

THE STUDY OF BOGOR BOTANICAL GARDEN ECOTOURISM VALUE CHAIN

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ABSTRACT

The objective of this study were : 1) to improve development of Bogor Botanical Garden ecotourism value chain, 2) to recommend strategies of development for Bogor Botanical Garden ecotourism value chain, and 3) to formulate programs that increase value added for Bogor Botanical Garden value chain, especially for involved SME's. Data collected from survey, in depth interview, and literature was analyzed using descriptive analysis, value chain analysis, SWOT analysis. The results of SWOT analysis indicated that the strength of The Bogor Botanical Garden value chain was the well known Bogor Botanical Garden, the weakness was lack of investment to improve the Bogor Botanical Garden, the opportunity was the support of government, and the threat was the growing of ecotourism competitor. Recommended strategies were : 1) relying on the strenghts of Bogor Botanical Garden as a focal point of the plus ecoedutourism programs, 2) improving quality of human resources at each value chain, 3) increasing investment for the development of value chain, and 4) marketing Bogor Botanical Garden as past of various integrated packages with other tourism objective in Indonesia.

Keywords: Bogor Botanical Garden, Ecotourism Value Chain, SWOT Analysis

ABSTRAK

Tujuan dari penelitian ini adalah: 1) untuk meningkatkan pembangunan Bogor Botanical Garden sebagai rantai nilai ekowisata, 2) strategi yang direkomendasikan untuk pengembangan rantai nilai ekowisata Kebun Raya Bogor, dan 3) untuk merumuskan program-program yang meningkatkan nilai tambah bagi rantai nilai Kebun Raya Bogor, khususnya bagi UKM yang terlibat. Data yang dikumpulkan dari survei, wawancara mendalam, dan sastra dianalisis menggunakan analisis deskriptif, analisis rantai nilai, analisis SWOT. Hasil analisis SWOT menunjukkan bahwa kekuatan Rantai Kebun Raya Bogor adalah nilai terkenal Bogor Botanical Garden, kelemahannya adalah kurangnya investasi untuk meningkatkan Kebun Raya Bogor, peluang itu dukungan dari pemerintah, dan semakin banyak pesaing ekowisata. Strategi yang direkomendasikan adalah: 1) mengandalkan Kekuatan dari Kebun Raya Bogor sebagai titik fokus dari program ecoedutourism plus, 2) meningkatkan kualitas sumber daya manusia pada setiap rantai nilai, 3) meningkatkan investasi untuk pengembangan rantai nilai, dan 4) pemasaran Kebun Raya Bogor terpadu dengan berbagai paket dengan tujuan wisata lain di Indonesia.

Kata Kunci: Kebun Raya Bogor; Ekowisata Value Chain, Analisis SWOT

INTRODUCTION

Ecotourism value chain has significant impact on sustainability of Bogor Botanical Garden (BBG). Data obtained from various sources show that the number of domestic and foreign tourist increased continuously (1,75%) in the period of 2001-2008 and (12,89%) in 2008-2009, respectively. However, the number of visitors to BBG decreased significantly around 60% in the period of 2008 and 2009. The decline probably influences the main role of BBG in preserving, utilizing, and improving its potency through conservation, research, education, recreation and the improvement of the society appreciation.

Based on the above matter, BBG should improve its competitiveness to be more optimal in the future. The aims of this study were to : (1) improve the ecotourism value chain of BBG, (2) provide recommendation on development strategies of the value chain, (3) present suggestion to increase added value (income) of value chain system particularly for micro, small and medium scale businesses within the value chain.

LITERATURE REVIEW

Porter (1990) hypotized that the value chain is a systematic way to analyze the sources of competitive advantage by examining all of activities undertaken and how all of activities interacted each other. The value chain consists of nine generic categories of activities that linked together in a distinctive manner. The generic value is used to analysis how value chain is done simultanly and specifcly.

Yilmaz and Bititci (2006) stated proving of tourism value chain based on improving of Porter Value Chain. Grangsjo (2003) in Yilmaz and Bititci (2006) emphasyzed advantage of improving networking and co-opetition on value chain (Competitors can do bussiness activities by competitiveness and co-operation). Add by Mitchell and Phuc (2007) stated that tourism produces activities of services, it is not products that manufactured, production process and services consumtion are done simultanly and specifcly for acvtivities in the same object tourism.

Journal of research from Henning, *et.al* (2008) about Rwanda Tourism Value Chain Case Study resulted value chain approach helping to identify both opportunity and threadness to improve holistic tourism.

RESEARCH METHODS AND CONCEPTUAL FRAMEWORK

Based on the research method and adapted model of ecotourism value chain Figure 1. Illustrate the conceptual framework of this study.

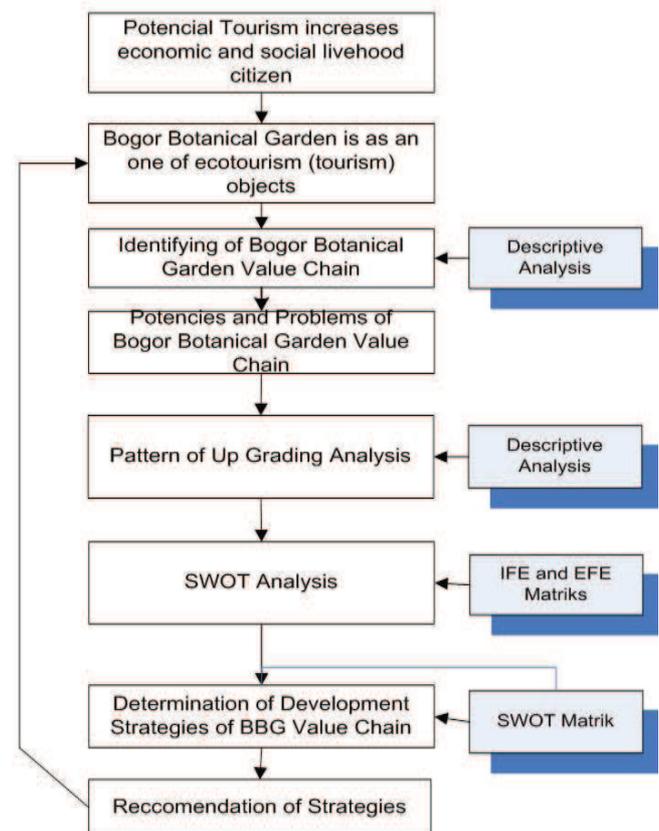


Figure 1. The Conceptual Framework of This Study

This study use descriptive method by conducting surveys and indepth interviews by using questionare guidlines. The factors analysed were both internal and external factors of the value chain influencing the development strategy of the ecotourism value chain. Data collection follow the research stages base on the following outline:

1. To identify (identifying) the value chain of BBG by using descriptive analysis.
2. Mapping the potencies and problems of the value chain.
3. Analysing potency in the form of strength and opportunity as well as problem analysis in the form of weakness and threat.
4. Formulating development strategies for the ecotourism value chain system basen on strength, opportunity, weakness and threath.
5. Determining the development strategies of the ecotourism value chain to be recommended as a value chain model of BBG ecotourism.

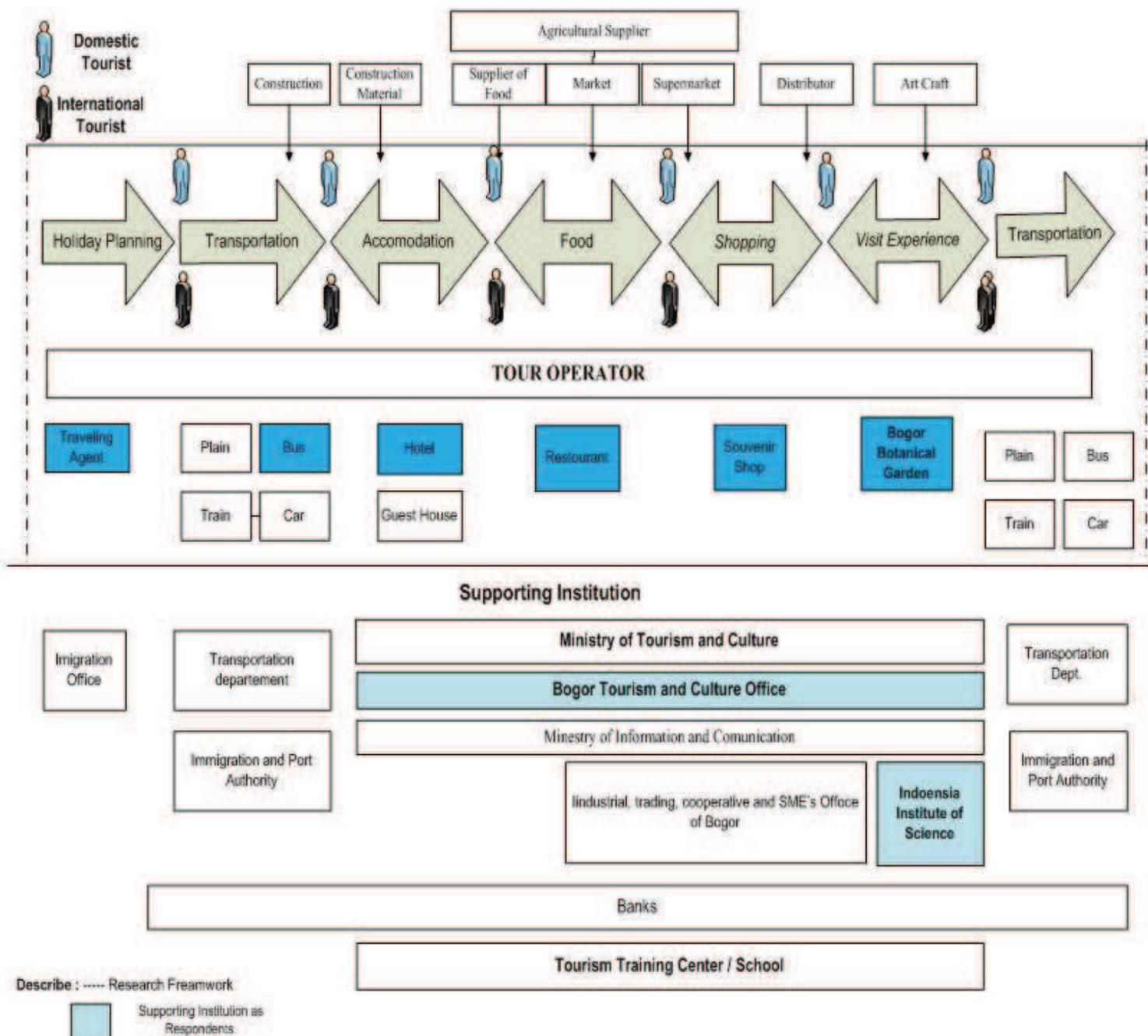


Figure 2. Model of Bogor Ecotourism Value Chain (Adapted from Mitchell and Phuc,2007)

Samples in this research used non probability technique by conducting purposive sampling which was judgement sampling. Samples who were chosen based on knowledge and experience to develop value chain of BBG who were expert respondents. The Determination of value chain strategies used descriptive, value chain, and SWOT. Model of value chain (Figure 2) was adopted from Mitchell and Phuc (2007).

RESULTS AND DISCUSSIONS

Descriptive Analysis

The Determination of value chain actors was based on data and information from observation and interviews of respondents. Based on value chain scheme from Yilmaz

and Bititi (2007) in Da Nang in Vietnam, the scope of research, and the schedule of this research chose five institutions as value chain actors, namely PT. Destinasi Tirta Nusantara (PDES), Hotel Salak Bogor, Restoran Cafe Dedaunan, UKM Souvenir and Garden Shop, and Bogor Botanical Garden as representative of Travel and Transportation, Accommodation, Food, Souvenir, and Tourism Object actors, respectively. Figure 3 shows pattern of value chain actors of BBG.

Based on processing of data and information the results indicated that there were differences of cooperation degree among actors of BBG value chain. Figure 3 shows pattern of cooperation of value chain actors.



Figure 3. Five of Value Chain Actors in This Research

From the Figure 4 the results can be explained briefly. In the scope of tourism package PDES that firstly met consumers should have a role and very strong role and function to add value to other actors. In reality PDES only serves consumers to tour BBG, because the cooperation among actors has not been integrated. UMKM Souvenir and Hotel Salak were the lowest actors of all actors to get added value tourism in BBG value chain. PDES never to guide tourist when visiting BBG to come to UMKM and Hotel Salak. Cafe Dedaunan that is located in BBG area is the most benefited actor because tourist would come there even though they were not directed to visit it. The solution to get added value for all actors is to make BBG as one of destinations on tourism package of PDES. Explanation of solution is to distribute tourist to all actors. When PDES directed the clients to stay in Hotel Salak, both actors will receive added value other. Furthermore, Hotel Salak directs tourist who come BBG to visit UMKM and Restourant. If tourist stay longer in Bogor with more time, they can be given some information to go around bogor city to visit various tourism center.

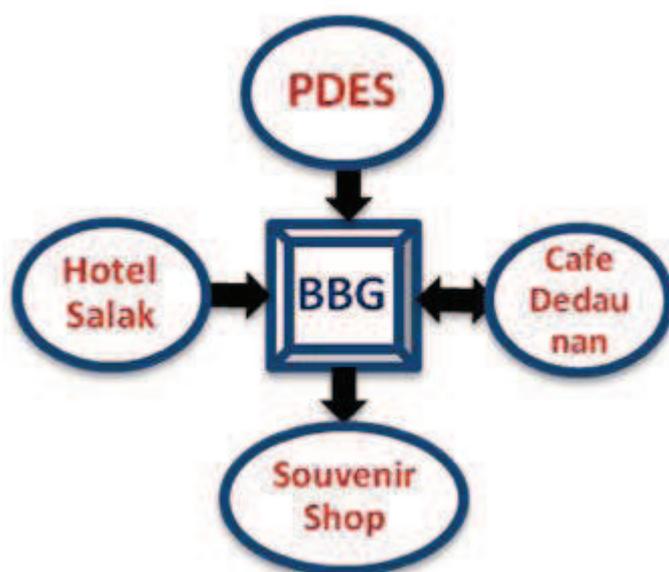


Figure 4. Pattern of Cooperation Degree of Value Chain Actors

SWOT Analysis

The Internal Factors (Strengths and Weaknesses)

Based on the point of view of expert respondents and processing data there were some internal and external factors of BBG Value Chain. The internal factors consist of strengths and weakness, the results that strong factors are : (1) BBG has many collections and diversifications of Indonesia floras, (2) The BBG is situated a strategic and reachable location, (3) BBG has complete infrastructures, (4) Accomodation, transportation and tour operator around BBG are reachable, and (5) BBG is famous in many countries. The weakness factors are (1) Members of value chain have still lack of awarness and understanding about ecotourism, (2) for special skill of ecotourism members of value chain is still weak, (3) Members of value chain do not have best cordination each others, (4) Coordination is not supported by information technology, and (5) The development of value chain needs large investment.

Based on accumulation of value on strength factors, Factor BBG is the famous of many countries have the highest weight (0,117) and score 4. This means that this factor is an important factor and a great strength in the success of the BBG value chain. Other factors of strength are accomodation (such as hotels and guesthouses), travel agencies and transportations (public transit, taxi) which is easily access to BBG. The Factor get value 0,112 obtained with rating 4.

Internal strategic factors that be major weakness is value chain development to require considerable investment because it requires ongoing research. Although it has a value of 0,143 that it indicate the weighting factors and strategic rather than other factors but the value of its rank is 1 (major weakness). Building up the value chain requires research, seminars and workshops continually. Learning from Rwanda tourism value chain formation (Henning et.al, 2006) take up to eight years in various research activities and meetings. The next weakness

Table 1. Internal Strategic Factors Analysis

Internal Strategic Factors	Weight	Rating	Score
Strengths			
1. BBG has many collections and diversified of Indonesia floras	0,093	4	0,37
2. The BBG is situated a strategic and reachable location	0,081	4	0,32
3. BBG has complete infrastructures	0,075	3,5	0,26
4. Accommodation, transportation and tour operator around in BBG are reachable	0,112	4	0,45
5. BBG is famous in many countries	0,117	4	0,47
Weaknesses			
1. Members of value chain have still lack of awareness and understanding about ecotourism	0,078	1,5	0,12
2. For special skill of ecotourism members of value chain is still weakness	0,097	1	0,10
3. Members of value chain do not have best coordination each others	0,116	1,5	0,17
4. Coordination is not supported by information technology	0,091	1,5	0,14
5. The development of value chain needs large investment	0,143	1	0,14
Accumulation	1,000		2,53

of internal strategic factor is the quality of human resources that it is still inadequate, especially skill of eco-tourism. This Factor has value 0,116 by ranking the value of 1,5, it means that has its disadvantages (between the big drawback or the minor). Human resource issues, especially skilled labor that controls the plant and floras, became a serious obstacle for BBG. Guide of BBG is still far from being necessary.

The External Factors (Opportunities and Threats)

The eksternal factors consists of opportunities and threads. Opportunities factors are : (1) Current tourism interest in the world is natural tourism or ecotourism, (2) Tourism can grow small and medium entrepreneurships, (3) Growing BBG as one of object of ecotourism should be supported by local governt and national

goverment as well as LIPI (Lembaga Ilmu Pengetahuan Indonesia – Indonesia Institute of Science), (4) BBG can be connected various tourism objects in West Java or Indonesia, (5) Advance of information technology can be used as connector BBG Value Chain. Thread factors are (1) Tourist are faced with various ecotourism alternatives, (2) Massal Tourism appears around BBG, (3) Indonesian situation is not safe for traveling tourist, (4) There is not ecotourism association in BBG Value chain, (5) National goverment through creative economy and tourism ministry of Indonesia has not made special ecotourism programm for BBG.

Results of analysis of expert assessment of the factors - external factors including the value chain opportunities and threats presented in Table 2.

Table 2. The Result of External Strategic Factors Analysis

External Strategic Factors	Weight	Rating	Score
Opportunities			
1. Current tourism interest in the world is natural tourism or ecotourism	0,111	4	0,44
2. Tourism can grow small and medium entrepreneurships	0,114	3,5	0,40
3. Growing BBG as one of object of ecotourism should be supported by local govern and national government as well as LIPI	0,120	3,5	0,42
4. BBG can be connected various tourism objects in West Java or Indonesia	0,097	3	0,29
5. Advance of information technology can be used as connector BBG Value Chain	0,105	3,5	0,37
Threats			
1. Tourist are faced with various ecotourism alternatives	0,089	3	0,27
2. Mass Tourism appears around BBG	0,092	3	0,27
3. Indonesian situation is not safe for traveling tourist	0,079	2,5	0,20
4. There is not ecotourism association in BBG Value chain	0,085	2	0,17
5. National government through creative economy and tourism ministry of Indonesia has not made special ecotourism program for BBG	0,110	2	0,28
Accumulation	1,000		3,10

External factor of Opportunities that have an above average response and considered more important than other factors is the support of central government/LIPI (Indonesia Institute of Science) and local levels in developing ecotourism in particular the Bogor Botanical Garden. This Factor has fourth of rank with a 0,120 interest rate (weighted value). Another opportunity factor that had tremendous response (rank value 4) and also important (the weight of 0,111) is the trend of nature tourism (back to nature) to increase so that it can be a huge market opportunity.

External factors of the threat that have an above average response (the rank 3) and considered essential for the emergence of alternatives to be addressed is whether the nature ODTW mass tourism (weighted value of 0,92) or a special interest (the weight of 0,089). Its presence does not become a serious obstacle for the sustainability of BBG because it need to supported by the State Budget for financing. However, if there is a continuous decline in visitor numbers so manager of BBG will be difficult to cover the cost of care BBG with to reach 3 billion dollars per year. Beside that the business (value chain) will also impact on the order. According to Data of Bogor Tourism Official (2009) there are now 2 natural attractions of tourism object and 11 mass tourism of tourism object in the area of the city of Bogor.

Development Strategies of Bogor Botanical Garden Value Chain

Based on SWOT Analysis and grouping of internal an externals factors five strategies of BBG Value chain development can be propose :

1. Strategy Focus on excellence of BBG to be the center of Ecoedutourism. This strategy emphasizes the relationship of value chain to lead BBG not only as object tourism, but also as the center of ecologic aspect like concervation and flora study.
2. Strategy for improving human resources in each actors of value chain. This strategy emphasizes on mastery of knowledge of ecotourism specialised BBG in each actor of value chain
3. Strategy for improving the value chain investment. This strategy emphasize on improving the investment of actors who will keep the suistanibity of value chain. Investment is not only capital but also related in using information technology for making integrity of information networking during activity in value chain.

4. Strategy for improving of joint marketing of BBG as The Placed of Ecoedutourism Plus. This strategy offers to market that BBG is not only as interesting object for public, but also its as place of MICE (meeting-incentive-convention-exhibition).
5. Strategy of strenghten the sinergic allience for ecotourism value chain. This strategi emphasize add value when tourist or consumen do to traveling of tourism. Travel Actors is member of value chain who offer package of traveling toward consumen. And consumen are expected to be in each others.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

1. Eco-tourism value chain Bogor Botanical Gardens consists of managing travel operators and travel agents, managers of transportation, accommodation manager, restaurant manager (food and beverages), souvenir centers manager, manager of the Botanical Garden, and supported by relevant stakeholders such as the National Institute of Sciences knowledge of Indonesia, Bogor City Government in this regard the Department of Culture and Tourism and other relevant stakeholders such as Department of Public Works, Tourism Association, Hospitality Association and Place Entertainment, tourism schools.
2. Ecotourism Value Chain Development Strategy of the Botanical Garden are: 1) Strategy Focus on excellence of BBG to be the center of Ecoedutourism, 2) Strategy for improving human resources in each actors of value chain, 3) Strategy for improving the value chain investment, 4) Strategy for improving of joint marketing of BBG as The Placed of Ecoedutourism Plus, 5) Strategy of strenghten the sinergic allience for ecotourism value chain.
3. Proposed program that can be implemented with a combination of five strategies on both points, the conclusions are a program package, diorama construction of ecotourism and environmental sustainability in one corner of BBG, eco-tourism promotion program, program promotion and implementation of MICE (meeting, incentive, convention, exhibition), program income stakeholders.

Recommendations

1. The need for eco-tourism value chain formed the Botanical Garden and sustainable competitive advantage by leveraging a tourist destination and take advantage of the cooperation that has existed so far.
2. The need for support from stakeholders, especially the central government to make a goal BBG as one of the major eco-tourism in Indonesia, as well as government policy Bogor greater Souvenir for the development of SMEs.
3. To support and accelerate the awakening BBG eco-tourism value chain, it needs to be carried out focus group discussions, seminars, research and workshops with the theme of eco-tourism value chain BBG.
4. LIPI and manager of BBG should be more intensive than KRB convince the government to serve as a center for conservation as well as a center of biodiversity conservation ekoeduwisata mainly by organizing seminars and workshops.
5. The members of the value chain from now on need to reform the data or records relating to internal business customers in the development of this tourist about the data in each member of the value chain.

REFERENCES

- Choo H and Jamal T. 2009. Tourism on Organic Farm in South Korea : A New Form of Ecotourism? *Journal of Sustainable* 17 (4):431-454.
- Chopra S and Meindl P. 2004. *Supply Chain Management : Strategy, Planning, and Operation. Second Edition*. USA: Pearson Prentice Hall.
- Damanik J dan Weber HF. 2006. *Perencanaan Ekowisata : dari Teori ke Aplikasi*. Yogyakarta: Andi.
- [Depparbud] Departemen Kebudayaan dan Pariwisata. www.budpar.go.id. Distribusi Bulanan Kunjungan Wisman dan Pengunjung Asing Melalui 15 Pintu Masuk dan Pintu Lainnya tahun 2007 dan 2008. Ditjen Imigrasi, BPS, Angkasa Pura I dan II. [12 Januari 2010].
- Dewi AR, editor. 2006. *Metode Riset Bisnis. Edisi Bahasa Indonesia Edisi 9*. Jakarta: PT Media Global Edukasi.
- [Disbudpar] Dinas Kebudayaan dan Pariwisata Kota Bogor. 2009. *Data Pariwisata Kota Bogor Tahun 2009*. Bogor: Disbudpar.
- Fandeli C. 2000. *Pengertian dan Konsep Dasar Ekowisata*. Yogyakarta : Fakultas Kehutanan, Universitas Gadjah Mada.
- Hengky. 2006. Penerapan Konsep Ekowisata untuk Meningkatkan Daya Saing Pariwisata Pesisir di Kabupaten Pandeglang-Banten [Disertasi] . Bogor : Sekolah Pascasarjana Program Studi Ilmu Pengelolaan Sumberdaya Alam dan Lingkungan. Institut Pertanian Bogor.
- Ismail Z. 2006. *Daya Saing Industri Pariwisata: Perbandingan di Tiga Provinsi*. Jakarta: Lembaga Ilmu Pengetahuan Indonesia.
- [LIPI-PKT KRB] Lembaga Ilmu Pengetahuan Indonesia – Pusat Konservasi Tumbuhan Kebun Raya Bogor. *Laporan Tahunan Pusat Konservasi Tumbuhan Kebun Raya Bogor – LIPI : Tahun Anggaran 2008*. Bogor: LIPI-PKT KRB.
- Mitchell J and Phuc LC. 2007. *Final Report on Participatory Tourism Value Chain Analysis in Da Nang. Management Consulting*. Vietnam: Central Vietnam.
- [Naturindo] Naturae Indonesiana. 2007. *Kebun Botani di Era Indonesia Baru*. Bogor: Naturindo.
- Pendit NS. 2006. *Ilmu Pariwisata : Sebuah Pengantar Perdana*. Jakarta: Pradnya Paramita.
- Pitana IG dan Gayatri PG. 2005. *Sosiologi Pariwisata*. Yogyakarta: Andi.
- Pitana IG dan Diarta IKS. 2009. *Pengantar Ilmu Pariwisata*. Yogyakarta: Andi.
- Sari, R. Editor. 2009. *Renstra PKT KRB 2005-2009*. Bogor: PKT KRB.
- Singarimbun M dan Effendi S. 1995. *Metode Penelitian Survei*. Jakarta: LP3ES.
- Subarna A. editor. 2006. *Sekilas Kebun Raya Bogor*. Bogor: PKT KRB.
- Sugiarto DS dan Sunaryanto LI. 2001. *Teknik Sampling*. Jakarta: Gramedia.
- Surisno, editor. 2008. *Laporan Tahunan Pusat Konservasi Tumbuhan Kebun Raya Bogor-LIPI : Tahun Anggaran 2007*. Bogor: LIPI-PKT KRB.
- Yilmaz, Y. and Bititci, U.S 2006. Performance Measurement in Tourism : a Value Chain Model. *International Journal of Contemporary Hospitality Management* 18(4):341-349.
- _____. 2006. Performance Measurement in The Value Chain : Manufacturing vs Tourism. *International Journal of Productivity and Performance Management* 55(5):371-389.
- Yin, R.K. *Case Study Research : Design and Methods*. 2nd edition. Applied Social.