Research in International Business and Finance 23 (2009) 134–143

Contents lists available at ScienceDirect

Research in International Business and Finance

journal homepage: www.elsevier.com/locate/ribaf

From collective learning to Silicon Valley replication: The limits to synergistic entrepreneurship in Sophia Antipolis

Robert Isaak

Lubin School, Pace University, 861 Bedford Road, Pleasantville, New York 10570, USA

ARTICLE INFO

Article history:
Received 15 February 2007
Received in revised form 12 December 2007
Accepted 10 March 2008
Available online 25 April 2008

JEL classification:
O-18

Keywords:
Collective learning
Silicon Valley replication
Synergistic high-tech innovation
Hot spots
Serial entrepreneurship
Sophia Antipolis
Endogeneous creativity

ABSTRACT

Taking Silicon Valley as a "Weberian ideal type" of high-tech development, one can derive 10 key characteristics which together can be used to measure to what extent other regions of the world have been able to duplicate this "hot spot" of economic transformation. Comparisons of such synergistic entrepreneurship are illustrated by the case of Sophia Antipolis in France, characterized by initial large company involvement, a utopian environmental design by Pierre Laffitte and the process of high-tech innovation among small and medium-sized companies, particularly in the telecommunication sector.

1. Background

Silicon Valley appeared in the global economy after World War II as what novelist John Gardner would have described as a vivid and continuous dream. This 50 mile strip between San Francisco and San Jose, California still attracts one-third of the world's venture capital: it has become the icon of cutting edge high tech and new economy start-ups. By identifying key characteristics of high-tech "hot spot" development, one can derive indicators which can be used to measure roughly to what extent other efforts at serial entrepreneurship have succeeded or failed to create such a synergistic competitive nexus. One such endeavor will be compared here with Silicon Valley: Sophia Antipolis, the

E-mail address: raisaak@gmail.com.

0275-5319/$ – see front matter © 2008 Elsevier B.V. All rights reserved.
doi:10.1016/j.ribaf.2008.03.006

vivid but discontinuous dream of French Senator Pierre Laffitte, a 140 ha, green, high-tech industrial park and intellectual center located at in the Côte d'Azur, a half an hour from Nice and 20 min from Cannes. Laffitte wanted to integrate science and the humanities in one place in order to encourage the cross-fertilization of research, academia and industry and to attract major companies, while keeping two-thirds of the intellectual-industrial park as undeveloped nature.

The main prerequisite for replicating the success of Silicon Valley is the creation of a culture of learning and innovation that attracts and keeps the best and brightest young scientists, entrepreneurs and venture capitalists. This kind of collective learning, which transcends learning as mere reduction of error and leads to the self-fulfilling "pull" of cultural and economic soft power, can be broken down into three distinct patterns: (1) open synergistic networking based upon trust, (2) radical quantum leaps for technological breakthroughs, and (3) striving for absolute excellence beyond all existing benchmarks (Isaak, 2000).

These transformational learning patterns evolve from an extremely competitive interactive milieu between prestigious universities and the high-tech businesses which they spawn. Stanford University was not only determined to best its rival, the University of California at Berkeley, but to become "the Harvard of the West" and to surpass M.I.T. on the East Coast. To succeed in this agenda, Stanford required administrators of high academic accomplishment who believed in their field with almost a religious fervor, permitting them to recruit the best talent available, who even were willing to put up their own money for start-ups. Frederick Terman became the point man, first as Dean and then as President. "The godfather of Silicon Valley," Terman embodied the emerging field of electronics, published the first text in the discipline and recruited people back to Stanford like William Hewlett and David Packard (to become the founders of Hewlett Packard) and William Schockley (a co-recipient of the Nobel Prize for the discovery of the transistor who brought the "silicon" to Silicon Valley) by providing his own money for their start-ups and by persuading the board of Stanford University to establish the Stanford Industrial Park on university property (Kaplan, 2000). Terman set out deliberately to build what he called "steeples of excellence." In this sense, Silicon Valley was more a result of planning than of accidental good fortune.

Stanford was thus positioned to specialize in a cluster of industries in the same sector (microchip and information technology) enabling it to become "the first mover" in a global technology revolution (the information technology revolution) that can perhaps only be compared in scope with the industrial revolution. The importance of *being first* to the market with an innovative technology cannot be overstated. The valley or region thus obtains the best minds and companies at the cheapest rates and benefits most from the growth curve and eventually from the brand-name associated with firms demonstrating overwhelming initial global success such as Intel, Apple and Google. Moreover, to maintain their initial starting position, such companies strive for excellence and maximum global market share, using any tactics available to raise the entry cost of competitors into their markets. Management guru Peter Drucker noted that in the knowledge economy imperfect competition seems to be inherent in the economy itself and that initial advantages gained through the early exploitation of knowledge (the "learning curve") become permanent and irreversible. To compete with Silicon Valley, for example, Harvard had to set up its own institute there having lost many students who transferred to the Valley. This strategy confirmed a recognition of the failure of "Route 128"—a would be high-tech hot spot around Boston—to maintain its momentum and to become a viable alternative to Silicon Valley (The Economist, 1997).

The reason for the "failure" of Route 128 is instructive: according to management professor Blair Sheppard, Boston's regional competitiveness was undermined by its Puritan background, the cultural tradition beneath the assumptions that it is disloyal to quit your firm and that you should never share information (Saxenian, 1994). In contrast, the success of Silicon Valley depended upon the efficiency of knowledge transfer, which only comes about with a high turnover of scientists and engineers combined with extraordinary openness concerning technical information (Cookson, 1999).

Such openness of communication and tolerance for disloyalty typically evolve in a region where political stability can be taken for granted and where there is enough leisure time for experimentation and hobbies such as ham radio, popular electronics, and personal computer groups—activities widespread in California in the last half of the 20th century.