Distribution Natural Resources for Equilibrium Global Economic with SWOT Analysis

Dodi Irwan Siregar[*]

Department of Tourism, College in Pekanbaru, Kota Pekanbaru, Indonesia

Abstract

Natural resource economics deals with the supply, demand, and allocation of the earth's natural resources. One main objective of natural resource economics is to better understand the role of natural resources in the economy in order to develop more sustainable methods of managing those resources to ensure their availability for future generations. Resource economists study interactions between economic and natural systems, with the goal of developing a sustainable and efficient economy. Market equilibrium in this case is a condition where a market price is established through competition such that the amount of goods or services sought by buyers is equal to the amount of goods or services produced by sellers. Economic equilibrium is the combination of economic variables (usually price and quantity) toward which normal economic processes, such as supply and demand, drive the economy. The term economic equilibrium can also be applied to any number of variables such as interest rates or aggregate consumption spending. SWOT analysis identifies internal and external factors that are prioritized by experts in the distribution natural resources for equilibrium economic domain through an analytical hierarchy process. The prioritized SWOT factors are used in the formulation of strategies using the TOWS matrix. The results of the study indicate that a no natural capital is the world's stock of natural resources. Some natural capital assets provide people with free goods and services, often called ecosystem services strategy and an isolation strategy that effectively regulates international trade in goods and services to equilibrium global economic is the best strategy.

Keywords: SWOT analysis method • Indonesia's position • Distribution natural resources • Equilibrium global economic • Natural capital

Introduction

Natural resource economics transdisciplinary field of academic research within economics that aims to address the connections and interdependence between human economies and natural ecosystems. Its focus is how to operate an economy within the ecological constraints of earth's natural resources. Resource economics brings together and connects different disciplines within the natural and social sciences connected to broad areas of earth science, human economics, and natural ecosystems. Economic models must be adapted to accommodate the special features of natural resource inputs. The traditional curriculum of natural resource economics emphasized fisheries models, forestry models, and minerals extraction models. In recent years, however, other resources, notably air, water, the global climate, and "environmental resources" in general have become increasingly important to policy making. The economics and policy area focuses on the human aspects of environmental problems. Traditional areas of environmental and natural resource economics include welfare theory, land/location use, pollution control, resource extraction, and non-market valuation, and also resource exhaustibility [1].

Sustainability, environmental management, and environmental policy. Research topics could include the environmental impacts of agriculture, transportation and urbanization, land use in poor and industrialized countries, international trade and the environment, climate change, and methodological advances in non-market valuation, to name just a few. Strategic management can be defined as a set of decisions and actions taken by management, in collaboration with all levels within the organization in order to establish long-term activities of the organization [2]. Literature review shows that many approaches and techniques can be used to analyze the strategic cases in the strategic management process. One of them is the SWOT analysis.

This article explains the SWOT analysis, provides the theoretical background and an overview of the application of the SWOT analysis. As some authors have identified weaknesses of the SWOT, analysis is combined with a method for multi-criteria decision Analytic hierarchy process, in order to avoid these disadvantages. Therefore,

[*]**Address for Correspondence:** *Dodi Irwan Siregar, Department of Tourism, College in Pekanbaru, Kota Pekanbaru, Indonesia, Tel: 82171928606; E-mail: dodi.irwan.siregar@gmail.com*

in the second part of the paper Analytic hierarchy process, method and SWOT Analytic hierarchy process, hybrid method are described. Following the basic steps method, SWOT Analytic hierarchy process, is applied to the example of the maritime of World Economic Trade Trajectory strategic Income plan definition.

to internal organizational factors, while opportunities and threats cover a wider context or environment in which the entity operates [3]. The first are likely to be under control of the organization but the latter one, although they are no less important when looking at the impact on the enterprise, are not (Table 1).

Literature Review

SWOT analysis method

SWOT is an acronym of strength, weakness, opportunities and threats. The first two factors (strengths and weaknesses) are related

(S) Strenght	(W) Weaknesses
S_1: stability, prosperity and well-being of human needs: Economic stability is a state of the economy that runs according to expectations, is controlled, and is sustainable.	W_1: Limited availability and accessbility: a little international harbor.
S_2: Geographical position and historical value as well as being included in the island and ocean: its location is in an island and ocean landscape, flowing with fertile rivers and harbor, has a good environmental carrying capacity.	W_2: The underdevelopment of world economic trade trajectory: the lack of reputable international harbor and International public facilities.
S_3: Economic shield to prevent social inequality: In essence, a Pancasila economy is a system that tries to avoid pendulum like swings from one extreme (a free market economy, known in Indonesia as free fight liberalism) to the other (state socialism, especially of the Soviet kind). In simple terms, a "Pancasila economy" can be described as a market economic system with government control or a controlled market economy. A Pancasila economy can be considered an example of a mixed economy or a third way economic system.	W_3: No income promotion: No appropriate Income strategies for the promotion
S_4: Macro and micro economic improvement in the face of recession: Microeconomics is a field which analyzes what's viewed as basic elements in the economy, including individual agents and markets, their interactions, and the outcomes of interactions. Individual agents may include, for example, households, firms, buyers, and sellers. Macroeconomics analyzes the economy as a system where production, consumption, saving, and investment interact, and factors affecting it: employment of the resources of labor, capital, and land, currency inflation, economic growth, and public policies that have impact on these elements.	W_4: No coordination between World Economic Trade Trajectory authorities: lack of involvement in public-private strategic decision-making.
	W_5: No world economic trade trajectory management: obsolete laws relating to World Economic Trade Trajectory, an ad-hoc investment, insecure jobs.
(O) Opportunities	(T) Threats
O_1: Geographic characteristics of destination: Different seasons of the year for activities.	T_1: Regional competitive destinations: local competitors are developing a competitive festival World Economic Trade Trajectory to attract tracks of similar profiles each nation.
O_2: The potential for world economic trade trajectorydevelopment: A wealth of cultural resources concentrated in a large area World Trade.	T_2: Role International Political instability: unfavorable economic situation in domestic and international.
O_3: International quality resources: Green economic products and blue economic product.	T_3: The absence of an active controlling government authority for world economic trade trajectory: No World Economic Trade Trajectory development plans

Table 1: SWOT analysis method

One of the most important management strategies, SWOT is a tool used by managers to develop strategies [4]. is frequently employed as a tool for the investigation of internal and external elements in order to develop a methodical strategy and get support for dealing with the problem. The two most crucial aspects for the future of enterprises are internal and external influences. The SWOT matrix includes these and refers to them as strategic elements. The formulation and adoption of a strategy that results in a positive interaction between the internal and external components is the ultimate goal of the strategic planning process, of which the SWOT analysis is one of the earliest steps. When an alternative shows itself unpredictably and the decision-making context needs to be examined, SWOT can also be used. The analysis aims to identify the strengths and weaknesses of the organization and the opportunities and threats in the environment of the organization. SWOT analysis is

an important tool that serves as a support for decision making and is often used as a tool for the systematic analysis of the organization, both internal and external influences on the organization [5]. Identifying their strengths, Weak nesses, opportunities and threats, organizations can build a strategy on their strengths, eliminate weaknesses and exploiting its capabilities, or to use an option in the fight against threats. SWOT analysis summarizes the most important internal and external factors (strategic factors) that may affect the future of the organization.

Analytic hierarchy process method

This chapter describes the Analytic hierarchy process, method which is used in conjunction with a SWOT analysis in order to avoid the disadvantages of SWOT analysis. Previous studies have recognized the shortcomings of SWOT analysis and point out SWOT

Analytic hierarchy process, as hybrid that deal with the priorities of SWOT factors. Thus, the idea behind using analytic hierarchy process, is to systematically evaluate the SWOT factors [7]. This chapter provides a theoretical background of analytic hierarchy process, method, and the next chapter describes SWOT Analytic hierarchy process, and emphasizes reasons for integration of two methods.

Analytical hierarchy process, is one of the most popular methods of multiple criteria decision making. It is used to rank the alternatives by taking into account the importance of the different criteria. Analytic hierarchy process, allows structuring the problem, followed by comparing pairs of elements in the hierarchy. At the end of the process, mathematical model is determined by weighting factors of all elements of the hierarchy. Analytic hierarchy process, structures the problem of decision making and monitors the process of decision making by defining objectives, criteria and alternatives, by comparing criteria and alternatives in pairs and defining priorities of alternatives.

Results of the analytic hierarchy process, method are ranked alternatives and the weight coefficients of criteria in relation to the goal. Analytic hierarchy process, successfully identifies and indicates the inconsistency of decision making by tracking inconsistencies for the whole process. Results are quantitative indicators that can argue the decision. Analytic hierarchy process, method is now one of the most popular and commonly used method for multi-criteria decision making in solving real problems. It was developed.

Application of analytic hierarchy process

Vaidya and Kumar published in 2006. the literature review of 150 publications published in the prestigious international scientific journals in the period since 1983-2003, in which the analytic hierarchy process, method has been applied to solve certain types of problems. In the period since 1983. to 2003, analytic hierarchy process, method is most often used for the selection, evaluation and decision making (more than 50% of the application is one of the three areas). Furthermore, the analytic hierarchy process, has been applied in the planning, development, and in cost-benefit analysis, and less in medicine and for the purposes of prediction. The same article noted that the analytic hierarchy process, method in that period occurred in the five studies combined with SWOT analysis. SWOT analytic hierarchy process, method This chapter describes a hybrid method of SWOT analytic hierarchy process, First, the reasons why combination of these two methods is necessary, followed by a review of SWOT Analytic Hierarchy Process method.

Although SWOT is often used as a planning tool, this analysis also has weaknesses. Some of these weaknesses can be avoided and then the SWOT can be used more efficiently. In previous studies, this is done by connecting a SWOT analysis with analytic hierarchy process, method. As a result, a hybrid method is obtained that produces quantitative values for the SWOT factors [8]. As advantages of derived hybrid method, literature most often states its simply maritime, efficiency and the ability to combine qualitative and quantitative criteria. One problem of SWOT analysis lies in the uncertainty related to the future development and the outcome of various factors. This can complicate the comparison. However, the analytic hierarchy process, method is able to manage the decision-making in situations of uncertainty. It is recommended that a number of factors (strengths, weaknesses, opportunities and threats) will be

limited to 10, but it certainly allows the user to avoid overlap and negligence during construction of SWOT. On the other hand, the limitation is not so strict and the problem of the large number of comparisons it can be avoided by using at least two different techniques. First, grouping variables and second, by adding a new level in the hierarchy. If, for example, there is a large number of opportunities, they can be grouped into two or three subgroups. Analytic hierarchy process, enables quantization of priorities to support decision making. However, analytic hierarchy process, does not include the statistical uncertainty of the results. Consistency measure of comparison and consistency ratio, resulting from analytic hierarchy process, calculation, does not give direct information about the uncertainty derived priorities.

Results and Discussion

Numerical results, prioritized SWOT factors are useful in formulating or selecting the strategy. It is good to compare the external features compared to the internal potential, because all the factors are, at the same, a numerical scale. For example, if it turns out that one weakness is greater than all the benefits, then the chosen strategy may have to be focused on eliminating these weaknesses. Similarly, the selection of the new strategy probably should not be based only on the deletion of the existing opportunities and threats, if they are of equal size. In every situation of strategic planning can be used SWOT analysis and analytic hierarchy process, method. SWOT analysis provides the basic framework which conducts analysis of the situation in which the decision was made, while the analytic hierarchy process, helps to conduct the SWOT in analytic way. Potential advantages of using analytic hierarchy process, in SWOT analysis lie in the possibilities of quantitative testing of SWOT factors and involvement of decision maker's preferences in the planning.

This hybrid method is suitable for many situations of strategic planning. After defining the priorities of SWOT factors, new strategies can be constructed partly on the basis of information derived from the comparison. Furthermore, it is possible to compare two or more strategic options, so find out which is the best match to the SWOT factors. This can be done by adding an alternative strategy to the lowest level of the hierarchy and comparing them with respect to each factor in SWOT list. The result is a quantitative value that indicates the priority or preference of each option.

Combined use of analytic hierarchy process, and SWOT proved promising. Making comparisons in pairs forces decision makers to think about the weights of factors and more accurately analyze the situation. Hybrid method of analytic hierarchy process, and SWOT increases and improves the information base for the strategic planning process. It also provides an effective framework for learning in support of strategic decision making in many situations and can be used as a tool for communication and education in the processes of decision making where multiple decision makers involved.

Steps of SWOT analytic hierarchy process method

According to Yeon and Kim, SWOT analytic hierarchy process, steps are following:

- Conducting a SWOT analysis.
- Comparisons in pairs between SWOT factors within each SWOT group.
- Comparisons in pairs between the four SWOT groups.
- Formulating strategies based on the results.

Step 1: SWOT analysis

Relevant external and internal factors are identified and included in the SWOT analysis. When applied to a standard method of analytic hierarchy process, it is recommended that a number of factors within the SWOT group does not exceed 10 because the number of comparisons in pairs that are needed in the analysis is rapidly increasing.

Step 2: Comparisons in pairs between SWOT factors were conducted within each SWOT group

When comparisons are made, the question to be answered is: Which of the two factors being compared is has higher impact: Is it strength, opportunity, weakness or threat. With these comparisons as input, the relative priorities of the local factors are calculated using the eigenvalues. These priorities reflect the perception of the decision maker on the relative importance of factors.

Step 3: Comparisons in pairs between four SWOT groups

Factor with the highest local priority was chosen from each group to represent the group. These four factors are then compared and their relative priorities are calculated as in step 2.

These are the scaling factors of four SWOT groups and they are used to calculate the total global priorities of independent factors within them. This is done by multiplying the local priorities defined in the second step corresponding to the value of the scaling factor in SWOT groups. The sum of all factors of global priorities is one.

Step 4: Using results in the formulation of strategies and the evaluation process

Contribution to the strategic planning process comes in the form of numerical values for the factors. New targets can be set, the strategies defined and the implementation plan taking into consideration based on the most important factors.

Application of SWOT analytic hierarchy process method

In several previous studies the combined model SWOT and analytic hierarchy process, method was used [9]. Kurttila et al. stated this hybrid method is often used to improve the usability of a SWOT analysis as analytic hierarchy process, quantitatively determines the importance of the factors in SWOT groups. In the above studies, among other things, research subjects are exploring the opportunities and challenges of agroforestry by applying SWOT analysis in combination with analytic hierarchy process, assessing perceptions of stakeholders regarding the suitability of the access control based on the community. Have recently used the SWOT and analytic

hierarchy process, model to, firstly, prioritize strengths, weaknesses, threats and weaknesses of the group, and secondly, to decide and evaluate alternative strategies of e-government. In each of these studies case study approach have been used to examine specific situations.

SWOT analytic hierarchy process, method was applied in even more domains such as environmental protection, project management, agriculture, manufacturing, energy, agriculture, industry, machine tools, etc.

Strategic planning of world economic trade trajectory in a small town

In this chapter the use of SWOT analytic hierarchy process, is demonstrated in the field of world economic trade trajectory. Development of a strategic plan for a small town in the northwest of the croatian, world economic trade trajectory is presented. World economic trade trajectory is a maritime with less than 50,000 inhabitants, the capital maritime of world economic trade trajectory county and the economic center of the world.

Systematic approach to strategic planning of world economic trade trajectory world economic trade trajectory development is implemented by using SWOT analysis integrated with analytic hierarchy process, method. Hybrid method follows the steps of development of described earlier in the paper. The first step is the SWOT analysis. SWOT matrix was developed by consulting an expert in the field of world economic trade trajectory: A person who graduated from the faculty of world economic trade trajectory management. Identified strengths, weaknesses, opportunities and threats are found in Table 1. The following strengths were identified: characteristics of destination, geographical position and historical value, standard of living, cultural maritime events. Elements of each of these strengths are fully explained in Table 1.

Expert has recognized the weaknesses of world economic trade trajectory relating to the following characteristics: Limited availability, underdeveloped world economic trade trajectory, inadequate Income promotion, poor coordination between World economic trade trajectory authorities and unstructured world economic trade trajectory management.

Expert has noted the following opportunities that can be exploited: geographical features of the destination recognized the potential for the development of world economic trade trajectory and international reputation. As threats to be aware of are identified: Regional rival destinations, economic instability and the absence of controlling authority for active world economic trade trajectory.

As the greatest strength expert identified the characteristics of the destination. It is interesting to be noted that characteristics of the destination has priority higher than following two strengths together. Expert recognized underdeveloped and inadequate Income of world economic trade trajectory promotion as the main weaknesses of world economic trade trajectory as a track destination.

The next step of the development SWOT analytic hierarchy process, method involves defining strategies using tows matrix. The main objective of the strategy formulation is a change of current conditions or re-establish the image that is currently broken in the

region. Tows matrix provides four different combinations: SO, WO, ST and WT. Below are shown strategies identified in this research. For each strategy are listed SWOT combinations that are used in defining strategies (e.g. S_1/O_4 means consideration of strength No.1 and opportunity No. 4.).

SO Strategies (Maxi-Maxi)

- **Strategy of differentiated approach:** Provides income mix in a different way than competitive destinations (including $S_1/S_2/S_4/O_3/O_2$).

WO Strategies (Mini-Maxi)

- **Strategy of shareholder involvement in world economic trade trajectory development**: involvement of shareholders in decision making, improve product quality and concern for consumers (including: $W_2/W_3/W_4/W_5/W_1/O_3/O_2$).
- **The strategy of diversification of distribution channels**: Distribution channels have the power to influence it, "when", "where" and "how" people are traveling, and so to some extent, control how many people come to a destination (includes $W_3/W_2/W_5/W_1/O_3/O_2/O_1/O_3$).

ST Strategies (Maxi-Mini)

- **Segmented Income strategy with product modification:** Segmentation identifies specific categories of homogeneous preferences among tracks (includes $S_1/S_2/S_4/S_3/T_2/T_1$).
- **Proactive communication strategy:** prevent potential negative image in the minds of visitors, must be centralized, honest, transparent and informative ($S_1/S_2/T_2$).

WT Strategies: Mini-Mini

- **Launch efficient/flexible income promotional strategies:** Creating confidence in the target market: special events, billboards, trade shows, TV programs, public relations, advertising are the best tactics for promotion ($W_3/T_2/T_1$).
- **Organizational interrelationships and team work:** World Economic Trade Trajectory is a set of variety services which include many parties, therefore it is necessary to develop a network among them ($W_2/W_1/W_3/T_2/T_1$).

Explained strategies are defined with the help of expert, following the theory of world economic trade trajectory. The main advantage of this approach is that it takes into account the internal and external factors that are built into alternative strategies. The disadvantage is that certain combinations are not taken into account.

Conclusion

Economic equilibrium is the combination of economic variables (usually price and quantity) toward which normal economic processes, such as supply and demand, drive the economy. The term economic equilibrium can also be applied to any number of variables such as interest rates or aggregate consumption spending. SWOT analysis identifies internal and external factors that are prioritized by experts in the distribution natural resources for equilibrium economic domain through an analytical hierarchy process. The prioritized SWOT factors are used in the formulation of strategies using the TOWS matrix. The results of the study indicate that a no natural capital is the world's stock of natural resources. Some natural capital assets provide people with free goods and services, often called ecosystem services strategy and an isolation strategy that effectively regulates international trade in goods and services to equilibrium global economic is the best strategy.

References

1. Collins-Kreiner N, Wall G. Evaluating World Economic Trade Trajectory potential: A SWOT analysis of the Western Negev, Israel. *World Economic Trade Trajectory* 55 (2007): 51-63. 2007.
2. Geoffrey, Heal. "Exhaustible Resources," The New Palgrave Dictionary of Economics, 2nd Edition. Palgrave Macmillan, London, (2008): 4163–4171.
3. Houben G, Lenie K and Vanhoof K. A knowledge-based SWOT-analysis system as an instrument for strategic planning in small and medium sized enterprises. *Decis Support Syst* 26 (1999): 125–135.
4. Jeon YA and Kim JS. An application of Swot-Analytic hierarchy process, to develop a strategic planning for a track destination. 16th Graduate Students Research Conference, Houston, Texas, (2011).
5. Kurttila M, Pesonen M, Kangas M and Kajanus M, et al. Utilizing the Analytic hierarchy process Analytic Hierarchy Process, in SWOT analysis a hybrid method and its application to a forest-certification case. *For Policy Econ* 1 (2000): 41-52.
6. Osuna EE and Aranda A. Combining swot and Analytic hierarchy process, techniques for strategic planning. Is Analytic Hierarchy Process, Vina del Mar, Chile, (2007).
7. Sumadi BK. Empat Puluh Persen Jalur Perdagangan Dunia Melewati Indonesia. Kementerian Perhubungan Jl. Medan Merdeka Barat No. 8 Jakarta Pusat DKI Jakarta, (2022).
8. Vaidya O and Kumar S. Analytic hierarchy process: An overview of applications", *Eur J Oper Res* 169 (2006): 1-29.
9. Yuksel I and Dagdeviren M. Using the Analytic Network Process (ANP) in a SWOT analysis-A case study for a textile firm. *Inf Sci* 177 (2007): 3364-3382.