論文の内容の要旨

論文題目　Post Industrialisation in Japanese Metropolitan Areas －A Perspective on Demographics －
（日本の大都市圏におけるポスト工業化に関する研究　－人口動態の分析を通じて－）

氏　　名　スタン　アウレリア

Within the relatively new post-industrial paradigm, the communication revolution has facilitated redistribution of economic centres within metropolitan areas. This leads to significant changes mostly in the metropolitan margin that now faces higher growth and an abundance of services. The former mono centric metropolis now becomes poly centric, gaining ever more flexibility as the boundaries between urban and suburban dissolve. The new dynamic and complex post-industrial suburban areas act in partnership with central cities to strengthen metropolitan and regional competitiveness. As the boundary between urban and suburban dissolves, employment centres, services and spatial typologies dissipate more and more throughout metropolitan areas, attracted by the availability of space and low land prices while geographically liberated by the information age. With knowledge and knowledge related activities at the core of local growth, these centres tend to favour areas that allow for activities clustering with human capital as the main resource, therefore sustaining population growth.

The purpose of this study is to provide a basis for urban development and policy in metropolitan areas in Japan. Post-industrialisation of metropolitan peripheries in a poly centric pattern occurs in Japan in the particular context of population ageing and decline. This phenomenon, also known as shrinkage, impacts service provision, infrastructure and the urban fabric as a whole through economic decline and decreasing densities. This study intends to establish a correlation between post-industrialisation and population evolution in the Japanese metropolitan periphery. For this purpose, the three largest Major Metropolitan Areas in Japan, Tokyo, Keihanshin and Chukyo were selected.

Chapter 2 uses existing literature to define post-industrialisation through its fundamental traits, (1) service sector growth and (2) increased emphasis on knowledge at the core of the economy, as well as the main consequences of this economic change: (3) knowledge-based social structure and (4) knowledge cities, as a spatial representation of the new socio-economic paradigm. As this study is concerned mainly with suburban areas within the post-industrial paradigm, the literature review was extended to post-industrial metropolitan areas.

Chapter 3 investigates the correlation between local service sector employment and population evolution and age, in an attempt to map possible development regions within Tokyo, Keihanshin and Chukyo major metropolitan areas. Through linear regression analysis it was established that there is a significant correlation mostly with population evolution, showing that post-industrialisation can be a factor in urban development though not overall population growth. The resulted development regions in Tokyo and Keihanshin prove to still be tributary to industrial geography, as growth happens mostly in proximity to central cities. Since the results singled out Chukyo as fundamentally different from the other two and not influenced by service sector growth, the study area was restricted thereafter to Keihanshin and Tokyo.

Chapter 4 uses the same main structure previously established, attempting, through multiple regression analysis, to

determine a correlation between higher education and research activities and population evolution, proceeding again to a mapping of the results for the purpose of better defining growth regions within Tokyo and Keihanshin major metropolitan areas. In this second part, the study considered different aspects of knowledge related activities as: size, distribution and diversity. As in the previous chapter, the correlations are significant only in the case of population evolution, no relation with population age being proven to exist. The spatial distribution of growing areas overlaps with the one established in the previous part, underlining a metropolitan structure that still shows industrial traits.

Chapter 5 integrates the results of the two previous chapters in order to identify municipalities that fulfil the combined set of criteria 50 municipalities were selected. from both Tokyo and Keihanshin Major Metropolitan Areas. As the study, so far, has identified significant correlations between both service sector growth and knowledge production and distribution and only population evolution and not median age, this chapter starts from the assumption that a growing but not a younger population implies that selected municipalities could be cost prohibitive for a younger population. This third part of the study investigates income disparities within the selected municipalities using rent values, housing ownership and annual household income as indicators. Using contingency tables, it was established that, for each pair of indicators, a substantial majority of the included municipalities surpass central city minimums and, at times, averages, with a higher percentage in Keihanshin Major Metropolitan Area. Hence this study proves the hypothesis that, as in other parts of the globe, post-industrialisation leads to income disparities.

In Chapter 6, out of the 50 municipalities, 8 were further selected as being part of two knowledge city-regions, one in Tokyo MMA and the other in Keihanshin MMA: Tsukuba Express Development Area and Keihanna Science City. As the knowledge city is the urban form of post-industrialisation, the final part of this research attempts to determine wether a clustering of research and high education activities can be associated with population growth. In both science city-regions, municipalities that did not meet the criteria for the previous chapter but are part of the science city-regions were included as well, with the exception of central cities (Tokyo Wards) or prefectural capitals (Nara). The population growth analysis was conducted through mapping recent population evolution data at a “chome” level and determining growth regions. The results show that highest growth happens in proximity to knowledge related activities, independently from positioning relative to central cities, thus showing that, in the case of knowledge city-regions, the conclusions of the general analysis conducted in the first part of this study do not apply.

In conclusion, this study proves that there is a strong relationship between post-industrialisation and population growth in Tokyo and Keihanshin Major Metropolitan Areas, though this growth is mostly due to inward migration. The spatial analysis reveals that there are significant differences in the spatial structure in metropolitan areas in Japan, though in the cases of both Keihanshin and Tokyo growth areas are situated in proximity to central cities rather than in more remote areas. In the particular case of knowledge city-regions, the general spatiality is contradicted, showing that a clustering of knowledge related activities is more significant to growth than the distance from central cities. This study only investigates the main post-industrial aspects of the Japanese metropolitan environment, therefore further research is needed to fundament any future development or policy.