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On the Move: California Employment Law and High-Tech Development

With the high-tech sector still mired in a slump, critical questions include where the industry will head next, and what role Silicon Valley will play in future waves of tech innovation and investment. The Internet and tech investment bust left many failed firms and thousands of unemployed workers in its wake in the Valley. Yet this area has reinvented and reinvigorated itself before—for example, after the surge in competition from foreign semiconductor makers in the mid-1980s—and is likely to do so again. Silicon Valley's competitive edge in tech development and marketing has been linked to several factors, including the active role of local universities and research centers and a unique set of venture capital firms. Some observers also have pointed to a business culture that provides an unusual degree of support for employee mobility and entrepreneurship, thereby spurring innovation through the rapid diffusion of the tech knowledge base. In this *Economic Letter*, I discuss the role of employee mobility and knowledge transfer in the development of tech centers, and I describe an underlying feature of employment law that may help support tech innovation in California and a few other states.

Employee mobility

One oft-cited aspect of Silicon Valley is rapid turnover among skilled employees and entrepreneurs (Saxenian 1994). In some industries, on-the-job skills specific to a particular firm lead to human resource practices that encourage long-term jobs. In other industries, essential skills and knowledge are more general, pertaining to the industry as a whole rather than to a specific firm. Under such circumstances, frequent job mobility can increase the pace of technological change and product innovation through the rapid dissemination of ideas and knowledge. The term “high-velocity labor market” was coined by Hyde (1998) to describe a regional labor market where skilled employees switch firms frequently, bringing valuable skills with them to existing firms and spinoffs alike, functioning as entrepreneurs in some cases and as essential development staff in others. The rapid dissemination and cross-fertilization of innovative ideas such mobility

affords likely offers collective advantages to the industry as a whole in a rapidly changing environment, since the spread of some ideas is essential to their successful development.

Saxenian contrasts Silicon Valley with the Route 128 corridor near Boston, which she describes as dominated by more traditional, vertically integrated companies. Route 128 firms tend towards well-defined hierarchies and internal promotion ladders, networks that look inward rather than outward, and attitudes about company loyalty and business failure that suppress worker mobility and risk-taking. In this environment, job-hopping is discouraged, and spinoff activity does not occur at Silicon Valley's dizzying speeds. While this alternative model offers its own advantages, especially for sustained research and development, it may offer disadvantages when product development is fast-paced.

Direct evidence on the relative extent to which Silicon Valley is characterized by rapid employee turnover and knowledge transference is limited. Saxenian (1994, pp. 30–37) relies largely on anecdotal evidence based on interviews with executives from Silicon Valley and Route 128, many of whom worked in both regions during their careers. In addition, using a sample of 275 semiconductor industry engineers for the late 1980s, Angel (1989) found statistically significant evidence of higher turnover among those who work in Silicon Valley, compared with the rest of the country. Although not definitive, the available evidence suggests that the Silicon Valley labor market operates differently from other high-tech labor markets.

This apparent difference between Silicon Valley and Route 128, and the areas' divergent development paths in the 1980s and 1990s, have been explained as the outgrowth of cultural differences that emanate from Route 128 executives' traditional approach to business, which contrasts with the more open-minded, “pioneer” attitudes in California. But relying on cultural differences as an explanation begs the question of what underlies them. Moreover, no matter what business culture prevails, firms

in general prefer not to lose valued employees to competitors and often act to prevent employee defections, through legal channels or other means. This occurs in Silicon Valley as well as elsewhere. Yet tech firms in Silicon Valley appear to have a culture that encourages employee mobility, which may increase the region's innovative capacity but sometimes works against individual firm interests. Why?

The legal status of “covenants not to compete”

One potential explanation for Silicon Valley's culture of employee mobility, which only recently has been identified by legal scholars, rests on elements of California employment law that developed largely through historical accident (Gilson 1999). In particular, Section 16600 of the California Business and Professions Code specifies that “every contract by which anyone is restrained from engaging in a lawful profession, trade or business of any kind is to that extent void.” The direct precursor to this law dates to 1872, when idiosyncratic historical circumstances contributed to the passage of a newly designed, comprehensive civil code by the California legislature. The California courts have consistently interpreted Section 16600 as a prohibition against “covenants not to compete.” These are clauses in written employment contracts specifying that after employment termination individual employees may not work for competitors in a specified geographic region corresponding to the employer's market. Most other states allow such covenants if the geographic scope and duration of the prohibition is “reasonable”; the definition of “reasonable” has developed through court proceedings based on employee or employer lawsuits.

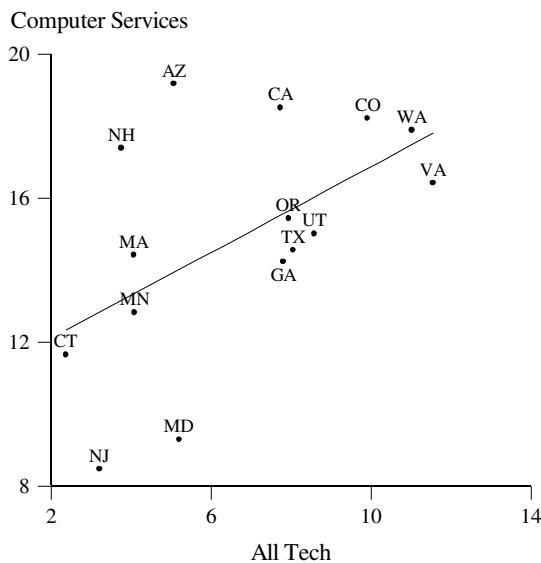
California's ban on covenants not to compete gives departing workers substantial latitude to share critical ideas and knowledge with existing firms or spinoffs. Because this law predates the founding of modern technology industries in California, it probably contributed to the evolution of Silicon Valley's culture of employee mobility. As the Valley developed, court cases highlighted and reinforced limits on employers' ability to restrain the dissemination of their former employees' intellectual capital (see Hyde 1998 for two examples). Of course, departing workers are not allowed to reveal specific trade secrets. In this regard, California law is similar to that in most other states, under the Uniform Trade Secrets Act; in fact, California law provides somewhat broader trade secret protection than the model act (Gilson 1999). However, for workers with general industry knowledge, mobility in California is largely unrestrained.

Recent tech growth

A comparison of tech growth across states illustrates the potential role of the legal climate for employee mobility. I focus on states because the relevant employment laws are defined at the state level. For this exercise, I compare the growth record in the

broad tech sector as defined by the American Electronics Association (AEA 2001) with growth in its computer services sub-sector, which includes, among other enterprises, software makers and Internet companies. The computer services sector was characterized by high growth and rapid innovation between 1995 and 2000, market characteristics that may be enhanced by a legal climate that supports the transference of intellectual capital across competing firms. By standardizing based on overall tech growth, thereby accounting for factors that affect tech growth in general, the comparison between the sectors provides a more informative test of the role of the legal climate than would an examination of either sector alone. To focus attention on states with highly developed tech sectors, the tabulations are provided for the 15 states with the greatest overall tech employment density in the year 2000 (similar results are obtained when all states are used). Among these states, California and Colorado have state laws and relevant judicial interpretation that ban covenants not to compete in employment agreements. By contrast, each of the other states' laws allows for covenants not to compete under general restrictions on scope and duration (Filipp 2001). North Dakota is the only other state in which both the law and judicial interpretation effectively ban covenants not to compete (Hyde 1998, Filipp 2001), but its tech sector is too small for inclusion.

Figures 1 and 2 display average yearly growth rates for employment and annual salaries in the computer services and broad tech sectors during 1995–2000. The growth rates for each state are indicated by the points, and the lines represent the least-squares fits for these points. States lying above the lines experienced relatively rapid growth in computer services employment or salaries, given the average relationship between growth in computer services and broad tech. In Figure 1, California and Colorado are among the few states that lie above the line and therefore are outliers with respect to employment growth in computer services. For these two states, unusually rapid growth in computer services employment likely is linked to a legal environment that supports the transference of intellectual capital across competing firms. Arizona and New Hampshire also are outliers with respect to relative employment growth in computer services. However, broad tech growth was not very rapid in these states; an unfavorable legal climate for employee mobility may play a role in this regard, by limiting the pace of growth in innovative sectors other than computer services. Moreover, Figure 2 shows that growth in annual salaries, which reflects value per employee—an important measure of industry performance—was not as rapid in Arizona and New Hampshire as it was in California and Colorado. The slope of the fitted line and close clustering of points around it in Figure 2 indicate that tech labor markets are

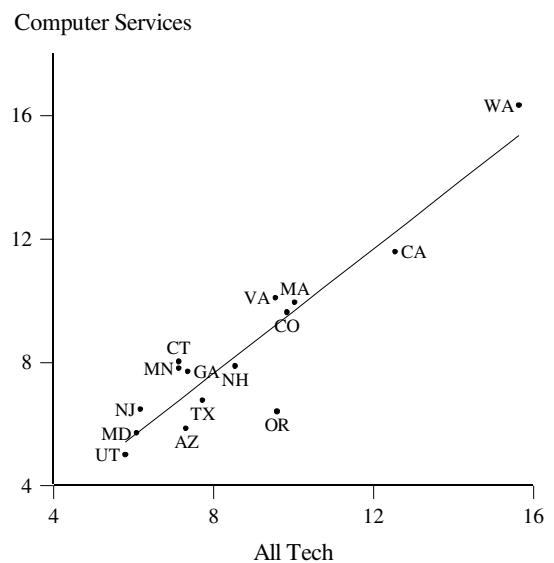
Figure 1**Yearly employment growth (%) 1995–2000**

not highly segmented, in the sense that tech employees within a state faced relatively uniform rates of salary increases across sub-sectors.

Of course, other factors besides employment law affect employment and salary growth in tech sectors. For example, Washington state stands out as a high performer, largely due to idiosyncratic factors that underlie Microsoft's decision to locate in the Seattle area. And in California and Colorado rapid tech growth is related in part to the pre-existing density of broad tech activities in the base year (1995). However, the base year density in those states in turn may reflect the prior impact of rapid employee and entrepreneurial mobility. Overall, although these comparisons are not comprehensive, they suggest that employment laws favorable to transference of employees' intellectual capital may play an important role in the development of rapidly innovating tech sectors.

Implications

This discussion suggests that Silicon Valley's success may derive in part from some unique features of California employment law. Like all states, California law does not protect employees who reveal trade secrets. However, for more general forms of industry knowledge, California's legal ban on covenants not to compete may enhance the dissemination of knowledge and ideas through rapid employee and entrepreneurial mobility. This system of law shaped Silicon Valley over a long period, and as such cannot be simply imposed on other regions as a means of enhancing regional tech development. Moreover, these arguments should not be construed as minimizing the vitality and innovative drive of other regions, or the value of development and innovation

Figure 2**Yearly salary growth (%) 1995–2000**

that occurs under the auspices of a single worker or team working for a single employer for a sustained period. But in regard to some products whose development benefits from the rapid cross-fertilization of ideas, states like California and perhaps Colorado, whose laws support mobility of intellectual capital, may have an edge.

Rob Valletta
Research Advisor

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