

Title: A comparative study of technology firms in Tsukuba Science City, Japan and Kulim Hi-Tech Park, Malaysia

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Abstract:

High technology property based development appeared in many other names such as science city, science park, technopolis, technopole, innovation center, among others. Science city is derived from the concept of science park. It is a concept of high technology property based development which links high technology industries, universities, and government together to achieve economic development and promoting R&D activities. The success of this concept accounts for the ever increasing number of high technology property based developments all over the world. However, issues remain on the slow pace of city type development compared to other types like the center and the park type. Some scholars doubted that high technology property based development has been a highly innovative tool in regional development. As such, this study attempts to compare the technology firms' activities in two selected case studies, which are Tsukuba Science City (TSC) in Japan and Kulim Hi-Tech Park (KHTP) in Malaysia. Besides, the author also investigates the urban planning elements of both cases. To carry out this comparative study, the author has visited the sites, interviewed and surveyed the tenant firms. Data gathered was firstly analyzed using the descriptive statistics to provide understanding towards characteristics of firms, urban planning elements and services provided. Secondly, to test the difference of technology firms, two hypotheses were formulated. The non-parametric test of Mann-Whitney test was used. Among the major findings on firm' innovative activities are, firstly, there is a significant difference between two case studies. Secondly, innovative potentials (R&D employees, R&D expenditures, firm size and occupied period) and the level of innovativeness (new or improved products, and new or improved processes) of tenant firms in TSC are higher than KHTP. In terms of urban planning elements, both TSC and KHTP are well planned high technology property based developments and provided state of arts facilities and services. However both are still lacking in the co-supportive relationship with mother city, transportation linkages problems and insufficient population in supporting the development. KHTP should take necessary actions to strengthen its soft structures and provide more consulting and networking services to its tenant firms. Several suggestions were drawn include incorporating knowledge-based economy development concept; incentives to attract technology firms; developing high technology property based development with different functions and focus of technology; co-supportive relationship with mother city; and developing high technology corridor.