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Utility of location: A comparative survey between small new technology-based firms located on and off Science Parks—Implications for facilities management

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Abstract

This paper aims to highlight the role of facilities management (FM) for new technology-based firms (NTBFs) that are located on respectively off Science Parks. It incorporates FM as a contributory background element in the enhancement of the entrepreneurial environment, which is one explanatory factor of the superior performance and growth of NTBFs located inside Science Parks. Differences in location preferences between on and off park NTBFs are brought into evidence in this paper by means of an extensive quantitative survey. This resulted in the finding that the proximity to university is especially significant among NTBFs inside parks. Furthermore, infrastructure has high significance in both groups whereas significance of facilities cost differs in range of significance. In a model it is argued that FM indirectly contributes to beneficial scenarios for interaction, interfirm relations and networks that can be found particularly in Science Parks. A discussion and a set of hypotheses in the conclusive part link FM and location issues to the performance for NTBFs.

Keywords: Facilities management; Entrepreneurial environment; Location; NTBF; Performance

1. Introduction

What can growth firms learn from the more successful firms that have established within the realms of a Science Park? How can the role of facilities management (FM) be linked to their success? The aim of this paper is to link the significance of facilities management and location among New Technology Based Firms (NTBFs) that are located on respectively off Science Parks. A comparison between the two categories is made through quantitative methodology. Although all NTBFs do not grow, here it will be assumed that technology-based growth firms have the similar basic performance variables and FM needs as those of NTBFs.

Science Parks provide an important resource network for new technology-based firms (NTBFs). The government and other organizations—The Swedish Board for Industrial and Technical Development—have introduced regionally targeted measures to provide an appropriate physical infrastructure for the encouragement of economic development in deprived and depressed localities. Central government has a long history of providing support for R&D, the transfer of technology and its diffusion into industry. Local authorities in Sweden have developed a range of local economic initiatives designed to create new employment opportunities. One element has been the encouragement of NTBFs in order to achieve high rates of growth. Local authorities have also played a key role in encouraging universities to take a more active role in the revival of local economies. Several financial institutions have made commitments to Swedish Science Parks, although these may have been prompted more by promotional and social reasons rather than commercial criteria (Löfsten and Lindelöf, 2002).

The theories of Williamson (1975) argue for minimizing transaction costs through a balance between employment

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and leasehold of staff. An outsourced function of a firm thus reduces the cost of facilities for employees that must be carried by other actors on the market. The outsourced staff is accessible through physical proximity, infrastructure or virtually by IT-technology. Williams (1996) presents two categories of management structures: (1) the in-house management with traditional hierarchy structure and (2) the 'intelligent' client with flatter management structure. The latter is characterized by outsourced facilities services and team structures. Inadequate provision of facilities might put the core business into a risky situation, which sometimes argues for the provision of external forces, if the facilities management skills there are higher than within the firm. An example of this might be the management of a start-up firm that consider themselves as having no experience of handling facilities, and only having the resources to concentrate on the core business. Incubators and Science Parks cover the facilities needs of start-up firms by offering them bundles of services that large and mature firms with developed FM structure can enjoy.

The purpose of this paper is to relate location to facilities management, and how it can affect the growth and performance of NTBFs through the enhancement of the entrepreneurial environment. Comparison is made between NTBFs located on respectively off Science Parks through a model based on an empirical sample of 273 new technology-based firms in Sweden.

The paper is structured as follows: Section 2 briefly discusses FM, location, Science Parks and NTBFs. Section 3 outlines the methodology adopted in the study, while Section 4 presents the findings from our survey. Section 5 discusses the findings and their implications, and Section 6 presents some conclusions expressed in hypothesis.

2. Frame of reference

2.1. Facilities management and location

For approximately two decades, various definitions of facilities management (FM) have appeared in literature. The International Facilities Management Association (IFMA) defines FM as the purpose to plan, to provide and to manage productive work environments. In recent years, the notion of FM also tends to incorporate location, infrastructure and urban planning (van Wagenberg, 1997; Meneghetti and Chinese, 2002). McGregor and Then (1999) categorize the professional field of FM into strategic, tactical and operational tasks, where the strategic part encompasses the mission statement and business plan of companies. Duffy et al. (1993) place FM as being a part of the proactive innovation of companies which today demand more than a traditional administrative approach. In the future, offices are forecasted to satisfy goals of less occupancy costs and increased feasibility of interaction between staff. An office layout called the club was created that would manage both individual work and cross-disciplinary work teams in knowledge intense businesses (Duffy, 1997).

The evolution of growth firms has been described in various phase models such as the model of Greiner (1998), and the evolution in the field of FM among growth firms has been described by Blyth and Worthington (2001), and more recently, by Bröchner and Dettwiler (2004) who created a model of three successive phases (the entrepreneurial phase, the managerial phase and the consolidation phase) focusing on the growth of employees and how they affect facilities use among growth firms. The entrepreneurial phase aims to describe the FM situation among start-up firms that is characterized by intense and informal interaction handled bad space and FM skills that are assumed to be ameliorated in later phases through increased knowledge. In the managerial phase, the facilities of the firm must support increased specialization, hierarchies and location on multiple sites. Partial or entire relocation from Science Parks should occur if the growth of employees exceeds the physical feasibility to house the firm.

The most significant physical features of growth firms are thus expressed through increment of numbers of employees and expansion of spaces located on a single or multiple sites. The first location might occur on the free market with a leasehold agreement or within some kind of incubator environment where additional services can be provided apart from the spatial occupation. Clusters can be considered as an intermediary solution between incubator and location on a complete free market where provision of various services can also be satisfied through various networks and interaction with different stakeholders. Similarly, McCann (2001) summarizes Porters ideas that clustering could be regarded as an alternative organizational form to the market and hierarchies of Williamson (1975), and the significance of mutual visibility that affects competition among the firms within clusters. Interaction is regarded as a significant instrument for transferring tacit knowledge, and consequently, also a prerequisite for the growth of a firm. Surroundings, such as incubators and clusters, that enhance the possibility of interacting through, e.g. elaborated facilities, should affect the growth positively. The necessary interaction varies due to the business sector and character of the firm. Too great an openness and interaction with the environment can sometimes be seen as a threat to secrecy or even specialization abilities of the growth firm (Dettwiler and Bröchner, 2003). To attain interaction at any price is not a self-evident goal for all firms, and probably not always a tool for increased performance (Penn et al., 1999).

Considerable resources are being devoted to Science Parks as policy instruments aimed at promoting research-based industrial and innovative activity. The concept of linkage between commercial enterprises and academic research is central to the US and UK Science Park model (Quintas et al., 1992). Findings show that current UK experience does not demonstrate high levels of such