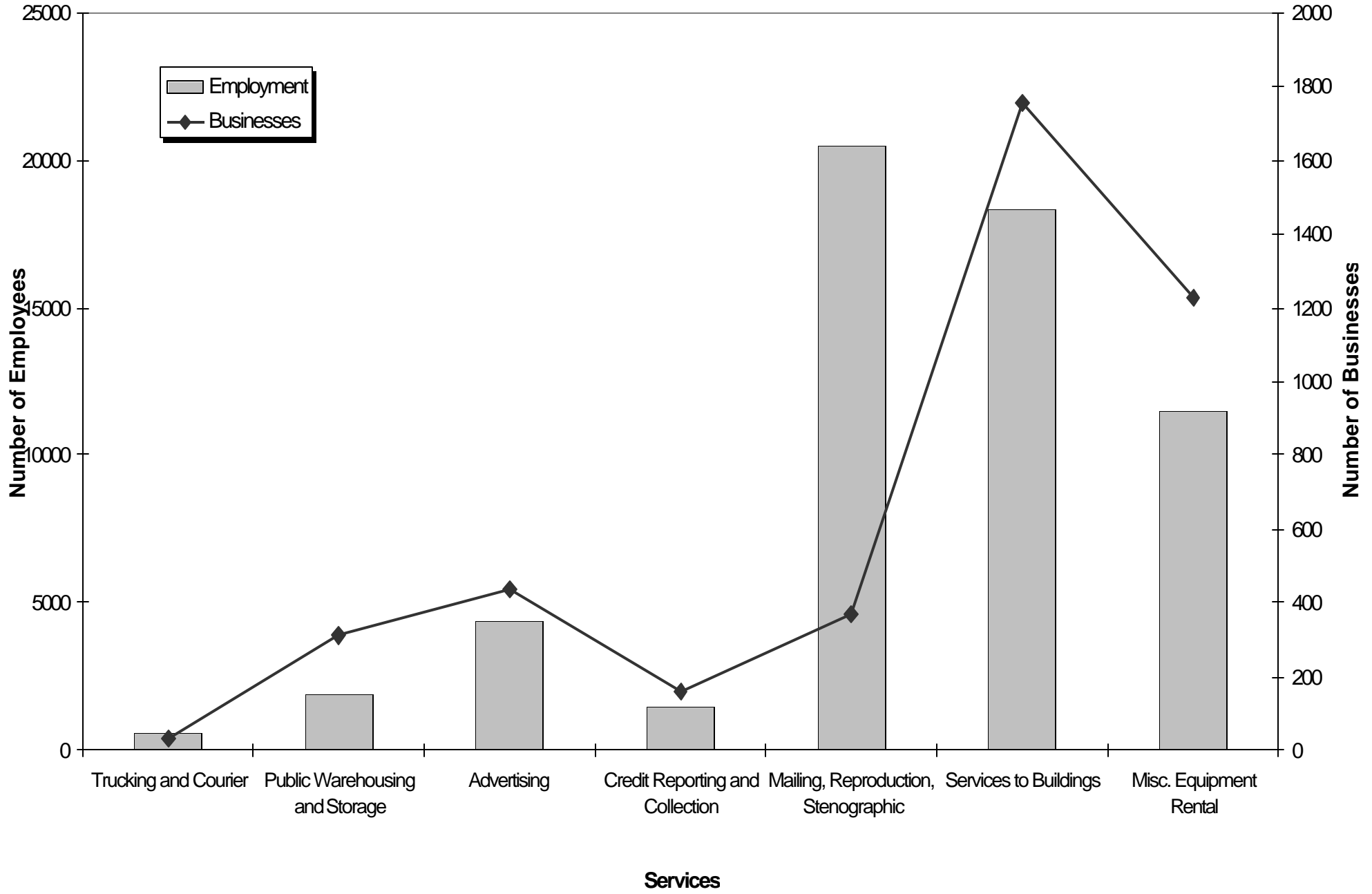
Alameda County Distribution Services, SIC Codes 4200-4299; Business Services, SIC Codes 7300-7399



Alameda County Manufacturing Products, SIC Codes 2000-3999



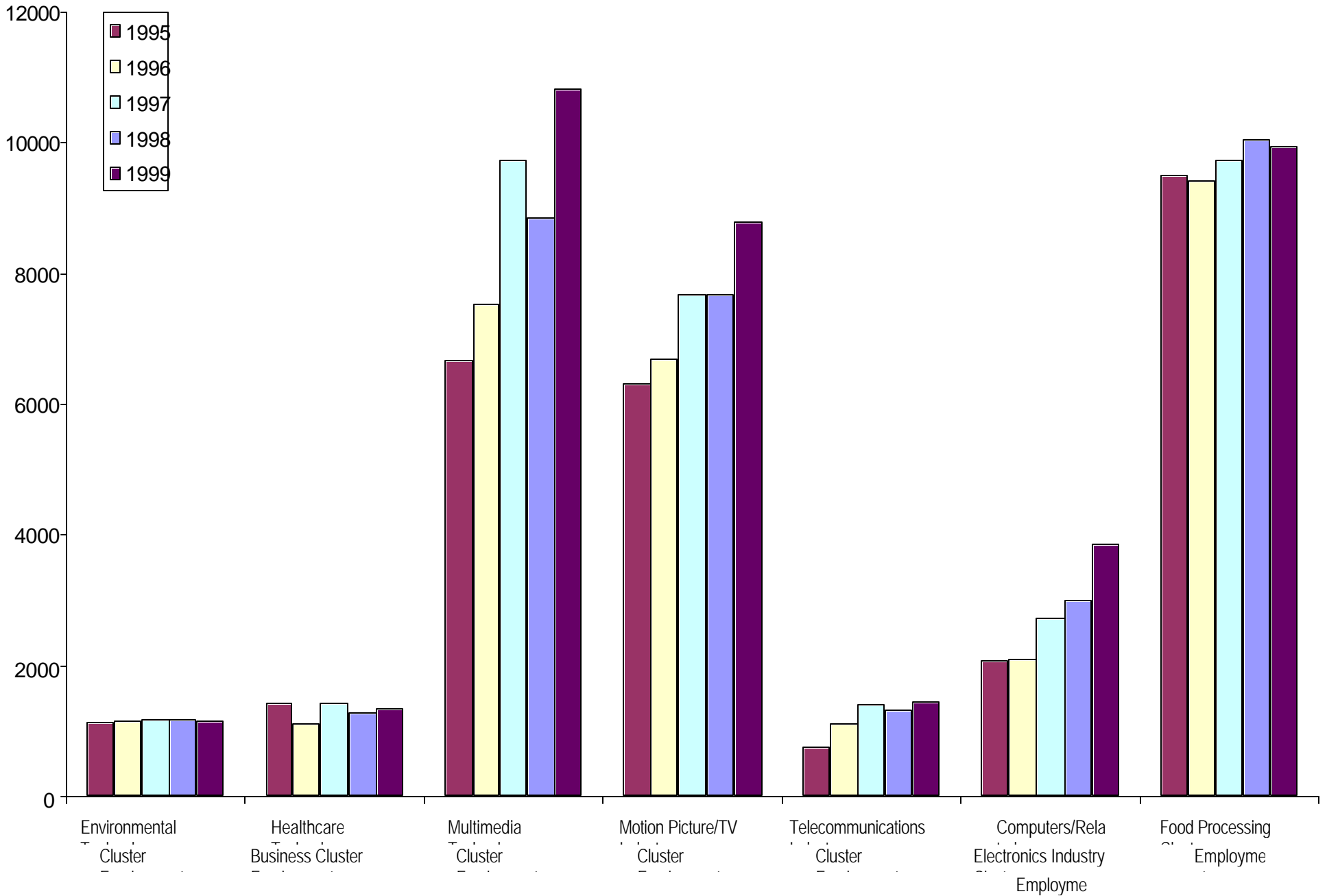
Alameda County Distribution Services, SIC Codes 4200-4299; Business Services, SIC Codes 7300-7399



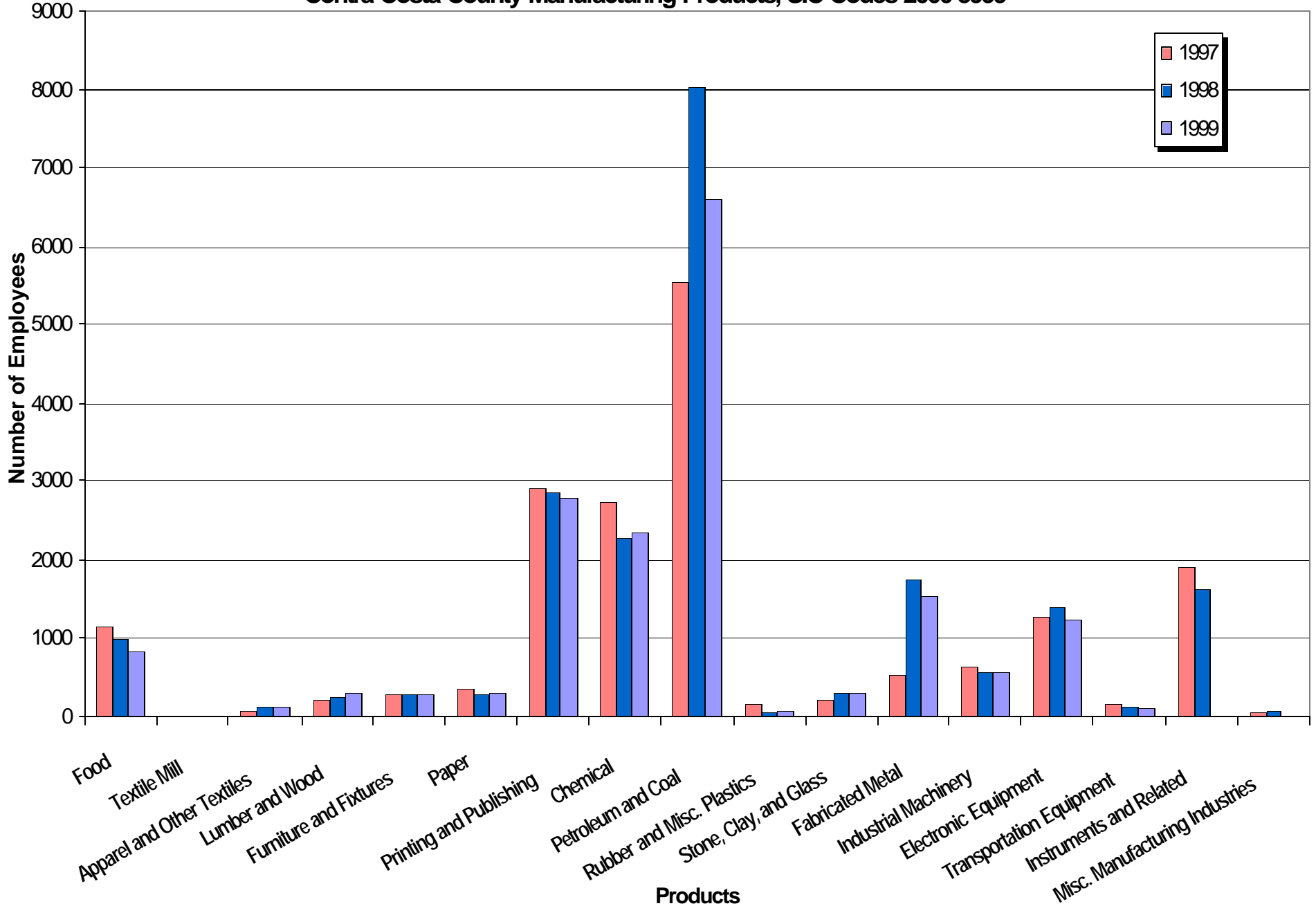


CONTRA COSTA COUNTY INDUSTRY & CLUSTER CHARTS

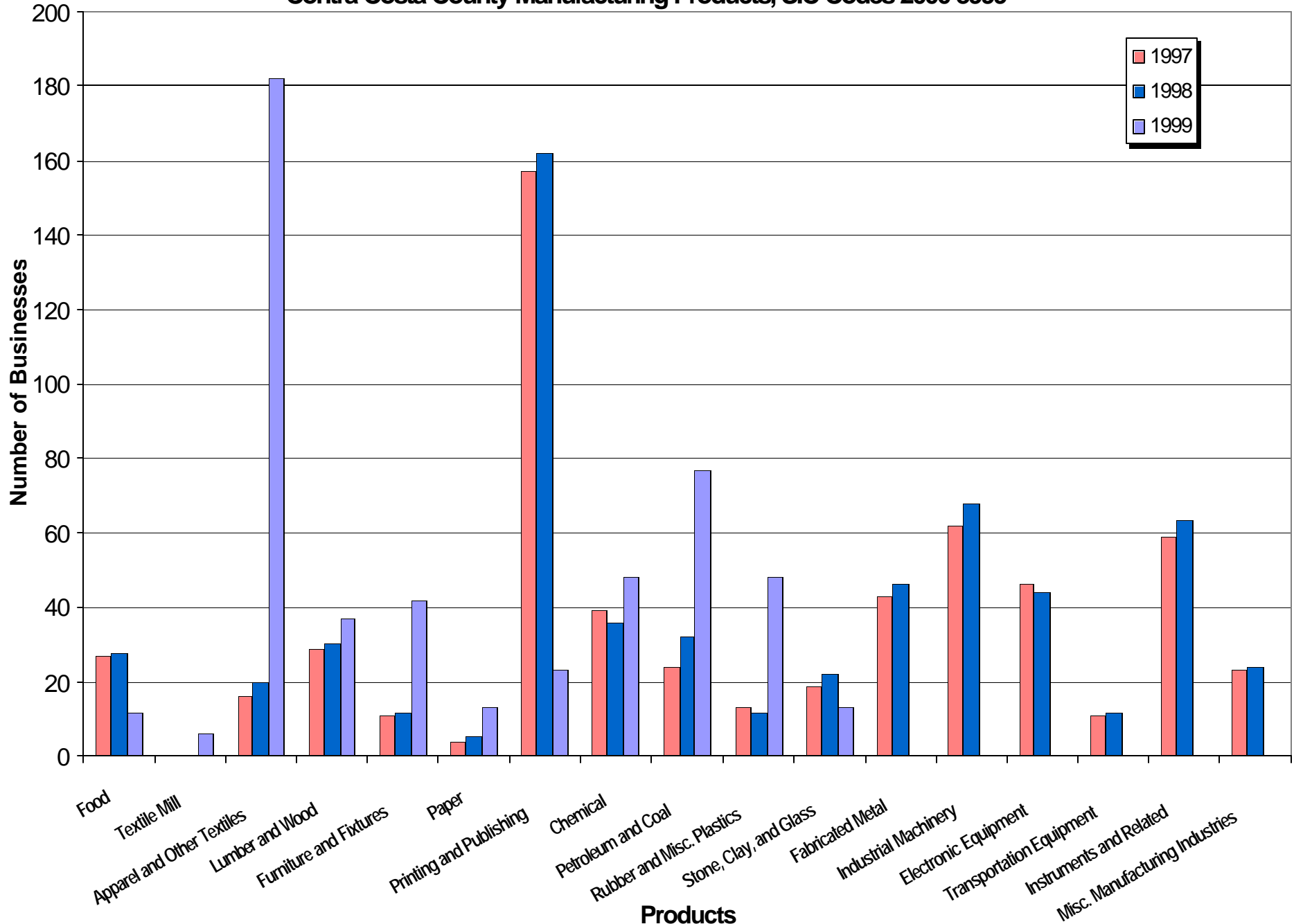
Contra Costa County Cluster Employment



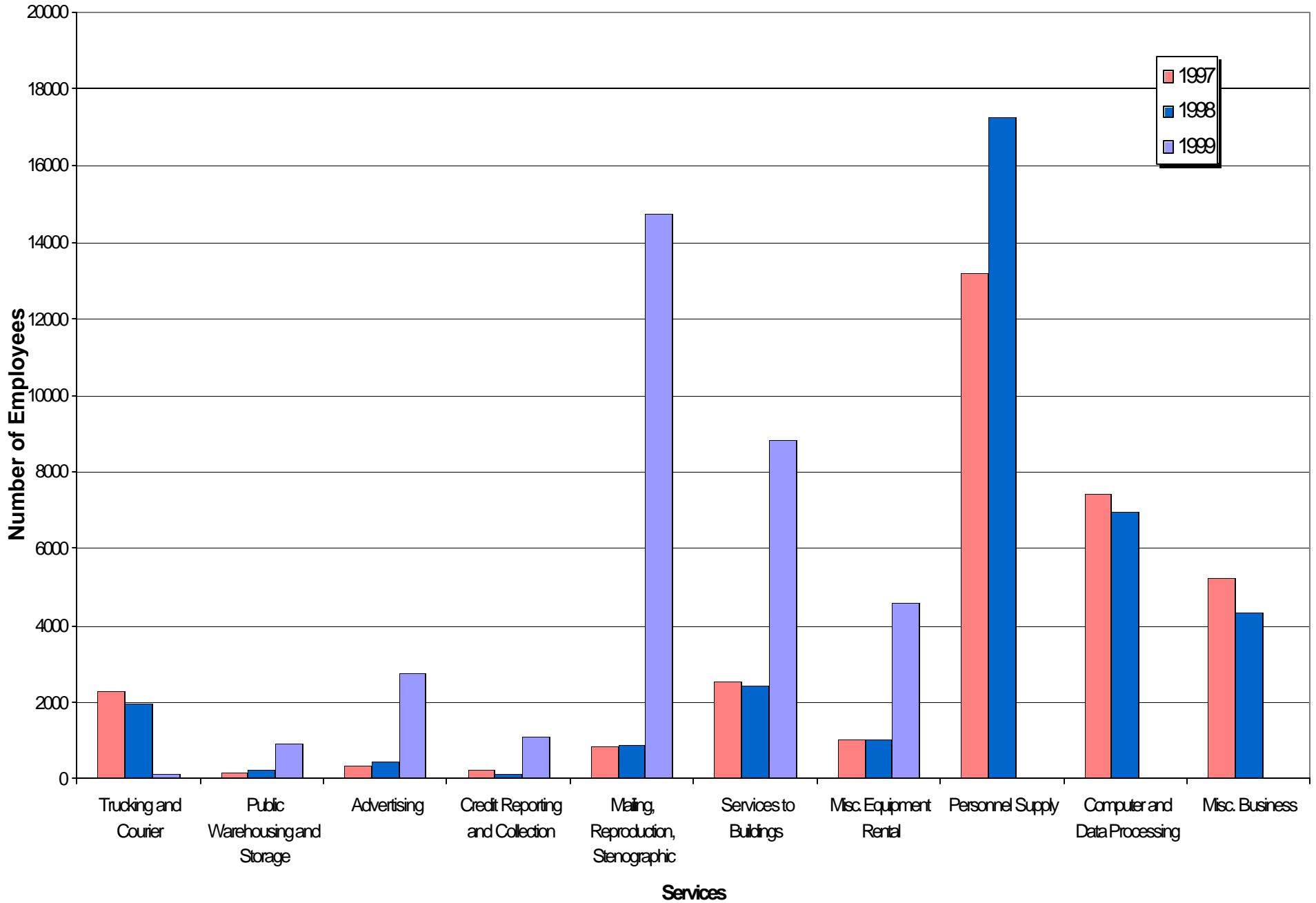
Contra Costa County Manufacturing Products, SIC Codes 2000-3999



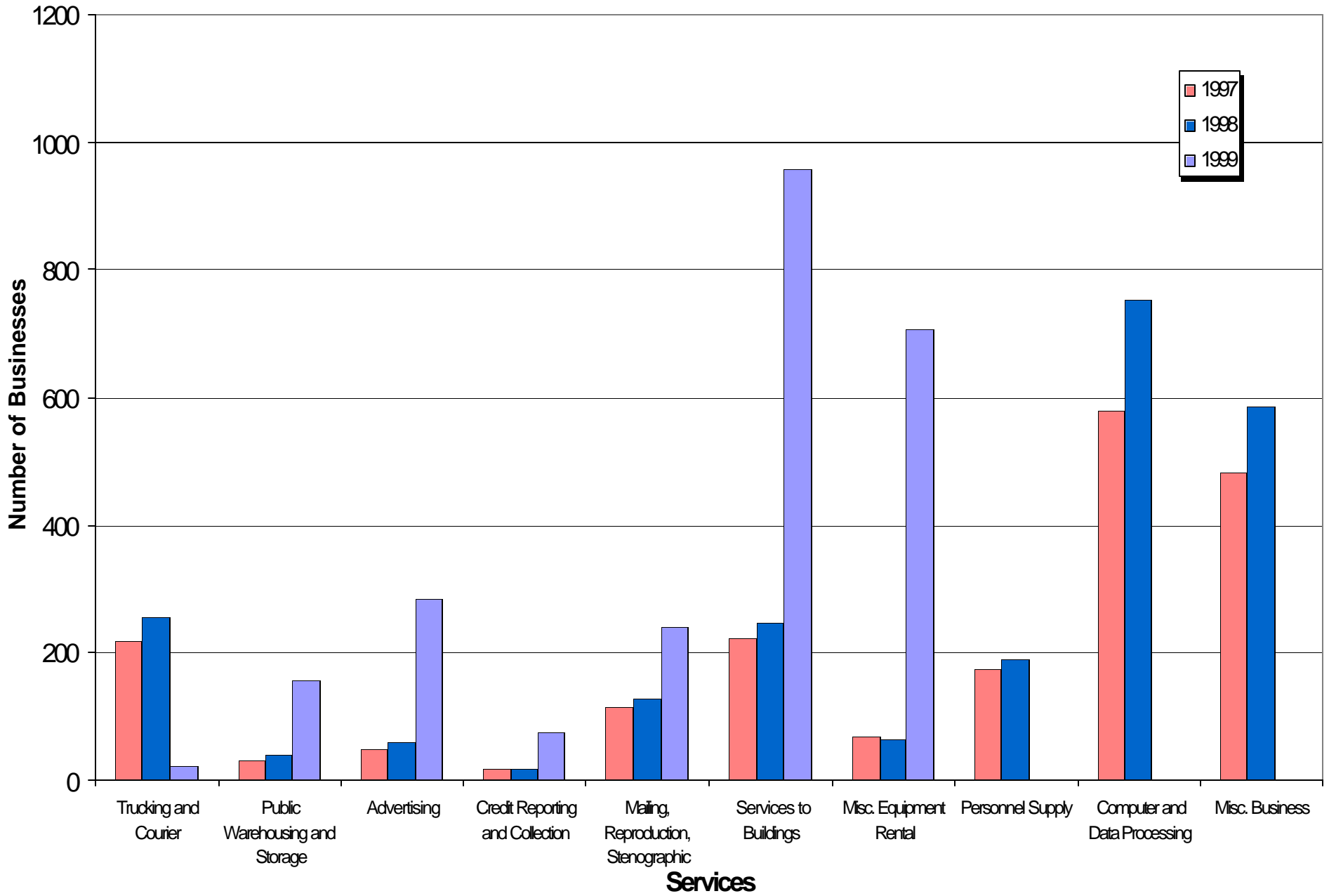
Contra Costa County Manufacturing Products, SIC Codes 2000-3999



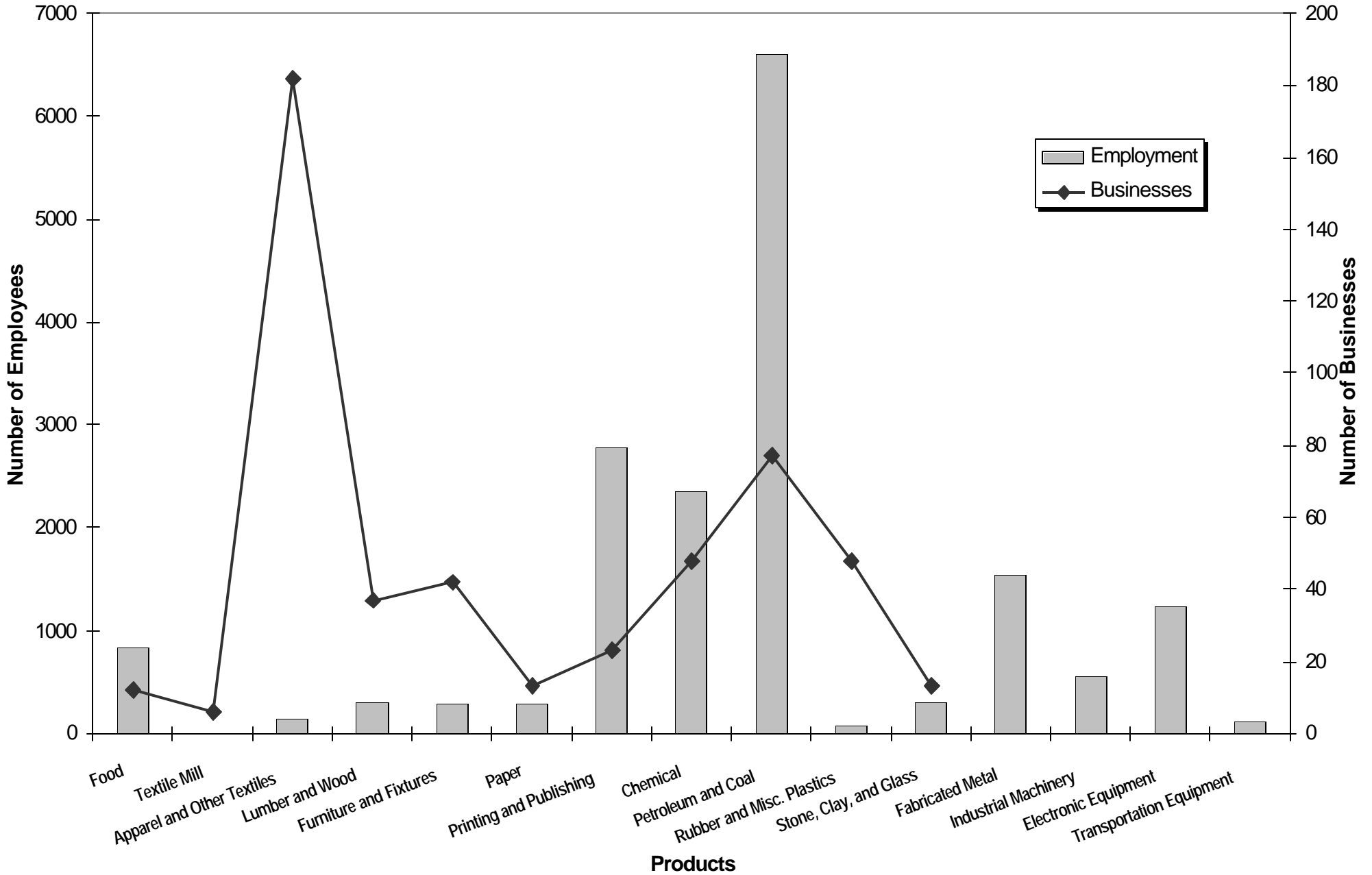
Contra Costa County Distribution Services, SIC Codes 4200-4299; Business Services, SIC Codes 7300-7399



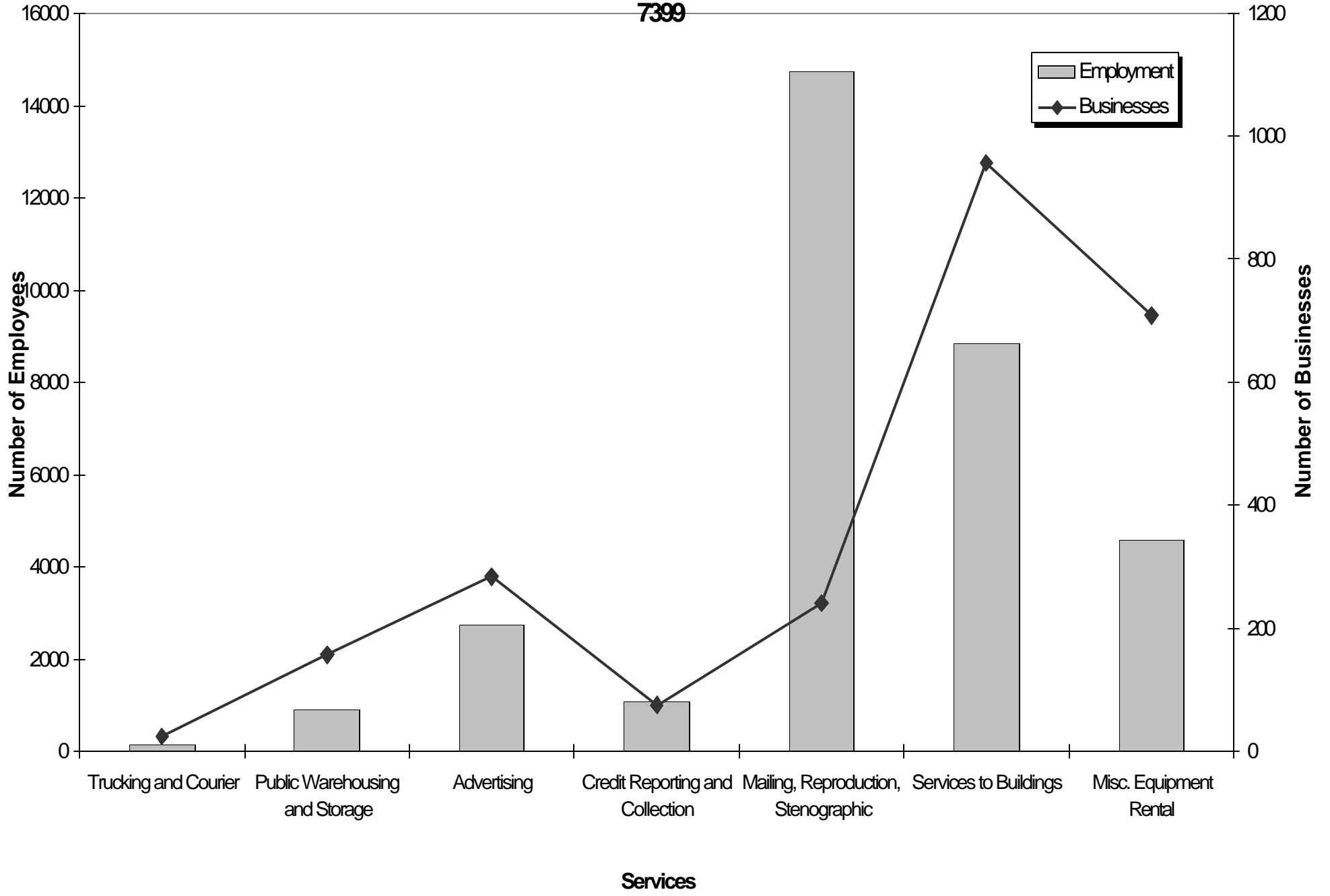
Contra Costa County Distribution Services, SIC Codes 4200-4299; Business Services, SIC Codes 7300-7399



Contra Costa County Manufacturing Products, SIC Codes 2000-3999



Contra Costa County Distribution Services, SIC Codes 4200-4299; Business Services, SIC Codes 7300-7399



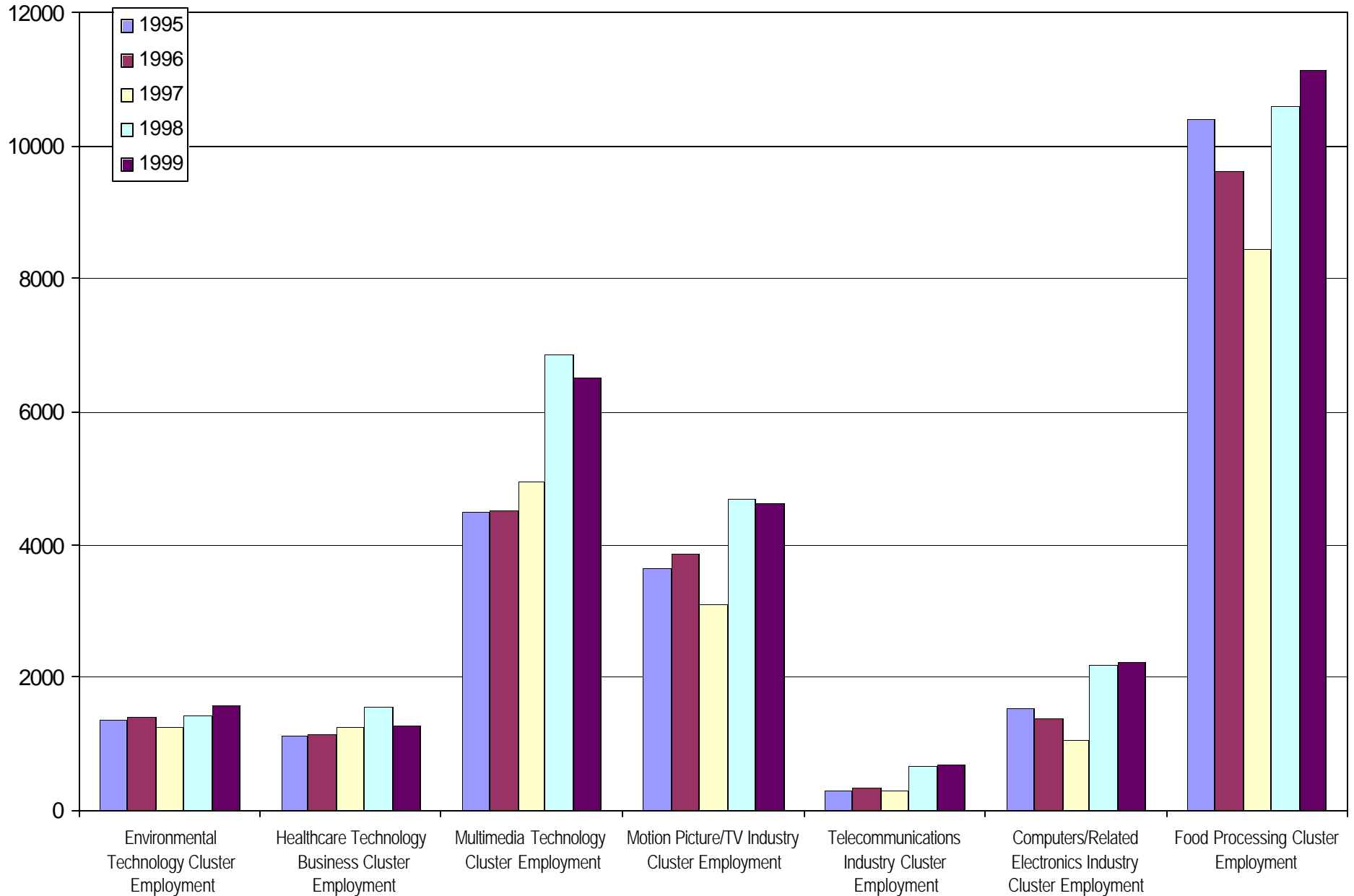


**Economic Development
Alliance For Business**

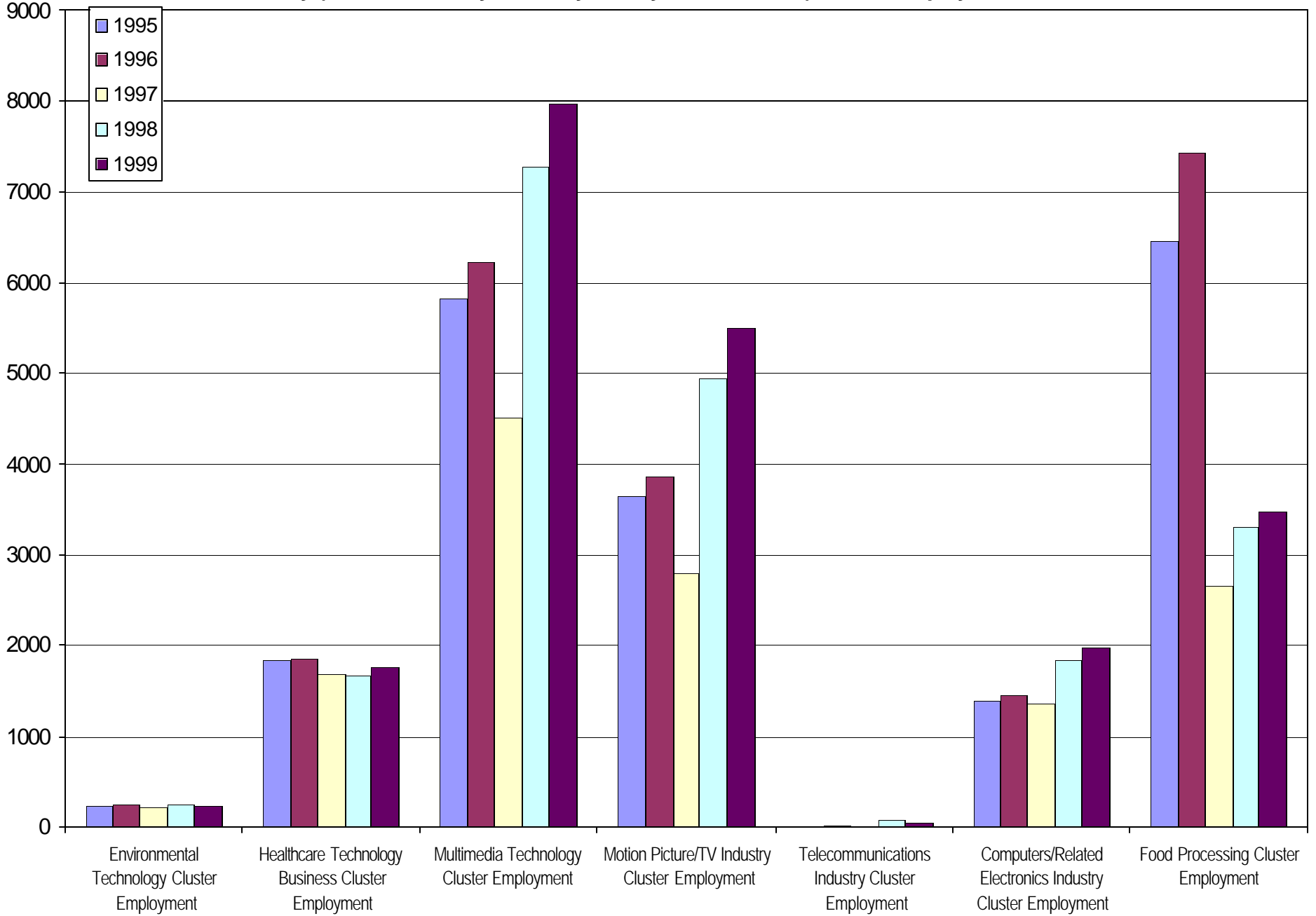
*Building Resources,
Businesses & Quality Jobs*

**ALAMEDA COUNTY
SUB-REGION
CLUSTER CHARTS**

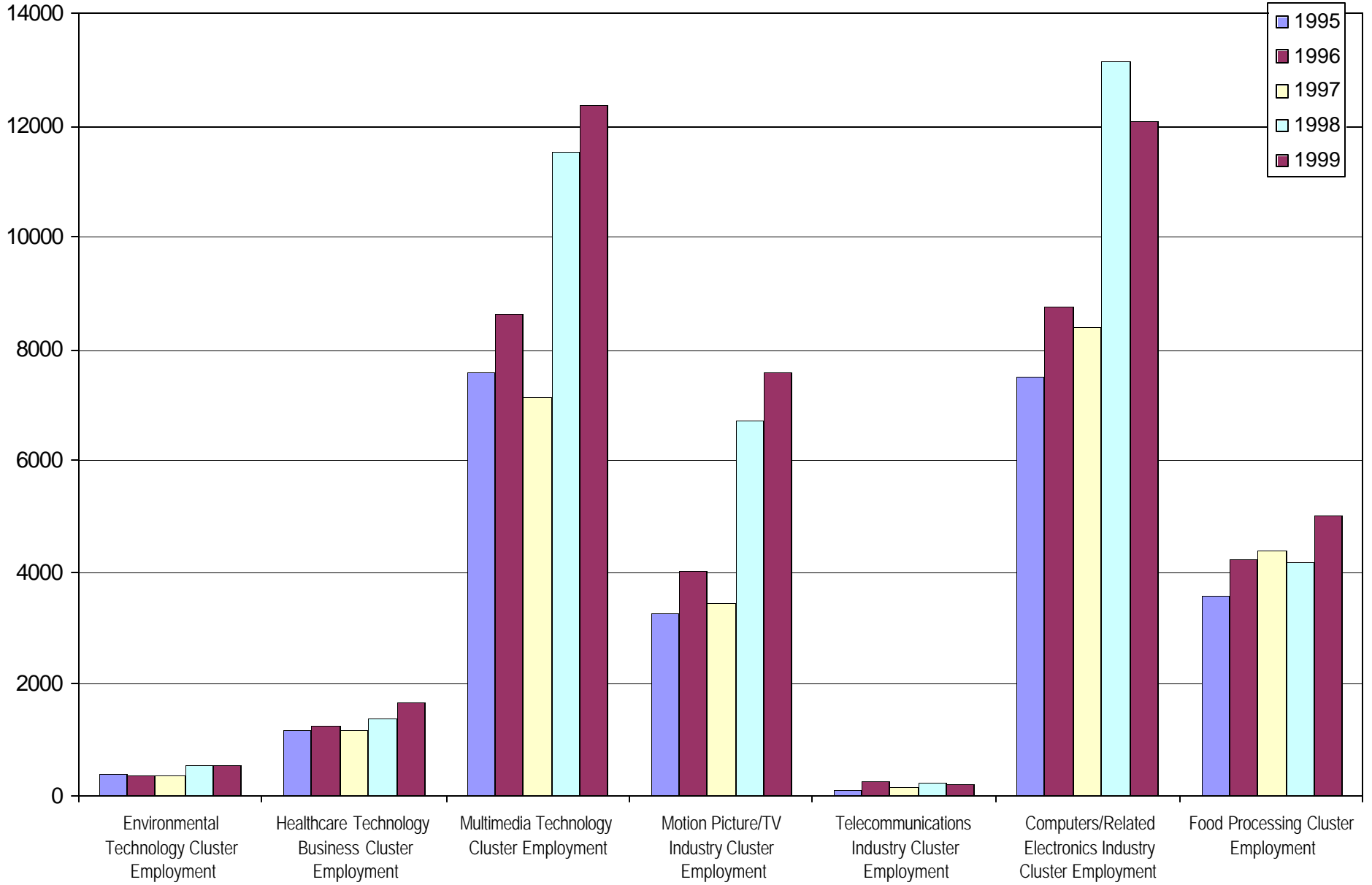
Mid County (Hayward, Oakland, San Leandro) Cluster Employment 1995-1999



North County (Alameda, Albany, Berkeley, Emeryville, Piedmont) Cluster Employment 1995-1999



South County (Fremont, Newark, Union City) Cluster Employment 1995-1999



Tri-Valley (Dublin, Livermore, Pleasanton) Cluster Employment 1995-1999

