

MNE spinoffs and Cluster Development and Growth

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The economic success of well-known innovative industrial clusters such as Silicon Valley and Route 128 has fostered attempts to transform local economies to successful industrial clusters (Feldman, 2001; Feldman & Francies, 2004). Recently, few researchers introduced dynamic cluster development models such as Avnimelech and Teubal (2006); Bresnahan et al. (2001), Feldman (2001); Feldman and Francies (2004); Feldman et al. (2005), and Menzel and Fornahl (2007).

These model and many other case studies on cluster development suggest that one of the initial stages in cluster development is attracting leading MNE into the region. The desired next stage is a significant increase in local startup formation.

The process of attracting MNE into the region is often a very expensive process, which include significant tax benefits and formation grants for these MNEs e.g. the Ireland government gave significant incentive to attract MNE into the country. However, it is not always clear how sticky are those locations for the MNEs. Often, in market downturns or when new location offer better incentives to MNE, they may leave the region. In addition, it is often assumed that entry of MNE into a region is not a self-reinforcing process.

On the other hand, the process of startup formation usually have very strong local characteristic and self-reinforcing element. In other words, intensive startup formation is related to strong cultural change and co-evolves with the development of significant local cluster infrastructures. Therefore, often intensive startup formation leads to cluster sustainability. However, leading to cultural change toward entrepreneurial region and triggering or enhancing intensive startup formation is often seen as a complex process that could not be achieved by policy measures.

The assumption of many policymakers is that attracting MNEs could be a first step in creating the conditions for future intensive local startup formation. The argumentation for this is the following: a) MNE creates a pool of skilled workforce and knowledge spillovers; b) MNE may become costumers of local technological service providers. According to this assumption the next phase after the entry of NMEs into a cluster will be characterized by intensive startup formation mainly based on entrepreneurs that had previous experience in the local subsidiaries of these MNE.

On the other hand, it could be that these MNEs would not enhance entrepreneurship. Moreover, the MNEs may have minimal interaction with the regional cluster and thus would not create significant knowledge spillovers and will maintain minimal costumers-suppliers interaction within the cluster.

This research will test these assumptions empirically. We will compare the impact of a number of leading MNEs in various high tech clusters on startup formation in those regional clusters. We will compare the level of spinoffs i.e. startup created by previous employees of MNE (direct spinoffs – the last work of the entrepreneur was the MNE; indirect spinoff – the entrepreneur work at least in one job after he left the MNE and before he created the startup).

The paper compares the ICT clusters that are located in the following regions: Tel Aviv, Israel; RTP, NC; Austin, TX; Denver, CO; Washington DC; Route 128, MA; San Jose, CA; and other ICT clusters.

Initial result suggest that these clusters has different patterns of spin-off e.g. in some clusters most of the startup are created by entrepreneurs previously employed by the leading companies in the region while in other clusters the sources of entrepreneurs are more diversified.

Table 1: Percentage of entrepreneurs previously employed by leading companies

	Silicon Valley	Route 128	Denver Colorado	Tel Aviv Israel	Austin Texas	Research Triangle	Washington DC
% Top 10	22.0%	10.7%	11.5%	18.9%	22.0%	16.1%	7.9%
% Top 25	32.2%	16.3%	15.5%	30.3%	30.0%	21.6%	11.1%
% Top 50	39.2%	19.1%	18.6%	40.2%	34.6%	23.9%	13.0%

Table 2: Percentage of entrepreneurs previously employed by leading companies

	Silicon Valley	Route 128	Denver Colorado	Tel Aviv Israel	Austin Texas	Research Triangle	Washington DC
HQ out of Top20	11	3	1	14	6	3	0
G. Top10 out of Top10	8	9	9	3	8	8	9
G. Top20 out of Top20	13	14	13	4	11	12	13

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ⁱ The reference list includes references that are not in the abstract but will be at the paper.