# 4 TECHNOLOGY REGIONS

Silicon Valley has earned a reputation of being the technological capital of the world. It is home to such companies as Hewlett Packard, Apple, Oracle and Sun. Newsweek (November 9, 1998) identified the following cities as the "Hot New Tech Cities" or technology regions attempting to challenge Silicon Valley.

| No | City |
|---|---|
| 1 | Austin, Texas |
| 2 | Bangalore, India |
| 3 | Boise, Idaho |
| 4 | Boston, Massachussetts |
| 5 | Cambridge, England |
| 6 | Champaign-Urbana, Illinois |
| 7 | Salt Lake City, Utah |
| 8 | Seattle, Washington |
| 9 | Tel Aviv, Israel |
| 10 | Washington, D.C. |

**Table 1**: *Hot New Tech Cities (Source: Newsweek)*

The above list is not exhaustive, as there are other technology regions around the world achieving different levels of success such as Taiwan's Hsinchu Science-Based Industrial Park.

### 4.1 Characteristics

The following characteristics were used to identify the successful technology regions:

1. The presence of a major research institution. Silicon Valley's success is closely linked with Stanford University, which created a technology park in the 50s by leasing its land with the intention of creating a centre of high technology close to a cooperative university. Cambridge University in England is encouraging its staff to venture into business with 2 of its colleges having opened science parks to incubate start-ups.

2. A minimum of 1 megasuccess story. Washington is home to companies such as Microsoft and Amazon dot com with Austin famous for Dell and Bangalore for Tata Unisys and Wipro.

3. Presence of high-tech talent. The presence of major research institutions generate successive batches of high tech talent while the megasuccess stories along with their supporting industries attract outside talent to move in to take advantage of the economic opportunities available.

4. Availability of Venture Capital. Silicon Valley's success is characterised by the presence of large amounts of venture capital with experienced lenders willing to take high risk for potential high rewards. With the dot com bust, lenders have become very much more tight and stringent with start-ups. The new technology regions are also attempting to imitate Silicon Valley's success with venture capital in the hopes of finding the next e-Bay.

5. Infrastructure. The new technology regions have emerged in the context of adequate supporting infrastructure which includes physical

infrastructure such as the telecommunications network, power and business support services such as lawyers, printers etc.

6. Entrepreneurship. Start-ups forming in the new technology regions have entrepreneurs as their founders who are very different from the traditional entrepreneur. The tech entrepreneur is extremely ambitious in the way he wants to change the way things are done. This naturally entails high risk and with it the potential for very high returns.

### 4.2 Benefits

The establishment of technology regions provides economic benefits in several ways. Productivity as measured in terms of value added per employee is higher in such areas and as a result per capita income is also higher. In Silicon Valley the per capita income increased from USD37,400 in 1990 to USD57,400 in 2001, a gain of 53%. During this period the US per capita income rose approximately 15% from USD26,500 in 1990 to USD30,800 in 2001.

Technology regions also provide employment growth opportunities with employment in Silicon Valley growing at an average annual rate of 3.9% between 1992 and 2000. However due to the technology bubble burst, Silicon Valley saw its first net job loss in nine years of about 1.8% in 2001.

For governments, the high per capita incomes is attractive, as there are more taxes to collect and none of the pollution of other industries.