Regional Development Of Medan City

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Abstract
This study aims to analyze the influence of biogeophysical aspects, economic aspects, location aspects, socio-cultural aspects, institutional aspects, and environmental aspects on water supply and clean water demand in Medan City. The data used in the study are secondary and primary data obtained from relevant agencies and communities in Medan City. Secondary data were obtained from 1990 - 2012, and primary data were obtained from 30 respondents. The analysis model used is the Structural Equation Model (SEM) Lisrel PLS (Partial Least Square), the decision-making model or Analysis Hierarchy Process (AHP) model, and the strategic planning model or Strengths Weaknesses Opportunities Threats (SWOT) model. The results showed that: biogeophysical aspects have a positive and significant effect on water supply and clean water demand.

Keywords: biogeophysical aspects, water supply, water demand.

1. Introduction
In line with social, economic and cultural developments, Medan City has grown into one of the metropolitan cities in Indonesia and has become a growth center or development driver in North Sumatra Province. Medan City has also become the social and cultural center of the community as an attraction for the migration of residents from various regions in North Sumatra, and ethnic groups from various countries. The progress of Medan City cannot be separated from the demands of global competition, the implementation of democracy and the implementation of regional autonomy. Global competition requires Medan City to develop into a city that has a conducive environment to increase productivity and creativity as well as to have strong attractiveness and competitiveness.
Medan City is one of the autonomous regions with city status in North Sumatra Province, where Medan City is a strategic place regionally. The implementation of regional autonomy demands a more advanced and modern Medan City governance in realizing public services that are more qualified, fast, easy, fair, and without discrimination for the welfare of the people and the progress of Medan City. Some of the main factors influencing the development performance of Medan City are (1) geographical, (2) demographic and (3) socio-economic. The three factors are interrelated simultaneously in influencing the usability and productivity of Medan City’s development. In accordance with the dynamics of city development, the administrative area of Medan City has gone through several developments. In 1951, the Mayor of Medan issued Edict No. 21 dated September 29, 1951 which determined the area of Medan City to be 5,130 hectares, covering 4 sub-districts with 59 urban villages. The edict was issued following the issuance of the Decree of the Governor of North Sumatra Province Number 66/III/PSU dated September 21, 1951, to triple the area of Medan City. Through Government Regulation of the Republic of Indonesia Number 22 Year 1973, Medan City then experienced an expansion of the area to 26,510 Ha consisting of 11 Sub-districts with 116 Sub-districts. Based on the same administrative area, through the Approval Letter of the Minister of Home Affairs Number 140/2271/PUOD, dated May 5, 1986, Medan City expanded the urban villages in Medan City into 144 urban villages. Based on the Decree of the Governor of North Sumatra Level I Number 140.22/2772.K/1996 dated September 30, 1996 on the definitiveness of 7 Kelurahan in the Municipality of Medan Level II based on the Government Regulation of the Republic of Indonesia Number 35 of 1992 on the Establishment of Several Sub-Districts in the Municipality of Medan Level II, Medan City was administratively re-divided into 21 Sub-Districts covering 151 Kelurahan. Based on this administrative development, Medan City then grew geographically, demographically and socio-economically.
2. Theoretical Foundation
2.1 Regional Planning
There are many definitions of planning, which seem to differ from textbook to textbook. The differences in definitions are mainly between textbooks in one discipline and textbooks in other disciplines. However, even within one discipline, there are differences in definitions between one author and another. This difference occurs due to differences in perspective, differences in focus of attention, and differences in the breadth of the field covered by planning itself. A simple definition of planning is setting a goal and selecting the steps necessary to achieve that goal. This definition is suitable for simple planning where the goal can be easily set and there are no significant limiting factors to achieving the goal. In another definition, planning is setting a goal after taking into account internal constraints and external influences, selecting and determining the steps to achieve the goal. In this definition, the assumption is made that both internal constraints and external influences can be anticipated from the start. However, the above definition only concerns the meaning of planning itself but has not touched on the regional element. In order for planning to become regional planning, the regional element must be added. Regional planning is knowing and analyzing current conditions, forecasting the development of various relevant uncontrolled factors, estimating limiting factors, setting goals and objectives that are expected to be achieved, determining steps to achieve these goals, and determining the location of various activities to be carried out to achieve these goals or objectives (Tarigan, 2004).

3. Research Methods
The type of research used is non-experimental research (no treatment). This type of non-experimental research is one type of survey research. The non-experimental
research design in survey research used is inductive research design. Inductive research design is a research method for drawing general conclusions from data collected from research samples or a way of thinking to give reasons starting with specific statements to compile a general argument. The inductive approach in testing hypotheses has several advantages, namely: First, the statements or conclusions drawn are general and more economical. Various facts have a relationship and the collection of these facts can constitute a whole essence. Second, general statements can be used as a basis for providing further reasoning inductively. Inductively from general statements can be concluded into even more general properties.

4. Discussion and Research Results

4.1 Discussion

1. Biogeophysical aspects have a positive effect on clean water supply in Medan City.

Based on statistical tests, it is known that the latent variable of biogeophysical aspects on clean water supply or X1 to Y1 has a significant effect because the t-statistic value > 1.96 or 5.376 > 1.96. (Table 5.11). Because the t-statistic value > 1.96, the hypothesis is accepted where the biogeophysical aspect variable has a positive and significant effect on clean water supply. This is because the increase in population and population density will increase the demand for water by the community, the increase in water demand will directly and indirectly increase the supply of clean water. The results of this study are in accordance with the results of research by Raharjo (2002), Sari, et.al. (2007), which states that regional development in an area will cause water demand to continue to increase along with the rate of population growth. Fulfillment of food needs and population activities is always closely related to the need for water and water supply.
Domestic demand is determined by the presence of domestic consumers, which comes from population data, habit patterns and living standards supported by socio-economic development that gives a tendency to increase the demand for clean water (Susana and Eddy Setiadi Soedjono 2009). Taty Hernaningsih and Satmoko Yudo (2007) stated that the amount of clean water demand is based on water demand with population growth, as well as research conducted by Indra Kusuma Sari, Lily Montarcih Limantara, and Dwi Priyantoro (2011) stated that regional development in an area will cause water demand to continue to increase along with the rate of population growth. Fulfillment of food needs and population activities is always closely related to the need for water and water supply. Based on the above, along with the rate of population growth, the amount of clean water consumption is increasing, this happens because clean water is a basic need that is needed by humans.

4.2 Research Results

External Factors (Opportunities and Threats) of Water Management in Medan City. External factors (opportunities and threats) are carried out by giving a score value. Then the average score of each factor is obtained so that internal factors that have weaknesses and strengths can be determined, and then external factors, namely threats and opportunities.

<table>
<thead>
<tr>
<th>No</th>
<th>Faktor-faktor Strategis Eksternal</th>
<th>Skor Rata-rata</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jumlah penduduk atau rumahtangga yang terus meningkat</td>
<td>3,50</td>
</tr>
<tr>
<td>2</td>
<td>Pertumbuhan pemukinan atau bisnis property yang meningkat</td>
<td>3,47</td>
</tr>
<tr>
<td>3</td>
<td>Kebutuhan akan air bersih yang terus meningkat</td>
<td>3,30</td>
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Table 5.1 shows that the external factors that have the most dominant opportunities for developing water management strategies are the increasing population or households and the increasing growth of housing or property businesses, which have the highest average scores of 3.50 and 3.47. External factors that pose a threat to the development of water management strategies are the lack of public attitudes about clean water information and the low retribution charged by the local government to institutions as well as the lack of supervision of illegal underground water users by relevant agencies, which have an average score of 2.57 and 2.60, respectively. This factor is the biggest threat for water management to develop water production in Medan City, so opportunities should be utilized as optimally as possible to overcome the threat.

5. Conclusions and Suggestions

5.1 Conclusion

Based on the results of the above research, it can be concluded as follows: Biogeophysical aspects approached by population and population density have a positive and significant effect on clean water supply.
5.2 Suggestion

Future researchers are advised to conduct further research on clean water management development strategies in various production centers such as in North Sumatra Province.

LITERATURE


    Fakultas Pertanian IPB. Bogor.


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