

Reflection

This research focuses on skyscraper height in China. The aim is to find out height determinants that effect height and produce a linear regression model that express the relationship between all the variables to height.

Quantitative research is chosen as the method from the beginning of the research. The motivation of this research is to provide empirical evidence that explains the mechanism of skyscraper development in China, where these results could be used as a base to make decisions on future development. The results show that skyscraper height in China seems to only get regulated in certain area, while some other area has more freedom in development, which makes it hard to understand skyscraper in china as a whole. Several experiment on possible variables and arrangement for regression model are done, to find possible relationship, but the result is base of the variables I could access, thus there are still some limitations and some other variables could be used for future research.

The method for answering the research question is separated into 5 step, where the first step looks into variables that could have effect on height from literature review, step 2 construct the variables so it is design to measure the aspects that we wanted it to measure, step 3 collect the variables data and combine it into a database, step 4 perform regression analysis and step five look into the data and results to understand what does each number represent. This process works as planned but the result is not as expected.

The result shows that building level factors, including building function and material have strong relationship with skyscraper height. While city level determinant including population and urbanization density does not always have significant effect in each model. There are also no significant relationship between year of completion, location and skyscraper height. These results are not expected, but it does provide a better understanding towards the development in China. This suggested that skyscraper in china are developed according to economic reason, rather than competition.

The topic of my thesis is Height determinant of Chinese skyscraper. From the result, skyscraper construction has proven to have connection with the economic situation of the city, also the topic has a strong connection with city development, which uses the theories from urban economic, thus it fits the topic of economic of tall building. From a managing point of view under building level perspective, skyscrapers are large construction project that require large amount of materials and involve decision of several stakeholders in different levels. From a city level perspective skyscraper also effected the structure of a city, which also requires to plan and manage. Thus the topic on skyscraper development requires knowledge from managing of the built environment including project management, urban development and stakeholders to fully understand and addressed the topic, therefore it also has a strong connection with the MBE master track; and as an architecture typology constructed worldwide, the study of skyscraper could directly fall under the specialization of Architecture, Urbanism and Building Science.

According to the explanation above, the thesis uses a quantitative research method. This model has the advantage of providing result with statistical base, and have the potential to spot patterns that may be hard to recognize when using qualitative method. There are many unexpected result that appears in the research, and they all leads to interesting findings, including the distribution of skyscraper height in China, the relationship between design of buildings finishing and construction height. The disadvantage of this method is that, the results only shows relationship between the variables, but it does not explain the causality in this relationship. This is a general weak point for quantitative research, thus more research could be done on this topic.

Throughout the data collection process, there are some variables that could address the aspects that I wanted to test, but due to data availability, not all variables could be collected. This problem is solved by combining different variables together to address the topic, for example urban land area is not available, thus the model uses a combination of population density and urbanization rate. Although this may not substitute the variable “urban land area”, but this is still better than other research that only uses urban population as the variable.

From the research process, I gain understanding towards skyscraper construction and the connection of city development with skyscraper development. There are both economical, strategical and psychological perspective in these developments. This research build on the previous studies on related topics. The motivation of the research focuses on providing statistical base for future development. The result shows some problems and potential improvement regarding to the current development. With understanding of the current situation we could make better plan for the future. The conclusion of this research summarize the findings and also provide suggestion on improvement, to develop more efficient cities.

The topic of my research is an emerging field, and skyscrapers are a building typology that just blooms in past 10 to 20 years. There are still many aspects that remains unstudied. But in general, the research method leads us to interesting results.