

# Market Analysis And Financial Feasibility For Office Space In Vashi, Navi Mumbai

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**Abstract-** In the present study, the micro-market selected is Vashi, Navi Mumbai. Vashi is the very first node which was developed in Navi Mumbai. The reasons for its growth was to shift the pressure of real estate development in Mumbai city. As a part of this, Agriculture Produce Market Committee (APMC) was shifted from Mumbai to Vashi. Vashi is spread across Thane creek and Arabian Sea lying in the outskirts of Mumbai. The study focusses on analysing the market conditions for commercial grade A office space in the micro market. The project is feasible only when it is legally permissible, physically possible, maximally productive and financially feasible.

Financial feasibility plays an important role in future planning, risk mitigation, failure prevention and forecasting returns to an investor. The study involves detailed analysis of the NPV and IRR for commercial grade A space. Financial modelling is used to forecast changes in the value of business or cash flows and analyse the worst- and best-case scenarios. The location selected for the study is a hypothetical site in Vashi. The study concludes that development of commercial grade A office space would be financially feasible or not.

**Keywords-** Micro-market, Market Analysis, NPV & IRR

## I. INTRODUCTION

A market examination is a quantitative and subjective appraisal of a market. It investigates the extent of the market both in volume and in value, the different consumer portions and purchasing behaviours, the opposition, and the financial condition regarding obstructions to section and direction (Anon., 2018).

Market analysis is a term that is mainly used in economics but has more narrowed down meaning in the appraisal discipline. For valuers, market analysis is a method of identification and study of area for a particular product or service. Appraisers, broadly classify market analysis at two levels which are,

1. From the view of a large market, when the property is not the point of concern
2. In the perspective of market in which the said project competes (Appraisal Institute of Canada and the Appraisal Institute, 2010)

Market and feasibility analysis commences the action of focusing from a larger perspective to data that is relevant to the selected asset. The analysis to identify most profitable, competitive use for which the selected property can be maximized and do the financial feasibility.

## II. OBJECTIVES OF THE STUDY

- Market analysis of Vashi for commercial Grade A office space
- To understand and derive the demand for commercial Grade A office space in the current market conditions
- To derive the financial feasibility parameters such as NPV and IRR for the selected land parcel

## III. RESEARCH METHODOLOGY

The methodology adopted for the study is as follows,

- Market Delineation of the micro market which includes neighbourhood analysis
- Property Productivity assessment for the selected land parcel
- Demand-Supply analysis through primary and secondary research.
- Financial Feasibility for Commercial Grade A office space.

## IV. MARKET DELINEATION

### A. Geography of micro market

Vashi has a flat terrain with an average elevation of 7m and is restricted by Parsik Mountain range on east and Thane creek on the west. The major land cover in the area is

residential and commercial amounting to 48% of the total land cover.

## B. Demographics

The population of the area is 2.21 Lakhs and is projected to reach 3.77 Lakhs by 2021. Around 40% of the working population works as Service- managers or Supervisor, 14% are involved in Trading/Retail Shops and 13% as Clerks. The average income in the area is Rs 29,672 (CIDCO, 2010).

## C. Historic Growth

Vashi has observed rapid growth after 1984 under CIDCO. APMC (Agricultural Produce Marketing Corporation) was then established in 1993 which became the economy of the place. Old Vashi Bridge was inaugurated in 1997 that connects Mankhurd in Mumbai to Vashi. Key Infrastructural developments started to happen after that like ICLES Motilal Jhunjhunwala College in 1984, St. Lawrence School in 1986, Hiranandani Fortis Hospital in 2007, Sterling Wockhardt Hospital in 2007, CIDCO Exhibition Centre in 2012 etc.

## D. Economy

The economy is majorly driven by APMC, IT/ITES, Manufacturing industry and other small and medium scale businesses like packaging, distribution and logistics.

## E. Site Characteristics

The land parcel selected is of rectangular shape with an area of 11.43 acres and excellent visibility from the streets. Number of parking areas and dedicated parking spaces are available.

## F. Delineation Concepts

The primary perimeter has been considered as a drive time of 15 mins and that of secondary is 30 mins from the site as shown in Figure 1. It has been observed that one can reach outside the micro-market even to Mumbai with a drive time of 30 mins.



Figure 1 Market Delineation using Business Analyst

## V. PROPERTY PRODUCTIVITY ANALYSIS

it a total of 2.0. There are no height restrictions. The potential development on the land parcel for Commercial Grade A Office space is 9.93 Lakh square feet.

## VI. DEMAND-SUPPLY ANALYSIS

### A. Demand Estimation

The first ever paper on demand of office space was published in the Appraisal Journal of 1965 by Christopher Jennings. The paper disclosed that demand of office space as an organised item of knowledge. This method relates the quantity of demand of office space to population. Jennings used a population ratio, detailing that ratio to be used for metropolitan regions (Gibler, 2007). Based on Jennings study, the following formula can be derived:

$$D_{t+1} = (S/P) * P_{t+1}$$

Where:

$D_{t+1}$  = Demand for total office space in a future time period;  
 $S$  = Stock of office space in a given period;  $P$  = Population in a given period;  
 $S/P$  = Average of the ratio for several recent years; and  
 $P_{t+1}$  = Forecasted population in time period  $t+1$ .

### B. Supply Analysis

The supply analysis was done through primary and secondary survey and it was found that there is an inventory of 16,19,500 sq ft as of December 2018 with a vacancy rate of 10.1% (Cushman & Wakefield, 2018).

**C. Analysis**

The output of the model when applied to the current conditions are shown in Figure 2 (numbers are in sqft). It is quite evident that there is a need for office space in the micro market.

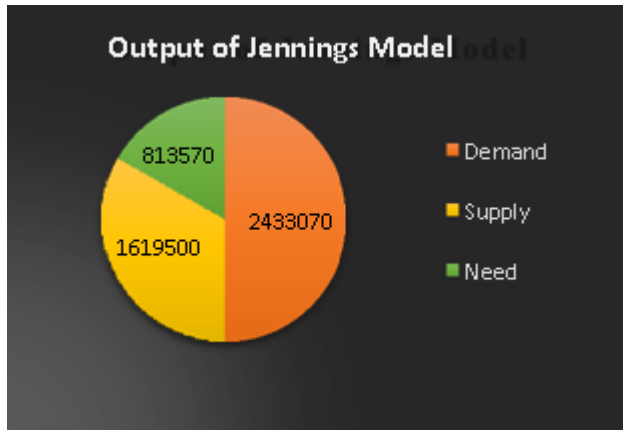


Figure 2 Demand Supply using Jennings Model

**VII. FINANCIAL FEASIBILITY**

The office space is expected to fetch a rental of Rs 80 in the first year and an escalation in the rent is assumed at 10% every year. The occupancy in the first year is also assumed to be 75%. The results of financial feasibility are given in the table below.

Scenario Summary			
	Current Values	Best Case	Worst Case
<b>Changing Cells:</b>			
Rent	80	100	80
Occupancy	75%	80%	50%
<b>Result Cells:</b>			
IRR Post Tax	10%	15%	9%
NPV Post Tax	₹ -108,700,407.30	₹ 1,383,995,076.47	₹ -255,369,905.48

**VIII. CONCLUSIONS**

- Under the prevailing market conditions, it is identified that there is demand for grade A office space in the micro market.
- To validate the demand, financial feasibility is carried out to understand the yield of the project from an investor’s perspective. It was observed that the return from the project is less than the weighted average cost of capital (17.52%) and average market returns (20%) (Katiyar, 2018).
- Hence it is not feasible to build commercial grade A office space with the current market conditions.
- The best use of the land has to be derived considering the options of land use available.

**REFERENCES**

[1] Anon., 2018. *Economic Times*, October.

[2] Anon., 2018. *The Business Plan Shop Ltd.* [Online] Available at: [https://www.thebusinessplanshop.com/blog/en/entry/market\\_analysis\\_for\\_business\\_plan](https://www.thebusinessplanshop.com/blog/en/entry/market_analysis_for_business_plan) [Accessed 03 November 2018].

[3] Appraisal Institute of Canada and the Appraisal Institute, 2010. Market and Marketability Analysis. In: Vancouver : UBC Real Estate Division, pp. 9.1- 9.30.

[4] CIDCO, 2010. *Socio Economic Survey*. Navi Mumbai : CIDCO.

[5] Cushman & Wakefield, 2018. *Mumbai Office Market Beats*, s.l.: Cushman & Wakefield.

[6] Dunn, C., 2010. The Appraisal of Real Estate. In: C. Dunn, ed. *The Appraisal of Real Estate*. s.l.:Real Estate Division, pp. 1-3.

[7] Gibler, J. S. R. a. K. M., 2007. Office Market Demand Analysis and Estimation Techniques: A literature Review, Synthesis and Commentary. *Journal of Real Estate Literature*, 15(1), pp. 37-56.

[8] India Brand Equity Foundation, 2018. *Real Estate Report 2018*, s.l.: s.n.

[9] Katiyar, P., 2018. *Economic Times Wealth*. [Online] Available at: <https://economictimes.indiatimes.com/wealth/real-estate/this-could-be-the-turnaround-year-for-real-estate-heres-why/articleshow/62490034.cms?from=mdr> [Accessed 17 April 2019].

[10] Pan-Jin Kim, W. K. W.-K. C. a. M.-K. Y., 2011. *Using new Huff model for predicting potential retail*, Korea : Academic Journals.