

**ALTERNATIVE DETERMINATION OF GOVERNMENT  
COMMERCIAL ASSET OPTIMIZATION BASED ON MARKET  
ANALYSIS: A CASE STUDY ON SHOPPING CENTER  
PROPERTIES IN CILEGON CITY – INDONESIA**

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**Abstract**

*This research is aimed to get recommendation in determining asset optimization alternative through market analysis toward commercial assets owned by Cilegon City Government (CPM Building), CPM has the potential to be developed into a shopping center. The research object is six commercial properties in Cilegon, consisting of five shopping centers and one government asset. Market analysis is done by identifying: 1). Market probability analysis using Huff's Model. 2). Market potential estimation analysis using Dasso et.al. Model 3). Analysis of consumer preferences to shopping centers using questionnaires. The results of the calculations are explained descriptively related to the interpretation of the trend of market analysis obtained on the decision making recommendations CPM optimization into a shopping center. The results of the market analysis indicate that CPM has a chance to be visited by the potential consumer by 5.41%. The analysis of market potential estimation indicates that in Cilegon is still 101,820 m2 available space that can be developed into a shopping center area, and CPM with 4,300 m2 can*

*fill it. From the analysis of consumer preferences, the results obtained most respondents expect a new shopping center equipped with recreational facilities, family entertainment, and supported by a complete facility.*

*Keyword: Market Catchment Probability Analysis, Market Potential Estimation Analysis, Asset Optimization*

## **INTRODUCTION**

Assets are goods or things owned by an enterprise, an agency or an individual it has an economic value (Siregar 2004: 178) consisting of physical goods such as factories, machinery, buildings, vehicles, pipes and cables, information, technical control and software systems used to serve business or organizational functions (Hasting, 2010: 3). Integrated asset management can have an impact and benefit to support development (Batara et al., 2015).

Asset management is a series of activities related to; identifying what assets are needed, identifying funding needs, acquiring assets, providing logistics support systems and maintenance for assets, and disposing or updating assets, so as to effectively and efficiently meet the expected goals (Hasting, 2010: 4)

The problem of management of local assets that occur are; unclear asset allocation inventories, non-transparent legal audits in reporting, asset valuation of the region are not in line with reality, optimization of assets that are inconsistent with achievements and lack of authority in overseeing and controlling of property. The unfulfilled effect of asset management in accordance with the utilization will cause some problems, therefore a comprehensive action in asset management is required (Tasdik et.al., 2016).

According to LKPP (National Public Procurement Agency), In 2014 the value of BMN (state property) in the form of land fields and buildings idle (BMN idle) as of December 31, 2014, amounted to Rp30.14 billion. The BMN idle consists of 23 land fields (20,874 m<sup>2</sup>) and 53 units of buildings. BMN idle data is based on the report or submission from the ministry of state/institution (K/L) as the user of the asset and has been set its status as BMN idle by the asset manager. For K/L that does not report idle BMN, it can not be known whether K/L has or does not have BMN idle. While BMN Recapitulation that indicated Idle based on SIMANTAP (government land management information system) data on the Year 2014 from 17 Provinces (Kanwil) recorded 554 land fields (units) idle. (Opinion of BPK RI, 2015).

The optimization effort of idle assets is expected to give an added value, where with this optimization process will be found the best solution which gives priority of optimal utilization of

asset optimally, because maximizing profit will depend on our ability to keep assets is working (Campbell et.al ., 2011: 24).

This study takes place in Cilegon city - Indonesia, Gross Regional Income (GDP) is from Industry and Processing sector are being the largest of which is 57.63% compared to other sectors are; large and retail trade sector, car and motorcycle repair 10.73%, Electricity and gas 7,50%, construction 6.35%, Real Estate 5%, and other sectors 12.25% (Statistic of Cilegon Municipality, 2016)

Thus it can be assumed that the income of Cilegon City is highly dependent on industrial & processing sector and trade sector. For trade sector supported by its facilities as :

Table 1. Number of Markets, Building Area and Number of Trade at Supermarket Store by District in Cilegon City 2014

No	District	Number of Location	Land Area (m <sup>2</sup> )	Building Area (m <sup>2</sup> )	Number of Traders
1	Ciwandan	1	2.000	1.200	70
2	Citangkil	-	-	-	-
3	Pulomerak	1	9.000	6.000	496
4	Purwakarta	-	-	-	-
5	Grogol	-	-	-	-
6	Cilegon	1	10.000	7.000	329
7	Jombang	1	45.000	3.000	2.365
8	Cibeber	1	500	300	50
<b>Kota Cilegon</b>		<b>5</b>	<b>66.500</b>	<b>17.500</b>	<b>3.310</b>

Source: Statistic of Cilegon Municipality, 2016

Cilegon Government has an asset called Cilegon Plaza Mandiri (CPM), an asset of 4,300 square meters of commercial buildings located in the central business district (CBD), the CBD is the core or center of a City where retail, financial, professional, recreational, and service activities of the peoples are concentrated (The Appraisal of Real Estate, 1987: 176), CPM was originally built as a shopping center with a management cooperation scheme with the investor, after the contract has expired CPM function is not utilized as a shopping center but used as government offices. Thus, the commercial assets are transformed into operational assets of the government, it can be said that the utilization of these assets is not optimal.

The potential for possibility toward utilization alternative CPM building can be optimized into a shopping center, it is conveyed by the local government. There will be an additional budget for restructuring the City, CPM will be reorganized and returned to business function, not

used as an office, so it is expected to increase local revenue (Head of Development Planning Agency of Cilegon City, 2016).

In developing the CPM building, the asset optimization analysis is required where the CPM is classified as non-operational assets, "to non-operational assets, the analysis is conducted on the utilization of the existing asset condition, to determine whether the utilization is optimally viewed from the land use in the construction development and the building function in the economic aspects. This analysis will include the regulation, designation, and development of the surrounding area. On the other hand, the market value will be combined with existing market potential "(Siregar: 779. 2004).

Thereby conducting market analysis becomes very important, the study related to market analysis is widely used in the field of economy and business. The analysis of the market is related to the level of consumer visits and the competition, the alternative of asset utilization towards the shopping center in order to optimize the asset, need to measure how percent the asset can absorb the market or consumer and the level of competition that occurs in a region, hence there is need of research examining the probability of market coverage in order to it is known how likely consumers are to visit certain shopping centers in certain areas, so that can be the basis of decision making in developing the property.

The probability analysis of market catchment is used to analyze the demand of retail space by knowing the market picture of shopping center property in a certain region using gravity model technique (The Appraisal of Real Estate, 2008: 193). The popular gravity models are; 1). Reilly's Retail Gravitation, Converse's Breaking-Point Model, Huff's Model of Trade Area Attraction and Christaller's Central Place Theory (Anderson, et al., 2010).

In the property valuation, market analysis must show how the interaction of supply and demand affect the value of property (Prawoto, 2015: 271) in the market analysis is also required the study of market potential because it has an important contribution in development, "market potential is a powerful driver of increase in income per capita "(Mayer, 2008). This needs to be done to determine the size of the estimated space shopping center needs in a region, in determining the policy to develop an asset demand analysis is very important. Previous research in calculating the market potential estimation is done by several approaches are 1). Calculating the market potential of shopping center using the income approach, (2). Estimating of market potential can be calculated using the steps it's developed by Dasso et.al. (1995). In this study using the Dasso et. al. models. Then conducted survey market-related consumer patterns.

There has been some research on market analysis that largely contents in the business scope. What distinguishes this research from previous research is that this study discusses the

scope of asset management and valuation, and market analysis results in this research can be used as a reference in decision making optimization of government's commercial asset by doing probability analysis of market catchment, analysis of market potential estimation and preference analysis/consumer patterns.

## **LITERATURE REVIEW**

### **Asset Optimization**

Asset optimization is a work process in asset management aimed at optimizing the physical, location, value, volume, legal and economic potential of the asset (Siregar: 519., 2004). to determine the asset optimization required performance evaluation of assets owned, Evaluate the performance of fixed assets is to evaluate whether the asset has been used fairly, safely, integrated and effective. Develop a system for evaluating the performance of fixed assets is the only way to solve problems, strengthen asset management and improve asset utilization (Wang, et.al., 2013).

To optimize the asset required a formulation that can be used to achieve the expected goal. Developing, optimizing, prioritizing, and integrating asset management plans is an ongoing process that begins with the development or updating of asset management strategies (PAS 55-1, 2008).

Managing assets to work optimally according to Batara et.al. (2015) can use the approach of NPM (New Public Management) with the steps as follows: 1). Implementation of asset restructuring, 2). Development of professional management, 3). Optimization of technology utilization through Management Information System.

From some of the above view can be said that the optimization of assets is an activity in optimizing the potential and usefulness of assets on the recommendation of asset performance evaluation that aims to be able to provide solutions in achieving the goals through a defined asset management strategy.

### **Shopping center**

A shopping center is a managed and planned shopping area composed of trade institutions that are architecturally integrated and built in locations owned or planned and operated as a unit based on the balance of tenants and surrounded by parking facilities. Planned means there is completeness in the quality and variety of product offerings, type and number of stores that are adjusted to the needs of the entire population (Berman & Evans, 1989: 246) in Wibowo (2007).

According to the ICSC (International Council of Shopping Centers), in Bozdo (2013), shopping centers are retail and other commercial groups that are planned, developed, owned and managed as one property, usually with parking space provided.

In *The Appraisal of Real Estate* (2008: 69) shopping centers are divided into Five types, are 1). Neighborhood Shopping Center, 2). Community Shopping Center, 3). Regional Shopping Center, 4). Super-regional Center and 5). Specialty Centers.

The function and usefulness of the shopping center depend on the contributing factors, in Prawoto (2015: 260) the factors are 1). Interesting public areas, 2). The restaurant facilities are conveniently located, 3). Adequate public traffic patterns, 4). The sufficient number of escalators, 5). Durability and ease of building maintenance, 6). Availability of areas for rest for shopping and pedestrians, 7) Strong and attractive lighting and good signs.

With the emergence of several shopping mall development trends into consideration in increasing value added, entertainment functions such as cinema, restaurants and other retail centers improve the function of shopping centers. According to a survey of cinemas increasing overall sales in shopping centers, and less property to entertainment options may be less profitable in the investment market (Prawoto 2015: 261).

From the explanation of some sources above it can be concluded that the shopping center is a place that is managed in such a way that involves many sellers (tenants) with variations, the number and types of products offered, the place is managed to attract customers by combining elements of shopping and entertainment are supported by sufficient parking space and easy access in the commercial area.

## **Market Analysis**

Utilization of assets, especially commercial property requires support analysis that can provide information in support of the feasibility of business activities can be developed, one of the supporting elements is market analysis. Market analysis is a process for knowing the demand and supply of property types and market areas geographically for certain types of property (*The Appraisal of Real Estate*, 2008: 173). To identify the demand and supply of a particular asset in this study is a shopping center property can be done by probability analysis of market catchment with the approach of the gravity model.

## **Market Catchment Probability Analysis**

Catchment is the geographic area that contributes most visitors to the shopping center (Kuruvilla & Ganguli., 2008), the question is whether the relevant field of business is carried out, it also depends on the consumer pattern of market coverage, the trade area is conceptualized

as a picture of probability that represents a possible pattern or customer special characteristics (Dramowicz., 2005). Also, market coverage analysis can determine marketing strategy, analysis of the retail trade area focus on the determination and description of the target market (Dramowicz., 2005).

### Huff's Probability Formulation Model

This model is one of the gravity models used in analyzing the probability of market coverage, complementing the limitations of previous models and can be used to analyze more than two shopping centers, this model is used to determine the probability that customers in certain trading areas will shop at or a particular shopping center (Anderson et.al., 2010). In his literature, Huff & Mc Callum (2008) explain that the Model is based on the premise that when one is faced with a series of alternatives, the probability that a particular item will be chosen is directly proportional to the perceived benefits of the alternative. Mathematically Huff model is formulated as follows:

$$P_{ij} = \frac{S_j / (T_{ij})^b}{\sum (S_j / (T_{ij})^b)}$$

- $P_{ij}$  is the probability of population in region  $i$  to shop to shopping center  $j$
- $S_j$  is the area of the shopping center  $j$
- $\sum (S_j / (T_{ij})^b)$  is the total comparison of the area of each shopping center with the travel time of region  $i$
- $T_{ij}$  is travel time in region  $i$  to shopping center  $j$
- $b$  is a parameter reflecting the effect of travel time on various types of travel to the shopping center = 2

According to Bintarto in Ardiana (2007), Mualif (2007) and Widawati (2007) stated that the above parameters are based on:

1. If the relief or topography between the two places is flat and the area of motion is wide, it is used 0.4.
2. If the topography is rough and the narrow area of motion is used 3.3.
3. The middle ground, the average of the two numbers is 1.94, rounded to 2.

From the above formulation, it can be assumed that:

1. The size of the probability of visit is determined by the area of shopping and the travel time of the vehicle to achieve it.

2. The wider a shopping center and the shorter the travel time it takes to get to a shopping center, the attraction of the shopping center is getting bigger.
3. This model can analyze more than two shopping centers.

Huff models have been used in; 1) Estimating market potential, 2) Defining and analyzing areas of trade, 3) Evaluating market penetration, 4) Assessing economic impact, 5) predicting consumer spending options, 6) Assessing and targeting consumers, 7) Forecasting sales of existing and potential outlets, 8) Assess the impact of environmental changes. (Huff & Mc Callum., 2008).

The model has been used in previous research on the topic of market catchment analysis and most of the research considers the model feasible for use amongst are the department stores in Korea, that Huff's Model for commercial district analysis fits in well with the tukjeongmeip system (Korean-style consignment) (Kim et.al., 2011). According Upadhyaya (2013) Huff model can be used: 1). To illustrate a probability-based market for store locations in the study area, 2). To model the economic impact of the addition of a new competitive store location, 3.) Forecast high- and low-selling areas of sales, which can guide the placement of new store locations or refine marketing and advertising initiatives.

From the above explanation it can be interpreted that the probability of market catchment is the magnitude of the possibility of consumers to visit certain shopping centers determined by the factors considered are the area of the shopping center, the distance and travel time to the shopping center, where the study of market coverage can be useful in calculating the absorption shopping centers to consumers and analyze the competition between shopping centers.

### **Market Potential Analysis**

Analyzing the market potential is very important in making investment decisions, to calculate the population of trading areas, shopping centers in each city must calculate the population within its range calculated by the Breaking Point formula. This figure represents the market potential for a shopping center. If there are many roads to access the shopping center, this distance is generally regarded as a radius (Bozdo et.al., 2013). In initiating the investment it is necessary to consider the area or business location, the potential store location may be incorporated into the model to determine the potential for new sales in accordance with the probability of the pattern and characteristics of the new consumer to replace another store (Upadhyaya., 2013).

According to Siregar in Widawati (2007) and Debianto (2013) divide the trading area into three parts: primary, secondary and tertiary-based on distance, travel time and percentage of absorption to consumers.



Table 2. Trading Area Limitation

Item	Primary	Secondary	Tertiary
Distance (Km)	< 5	5 – 10	>10
Traveling time (Minute)	< 20	20 – 45	>45
Capture rate	70 - 80	30 – 40	< 30

Source: Widawati (2007) and Debianto (2013)

According to Dasso, et.al in Ardiana (2007), Mu'alif (2007), and Debianto (2013) that to estimate demand for shopping space consists of several steps, are:

1. Estimating the potential purchasing power by determining the average per capita income in the trade area then multiplied by the number of residents who become potential consumers of the existing shopping malls in the region.

Total Purchasing Power = Number of Population X Mean Income per Capita

2. Estimating the potential sales by multiplying the total purchasing power by the percentage of income spent.

Total Potential Sales = % Spent on Shopping Center X Total Purchasing Power

3. Estimating total sales at the site by multiplying site capture rate (percent of absorptive power allowed by shopping center) with total potential sales.

Total Sales at Site = Site Capture Rate X Total Potential Sales

4. Estimating the amount of shopping space possible by dividing the total sales at the site with the average selling price per square meter of the existing shopping space.

Justifiable Space = Total Sales at Site: Sales per square meter

To see new shopping space investment opportunities is to compare the number of available space (occupied space) with the widest possible space (justifiable space). If the amount of available space (occupied space) is smaller than the allowable space (justifiable space), it represents a larger demand than the existing space.

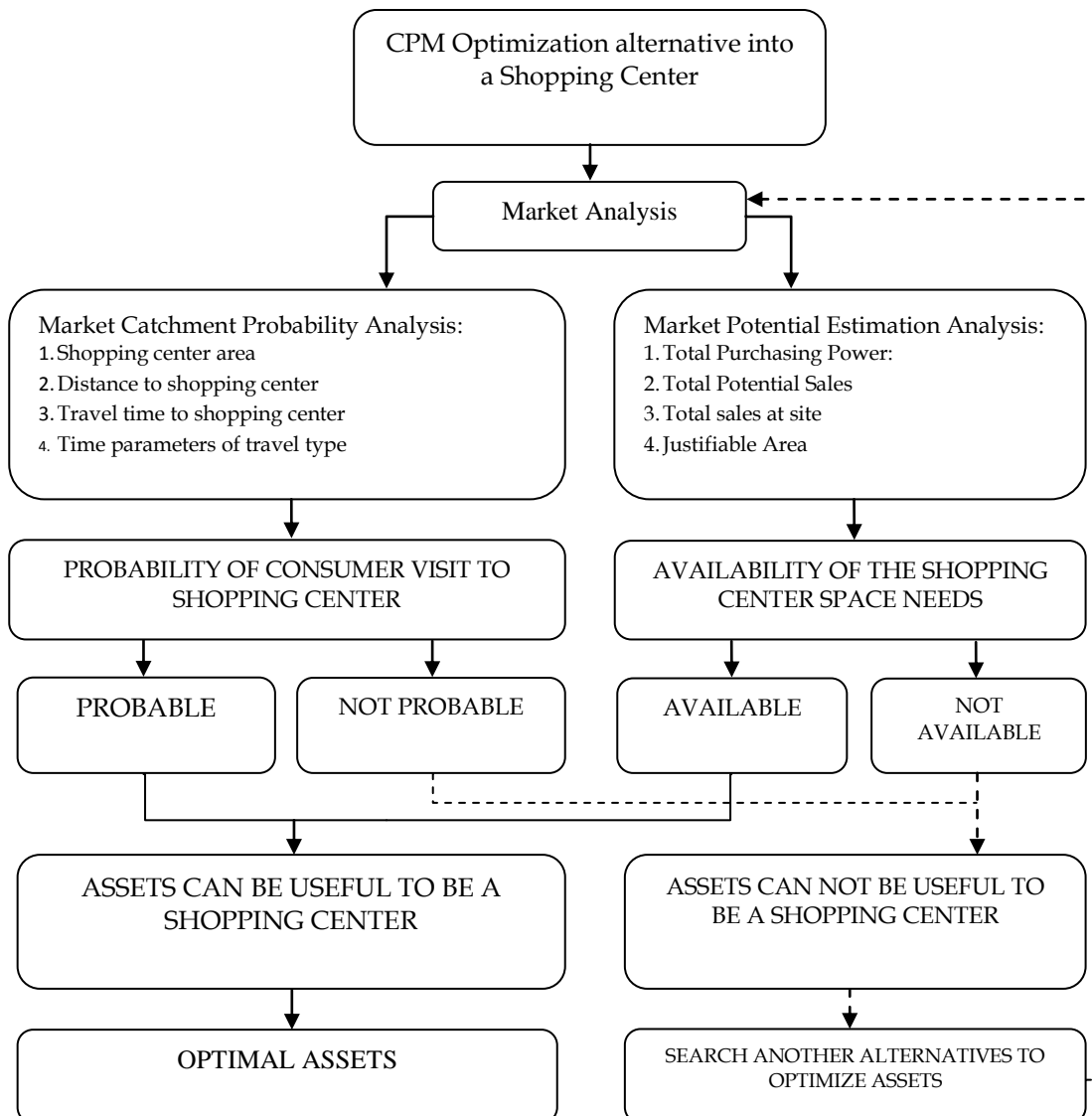
To forecast the demand for the space of a particular shopping or shopping center in a particular area according to Prawoto (2015: 105) can be done by request analysis by identifying support for possible leased space in the trading area using income and population data.

To analyze the market potential of a shopping center can consider important factors in analyzing the demand for the retail market, in The Appraisal of Real Estate (2008: 177) these factors include: 1) Population of trade area, size and number of households, level of increase and decrease of household formation, composition and age distribution in the household, 2) Household per capita income (average and median), 3) Percentage of household income incurred for all retail purchases, and percentage of disposable income (effective purchasing

power) diluted for certain retail categories, 4) Retention rate of sales in the trading area, 5) Volume and sales required for retail facilities to operate the existing profitability and sales volume per square foot, 6) The level of retail vacancy and trends in the market, 7) Percentage of retail purchases taken from outside the trading area, 8) Pattern of land use and direction of growth and development of the city, 9) Accessibility (means of transportation and road systems) and transportation costs, 10) Factors that affect the attractiveness of retail centers (image, quality of goods, and tenant reputation).

From some of the above explanation can be said that the estimation of shopping center market potential is the amount of space required for a shopping center in a region, from the analysis it can define the number of space needs that are still possible to be met in developing commercial property in the form of shopping centers.

Figure 1. Conceptual Framework



## RESEARCH METHOD

This research was conducted in the Cilegon City of Banten-Indonesia Province with the object of research on shopping center / commercial property. Research activities were conducted in the Year 2017.

For market catchment, the data used are the distance and travel time of all Village Offices in Cilegon which amounted to 43 Villages to the shopping center. Distance and travel time is determined using the google map application by specifying the Village coordinate point as the starting point and the coordinates of the shopping center as the destination.

Data processing is done by filling the supporting indicators and applied in the formulation that has been determined. For the probability of shopping center market coverage using Huff's Probability Formulation Model as above.

To estimate the potential market data used include; 1). The number of potential consumers from the shopping center is the population in the productive age of 15 years to 59 years, 2). Income per capita within one year is expressed in rupiah, 3). Capture rate is the estimated percentage of the total potential market that can be absorbed by shopping center based on trade area boundary, 4). Average market rent price per square meter of shopping center property in Cilegon City which has similar characteristics, 5). Income spent is a certain percentage of monthly income spent on a shopping center sourced from a questionnaire, 6). The amount of space of an existing shopping center (occupied space) is the total estimated total space of the existing shopping mall property in Cilegon City, 7). Justifiable space is the number of shopping center space that is still possible.

To know consumer preference to shopping center it uses questioner with question item as previous research by involving 100 respondents.

In analyzing the data that have been obtained from the formulation results for further explained descriptively on the indication obtained from the calculation results obtained, so the interpretation of the value obtained can explain the condition of the research results that have implications for policy recommendations and will be taken by the Government in developing the assets owned. From these activities will be obtained information that contributes to this research, where the validation, processing, and analysis of relevant data can provide opinions for the determination of CPM building optimization alternatives, as well as the results of analysis and discussion, reflect the research conclusions.

## RESULTS AND DISCUSSION

### Market Catchment Probability Analysis

This analysis is conducted on all shopping centers in Kota Cilegon which consist of 5 (five) shopping centers plus 1 (one) unit of commercial property owned by Government so that commercial property which becomes object of research is 6 (six) units. The result of probability analysis of market catchment using Huff's Probability Formulation Model is as follows:

Table 3. Market Catchment Probability

Commercial Property						
No	(Shopping Center)	S <sub>j</sub>	T <sub>ij</sub>	S <sub>j</sub> /(T <sub>ij</sub> <sup>2</sup> )	P <sub>ij</sub>	%
1	Cilegon Supermall	45.000	15,84	374,88	0,59	58,62%
2	Cilegon Mall	26.138	17,93	241,09	0,29	28,63%
3	CPM	4.300	16,70	53,72	0,05	5,41%
4	Edi Dept. Store	2.620	16,95	19,87	0,03	3,27%
5	Krakatau Junction	2.510	18,19	13,41	0,03	2,94%
6	Giant Cilegon	1.200	21,07	4,36	0,01	1,13%
Total						100,00%

Probability in the form of percentage can be converted into the number of potential customers visiting the shopping center that is the number of gross visits. Residents of Cilegon City amounted to 418,705 people, potential consumers are assumed to be at the age of 15 - 59 years, based on population data shows the number of 280,648 people (BPS Kota Cilegon 2017). The number of gross potential visits is presented in the following table.

Table 4. Gross potential visits to the shopping center

No	Commercial Property	Gross Potential Visits (people)
1	Cilegon Supermall (Mayofield)	164.505
2	Cilegon Mall (Ramayana)	80.347
3	CPM	15.176
4	Edi Dept. Store	9.185
5	Krakatau Junction	8.253
6	Giant Supermarket Cilegon City Square	3.183

From the above analysis, it can be explained that the biggest visit probability is Cilegon Supermall equal to 58,63% with gross potential visit 164,505 people, followed by Cilegon mall 28,63% (80,347 people), Cilegon Plaza Mandiri 5,41% (15,176 people ), Edi Dept. Store 3.27%

(9,185 people), Krakatau Junction 2.94% (8,253 people) and lastly Giant Cilegon 1.13% (3,183 people).

### Market Potential Estimation Analysis

To calculate the estimated market potential using the following data:

1. The number of potential consumers that is the number of productive population in Cilegon City is assumed to be in the range of age 15 - 59 years, the number of productive population in Cilegon city in 2017 is 280,648 people (Statistics of Cilegon Municipality, 2017).
2. Income per capita of Banten Province with proxy GRP is Rp. 42.3 million per year annually (Statistics of Banten Province, 2017).
3. The average percentage of monthly income spent in the shopping center, based on the questionnaire the consumer spent 23.10% of income.
4. Determination of site capture in Cilegon City based on the criteria that based on the average mileage to the shopping center of 8.20 Km shows in the secondary area with the market absorption rate of 30-40% potential consumers, while based on the average travel time to shopping center is 17.78 minutes indicating in the primary area with market absorption rate of about 70 - 80%, then with the condition got the number of 55% for site capture in Cilegon City.
5. Rental price per m<sup>2</sup> is obtained from the information of the manager of the shopping center and obtained directly in the field, the average rent is Rp. 8,412,500 per m<sup>2</sup> per year.

Based on the above data it can be calculated the estimation of the market potential shopping center by using Dasso et.al. Models as below.

1. Total Purchasing Power = Number of Population x Mean Income percapita.  
= 280.648 people x Rp. 42.300.000  
= Rp. 11.871.410.400.000
2. Total Potential Sales = % Spent on Shopping Center x Total Purchasing Power  
= 23,10% x Rp. 11.871.410.400.000  
= Rp. 2.742.295.802.400
3. Total Sales at Site = Site Capture Rate x Total Potential Sales  
= 55% x Rp. 2.742.295.802.400  
= Rp. 1.508.262.691.320
4. Justifiable Space = Total Sales at Site : Sales per square meter  
= Rp. 1.508.262.691.320 : Rp. 8.412.500  
= 179.288 m<sup>2</sup>

The total area of five shopping centers in Cilegon is 77,468 m<sup>2</sup>, then we can get the estimated market potential by comparing it with the justifiable space its 179,288 m<sup>2</sup>, are:

$$\begin{aligned} \text{Market Potential Estimation} &= \text{Justifiable space} - \text{available space} \\ &= 179,288 \text{ m}^2 - 77,648 \text{ m}^2 \\ &= 101.820 \text{ m}^2 \end{aligned}$$

The calculation result that in Cilegon still available space to develop a shopping center in 101.820 m<sup>2</sup> area, it indicates the opportunity to develop a shopping center can still be done and CPM with an area of 4.300 m<sup>2</sup> can fill the space to meet the needs of consumers.

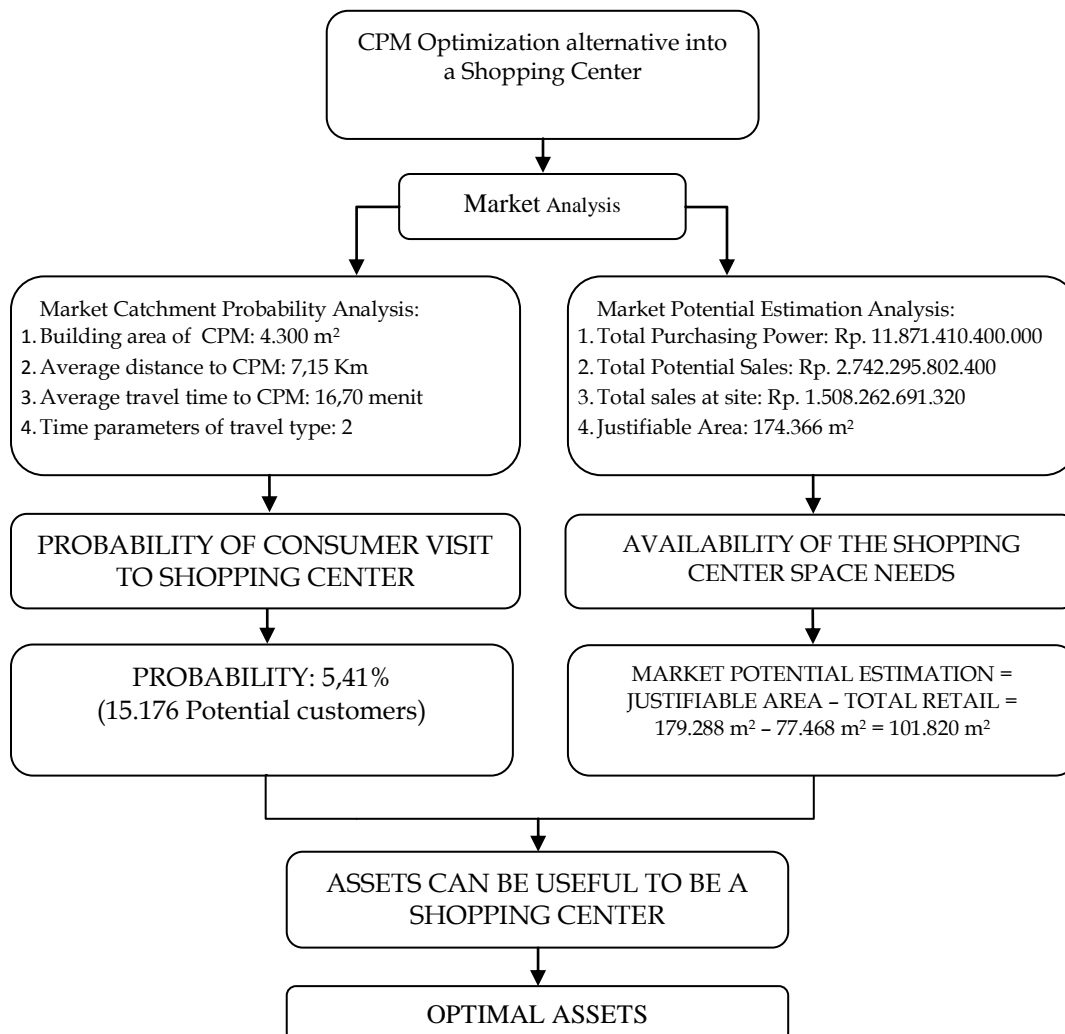
### Consumer Preferences Analysis

Table 5. Resume of Questionnaire Results

No	Subject	Classification	%
1	Domicile of respondents	Cilegon City	88,00%
2	Subdistrict of respondents domicile	Jombang	17,00%
3	Respondent ages	36-60 Th	47,00%
4	Respondent occupations	Civil servant / State-owned Enterprises Employee	39,00%
5	Shopping centers frequented by respondents	Cilegon Supermall (Mayofield)	57,00%
6	The main reason respondents choose a shopping center	The location is easily reached	46,00%
7	How many time respondent visits to the shopping center every month	< 2 time	43,00%
		2-4 time	43,00%
8	Transportation used by the respondents to the shopping center	Private transportation	90,00%
9	monthly respondents income	> Rp. 4.000.000	50,00%
10	Average respondents spending in the shopping center	Rp. 101.000- Rp. 250.000	33,00%
		Rp. 251.000 – Rp. 500.000	33,00%
11	Percentage of respondent's income spent in shopping center every month	Weighted Average	23,10%
12	Goods are often purchased by respondents in shopping centers	Basic goods/food	48,00%
13	Respondent expectation for about new shopping center	Expecting a new shopping center	76,00%
14	The facilities expected by the respondent if there is a new shopping center	Recreation and entertainment	21,00%
		Complete	21,00%
15	Response of respondents if CPM used as shopping center	Agree	69,00%

The result of questionnaires related to consumer preference is that most of shopping center visitors in Cilegon city come from within city (88%), mostly visitors come from Jombang District (17%), with majority of visitors 36-60 years old (47%) with background rear of employment as civil servant / state / state-owned enterprise (BUMN) employee (39%), frequently visited shopping center is Cilegon Supermall (57%), with most of the reasons consumers come to shopping centers with considerable location (46%), visited as many as <2 times and 2 - 4 times a month (43% each), visited by private transportation (90%), monthly income of respondents above Rp. 4,000,000 (50%), with the average of respondents spending each time to visit the shopping center of Rp. 101,000 - Rp. 250,000 and Rp. 251,000 - Rp.500.000 (33%), the weighted average of respondent's expenditure from total income spent in shopping center is 23.10%, goods often purchased by respondents in the form of basic goods/food (48%), partially large respondents expect new shopping centers to be present in Kota Cilegon (76%), they expect the entertainment and recreation facilities and more complete facilities (21% each), and the majority of respondents agree if CPM is used as shopping center (69%).

Figure 2. Recommendation CPM Optimization



## CONCLUSION

1. The CPM building has a probability of market catchment, it can be said to have the absorptive capacity and has a chance to be visited by consumers, its market absorption is in the third position among six commercial properties that become the object of research, it indicates that CPM can be optimized into a shopping center.
2. Market potential estimation Analysis shows that in Cilegon City still available shopping center space that can be developed, CPM can be optimized as a shopping center to fill the space in order to meet consumer needs.
3. Based on the results of the questionnaire analysis related to consumer preferences to shopping centers indicate that consumers prefer shopping centers based on the location that is easy to reach, also most visitors use private transportation to the shopping center. Basic goods and food are the items most often purchased by consumers when visiting a shopping center. Most consumers expect a new shopping center in Cilegon City with the preference of facilities that consumers expect of new shopping centers that have recreation and entertainment facilities also have complete facilities. In the end, most of the consumers who represented by respondents agreed and expect if the CPM is returned to function as a shopping center.

## LIMITATIONS

This research did not analyze the potential of the fair market value of assets based on property valuation analysis using approaches:

1. The cost approach, generating property values with the current cost of building analysis, is useful for estimating the benefits expected by the developer.
2. Comparative sales approach, generating property values by analyzing property selling prices comparable to market conditions by understanding market conditions and certain economic characteristics.
3. The income capitalization approach, generating property values by analyzing assumption data in the form of interest rates, market rental rates, current and future returns, and competitive positions in the market. This information can be used to determine the selling and rental rates of property, the market share of the property, future forecasts of income, discount rate or appropriate capitalization rate to be applicable in revenue projection.



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