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## INFORMATION TECHNOLOGY PARK , PUNE .

*Hrutik Satish Bhandare, Prof. Tushar Bhamare*

<sup>a</sup>Student of MBA Project and Construction Management, MIT-ADT, Loni-Kalbhori, Pune, 412201, India.

<sup>b</sup>Assistant Professor at MIT-ADT, Loni-Kalbhori, Pune, 412201, India.

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### ABSTRACT :

Touted as one of the important IT hubs in India, Pune also has the dubious distinction of being one of the highly polluted cities in India. The IT industry is considered as one of the biggest industries of Pune, and as the thesis tries to explore widespread spin-off effects.

The IT industry was welcomed with open arms into the city as per the IT policy of the State government of Maharashtra. Many environmentalists have often stated that Pune has grown out of control because of the IT industry.

That the various tax concessions and allowances have not been contributing enough, and the massive development that has taken place has affected the city's environment.

Pune's IT industry – A Boon or A Bane? - is to explore the realism in this perception. The main objective of the thesis is to map the range of economic and environment effects of the IT industry.

Using the OECD Pressure State Response framework, various environment effects are identified and analyzed. Where data has not been available, scenarios have been created to project the scale and level of possible effects of the IT industry in the city.

In terms of environment the effects of IT industry have been explored two-fold - the industry level and the employee level.

The reason to include the latter was to examine the entire gamut of environment effects due to the industry in the context of high migration and high consumption by employees. Various kinds of analysis have been used to process the data that was available, and draw conclusions. In terms of environment effects at the industry level, e waste and transport congestion come out very strongly compared to electricity consumption.

At the employee level, an overview of what the additional pressures on land (housing) and basic services, electricity and transport is created.

Viewed within the lens of the effect of an industry, one can summarize that these are high pressures for the city. Economic effects have been expressed through the taxes and revenues that the city receives from the IT industry; and the employment created. These have been classified as direct and indirect effects.

From the data gathered and most importantly from the interviews, the economic effects for the city are high. Unfortunately, the city does not have a way to monitor these effects through a cost and benefit analysis. At some points, the thesis explores these connections such as by calculating carbon dioxide mitigation costs, or the cost to recycle one ton of PC e-waste. The thesis also looks at the implementation of the IT policy in the city. Not all the clauses are implemented by the city of Pune.

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Keywords: Circulation, IT park, innovation.

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### Introduction :

A few years back, a number of multinational information technology (IT) and business process outsourcing (BPO) companies after considering the Chennai as a base for their operation, finally decided on cities such as Bangalore, Hyderabad and Pune due to lack of quality space in Chennai. This trend is fast changing with the entry of national developers, who are gearing up to meet the potential demand for space from IT companies which is expected to be in the range of 2 to 2.5 million sq. Ft per year. Other reasons for this trend are that companies have realized that Chennai also offers better infrastructure than many other Indian cities, has low attrition levels, and a large pool of qualified personnel.

Nearly 1.4 million sq. Ft office space was absorbed in 2003, with more than 90 percent of the demand originating from the IT and BPO sectors. Nearly 1.6 million sq. Ft of spaces has been absorbed in the Chennai office market during the first three quarters of 2004. Over the last two years more than 95 percent of the space absorbed has been by the IT and BPO sectors. This is an extremely healthy situation given the fact that the quality of building in

Chennai is still not up to international standards. The city still needs to offer quality ready- built space and developed land, targeting technology and outsourcing companies of different sizes. The need of hour is to have a healthy mixed of multi- tenanted building such as Tidal Park, and business park such as the seruseri IT park.

My intension is to design for future trends from an occupier perspective, which includes a more strategic approach to real estate, for more flexible solution, greater focus on security and environmental issues, and global or regional input. It is because large IT companies making an entry into the city will look for a mix of readily available space, incubation space, and built -to- built space. As competition increases, I wish to design a building of distinguished character and identity. And to offer built- to -built space solution to attract more international IT and BPO companies to accommodate spaces.

The research is analytical as it aims to analyze facts and information that is already available to evaluate the impacts of the IT industry on Pune.

The research would be largely quantitative. Within the context presented in chapter 1, the research can be defined as exploratory as it seeks relationships.

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### Scope of study

1. The study is currently limited to sourcing information on the city level which is defined as the area within the jurisdiction of the Pune Municipal Corporation. It also does not extend to analyzing the links and flows outside the city such as the provincial and national levels such as the contribution to growth rates, financial benefits, inter-regional benefits etc. The study would have a stronger basis if the direct, indirect, and trickle-down economic benefits could have also been analyzed in depth, for example benefits at the employee level; for landowners and builders who have profited from the real estate development; local economic growth because of the larger expansion of the city; and ancillary industries and services that have grown because of the IT industry.
2. But this would not be possible to cover in this thesis. The thesis will be a static study, as the aim of the thesis is not to make an analysis of the effects of the IT industry over time, but to explicitly break down the kinds of effects that this industry can have for the city. Still, the need to compare information based on previous years was considered in this study, but given that the focus of the study is to develop a set of indicators that would help analyze what are the effects of the current IT industry on the city, current information would also suffice.
3. Such a mode of research is also carried out in other forms of research and studies that have been reviewed during this thesis. Also, the relationship between the effects and the growth of the industry are directly proportional in terms of service needs and resource use, and such a comparison may not necessarily add value to the study.
4. The study would have benefitted by looking at the social aspect as well, more in terms of the change in working patterns, and lifestyles such as call center jobs, late working nights for women, change of roles etc. Additionally, it has also been pointed out that the IT sector's fast growth has worked more to the advantage of the well-educated section of society.
5. Economic growth remains priority for most governments including citizens, and policies such as the IT policy are pursued strongly. But economic growth cannot function in isolation as it is dependent on services and resources that the environment provides by virtue of its own activities; and to support the population who in turn need the services and resources that the environment provides.
6. There is no doubt that economic policies such as the IT policy aim to improve city competitiveness through the benefits and the infrastructure set-ups that attract economic interests.
7. Yet in the long run a city remains attractive and competitive when it is loveable for the industry and for the people who are employed by the industry. A good social and environmental index contributes strongly to this livability of the city. This in turn improves competitiveness and any policy decision needs to therefore understand these linkages and plan more holistically for (Cities Alliance 2008).
8. Policies to deal with environment issues specifically associated with land use change (developing open plots, green belt spaces, conversion of agricultural land) remains on the superficial level of e.g. planting some trees.
9. In cities like Pune, the intricate connections between economy and environment are not embedded in decision making processes, so effective measures are not taken or accounted for when planning for the city's growth and development. The thesis aims to delineate and map these connections to improve the understanding of environment related problems of the city, because of economic growth policy. The study could contribute in improving the understanding the interaction of economic growth like the IT industry and environment in the city; its dependence of the environment and its subsequent effects.

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### Research Type and Strategy

1. The research is analytical as it aims to analyze facts and information that is already available to evaluate the impacts of the IT industry on Pune.
2. The research would be largely quantitative. Within the context presented in chapter 1, the research can be defined as exploratory as it seeks to explore what are the relationships and the interactions between the IT industry and its environment

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### 6.Conculsions:

1. To be able to understand what are the implications of high rate of migration and employment where annual income is higher than most of the other professions, housing demand was looked at. As in the previous section of economic effects, the consumption categories include a huge percentage of income being spent on housing). Two developers were interviewed about this, one of them being the owner of a township with a very big private IT park in Pune.

2. They confirmed that the IT industry has been beneficial for the real estate industry including the housing market, but other industries are also contributing to that demand.
3. One of the developers said that it was not easy to extrapolate the demand for housing from the IT employees, but broadly stated that 50% of the people working in the IT industry would be bachelors and would not necessarily demand a house on ownership, and would prefer rental or paying guest accommodation.
4. The second developer stated that they basically calculate 40% of the IT employees have a housing demand on ownership basis and 15-20% as rental. And for every 100 sq ft of commercial area that is added, the developing firm calculates 1000 square feet or 92.90 square meters of housing for that target population.

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