

HIGH TECHNOLOGY BUSINESS INCUBATORS: THE EFFECT OF EDUCATIONAL LEADERSHIP

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ABSTRACT

Many U.S. universities are pursuing new sources of revenue, as well as regional economic development, through high technology business incubators either independently or in cooperation with strategic partners [10]. Malecki [7] defines high technology as "nonroutine economic activities directed toward developing new products and processes and toward small-volume production of innovative products and services."

Little doubt exists that the transfer of new products and processes from academic research programs to the private sector has been accelerated. For example, university patent applications increased by more than two hundred percent and related license income increased by over six hundred percent from 1991 to 2000 [4]. High tech business incubators are one of the more favored means to encourage technology transfer. The creation of such physical facilities can provide a variety of support services to emerging new businesses and has been a focus of government economic development policy for decades [1] [11]. Proponents argue that the provision of business incubator facilities speeds the development and adoption of innovative new products as well as reduces the failure rate of emerging new products. Whether this position is correct is a nontrivial question. The development of new products and process technologies is the fuel that drives economic growth [9] [2]. People prefer superior products. Really new to the world products such as the internet produce discontinuous leaps in consumption behavior as individuals replace old products that are inferior with new ones. Incremental enhancements to existing products and production processes induce less significant change. The economic welfare of region or a nation will, as a consequence, depend on the generation of new ideas and the successful introduction of related products and process technologies.

A conclusion that high technology business incubators enhance economic development, however, is more an act of faith than reasoned action [3]. The evidence regarding whether or not technology incubators stimulate an increase in high paying new jobs and corresponding economic growth is inconclusive. These contradictory outcomes may be due in large part to the relationship an incubator may or may not have with educational institutions. For example, firms in close proximity to the source of new ideas have been shown to have a product innovation advantage [5] [6]. Porter and Stern [8] also note that the ability of an organization to turn ideas into successful new products depends on the external environment as well as the intrinsic characteristics of the firm.

This study assesses whether university affiliated technology incubators enhance regional economic development. More specifically, whether or not higher education based technology incubators are responsible for superior growth in commercialization activity when compared to other public or private sector business incubators. A model of economic growth which incorporates product innovation is utilized as the theoretical basis for subsequent analysis. Hypotheses are tested using an outcomes oriented approach to explore how aggregate standard of living measures respond in discrepant circumstances. The paper concludes with a discussion of the benefits a community may expect if a higher education institution collaborates with or sponsors a high technology business incubator.