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Sustainable Development Pattern of Eco-tourism Based on Stakeholders

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ABSTRACT Eco-tourism recently has been attracting the attention of tourists. In order to obtain the sustainable development of eco-tourism, this paper implies a combination of not only economic prosperity, but also ecological protection and social benefits. In this paper, the game theory is applied to analyze the Nash Equilibrium of main stakeholders (government, tourism enterprises and tourists) during development process of eco-tourism by balancing their interests. this sustainable development pattern of eco-tourism can depict the relations among the stakeholders and the effects of the choices on the satisfaction. After the analysis of equilibrium among the three stakeholders, the findings show that new forms of sustainable development patterns of eco-tourism will launch a new style of economic development, related to sustainable eco-tourism and environmental protection system with the application of a multi-criteria approach.

INTRODUCTION

The conception "sustainable tourism development" should be varied because of its rapport related to the perspective of the stakeholders including, tourism enterprises, governments, international non-governmental organizations, local communities, environmental activists, and other stakeholders. Eco-tourism is to learn from the concept of green economy, low energy consumption, and low pollution-based green tourism (João el al. 2014). Sustainable tourism development requires energy conservation and reducing pollution to interpret sustainable economic development, and to construct a civilized society through each aspect of tourism factors, including food, lodging, transportation, travel, shopping and entertainment. Therefore, in order to protect the sustainable tourism development, the government should provide necessary policy supports, communication platforms, financial supports and other promotional efforts related to tourism (Zhao et al. 2015). As a universally acceptable definition of sustainable tourism development does not exist, the development of a vast range of policy instruments is promoting adoption of more sustainable tourism practices (Nefta-Eleftheria et al. 2014). The United Nations World Tourism Organization (UNWTO), the agency of the United Nations for tourism issues, recommends a strict concern with the sustainable development of tourism and defines a clear link between the competitiveness and sustainability of tourism. In order to compete effectively with destinations, the excellent value should be delivered to tourists. This depends on many aspects working together in unity. The UNWTO published the *"Climate Change and Tourism: Responding to Global Challenges"*, which shows that the development of the tourism reached 1.3 billion tons of CO_2 emissions (mainly from three areas including tourist traffic, tourist accommodation and tourism activities), accounting for 4.9 percent of all CO_2 emissions from human activities. The contribution of global warming caused by human factors and the tourism sector accounts for five to fourteen percent (UNWTO 2008). If the current approach to development and growth is maintained, the forecast for the tourism sector emissions will increase by one hundred and fifty-two percent, and contribution to global warming will increase by one hundred and eighty-eight percent in 2035 (Lu 2012).

The sustainable development of eco-tourism not only requires environmental resources for the production of tourism experiences, but also depends on the preservation of the ecological integrity of the place in the long run (Williams and Ponsford 2009). Thus, the development of eco-tourism should be conducted in the international community with climate change control strategy (Zhang 1996). This paper tries to launch a new economic development, related to sustainable eco-tourism and an environmental protection system equilibrium among the three stakeholders, by which new forms of sustainable de-

velopment pattern of eco-tourism can be proposed with the application of a multi-criteria approach.

Literature Review

The definition of the term 'sustainable tourism development' varies in rapport with the perspective of the stakeholders including tourism enterprises, government, international non-governmental organizations, local communities, environmental activists, and other tourism stakeholders. Alan (1981) discusses the technical defects of the Travel Cost Method (TCM) and Contingent Valuation Method (CVM). TCM is introduced by the concept of consumer surplus, which is a step forward to resource valuation, but it cannot assess the value of non-use of resources. The available range of CVM is rather wide, which can not only be used to value in use of resources and to evaluate environmental goods, but also on intangible non-use value to evaluate resources and environment, therefore, CVM is more widely applied to the researches (Camelia and Rolando 2005; Huang 2009). Nature reserves (such as eco-tourism resources) are often surrounded by the contradiction between resource conservation and tourism development. Forest vegetation landscapes are not only the important tourism resources but also the tools of ecological protection, which are main targets of resources conservation. Eco-tourism activities bring the environment pressures with a serious disturbance on vegetation landscapes (Jintun et al. 2012).

Richard (2007) forecasts that the air transport industry is affected by a carbon tax, and researches show that with a USD 1,000 per ton carbon tax in accordance with the air transport industry, the emissions carbon will be reduced by 0.8 percent, resulting in relative price of flights significantly increasing during both long haul and short haul. The cost of medium tourists is relatively stable, which can result in faraway places and tourist destinations close to tourists, and then trying to build a good eco-tourism model. Ma and Ding (2009) believe that the ecological carrying capacity should be reasonably treated, by which the ecological operating pattern selects two coordinates based on the perspective of eco-tourism development. Nae-Wen and Pei-Hun (2009) consider the sustainable development of tourism as an important tool of economic activity. In terms of industrial ecology researches on tourism management, the evaluation method of the Life Cycle Assessment (LCA) is applied to tourism resources development including greenhouse gas emissions, waste water, solid waste and other quantitatively, calculating the volume of daily waste dosage of consumption from both tourists and local residents. Eco-tourism resource protection behavior can carry capacity of resources and environment to enhance tourism products and services, so that the ecological positive externalities can be obtained. Advocacy work for tourists is closely related to environmental education, which can help tourists understand how the tourism behaviors can affect the environment and social wellbeing (Sibel 2015). Enhancing the capacity of eco-tourism resources and environment will withstand more tourists to the relevant interests of all parties to bring greater benefits from eco-tourism resources, and to increase tourism income (Ryan 2010). Hu et al. (2011) starts from the perspective of development concept for the tourism industry, indicating that the development of the tourism industry can be an effective approach to cultivating the hematopoietic function, which can help the stakeholders realize the adjustment of the industrial structure and ecological compensation mechanism for long-term growth, ultimately leading to the formation of industrial development of the eco-tourism protection, as well as ecological protection to promote a sustainable development of the tourism industry (Karen and Richard 2007). As the ecological rules guide the sustainable development of eco-tourism, the primary direction of the eco-tourism development is to create a "loop-type" pattern, which strictly follows the "3R principle" (reduce, reuse and recycle) of the circular economy in eco-tourism resources development to achieve the model of "resources-products-renewable resources". Therefore, the closed-loop feedback cycle can effectively integrate cleaner production of tourism destinations and utilization of tourism resources to provide the sustainable tourism development and eco-tourism product design for tourists. According to the definition of ecological compensation for ecological compensation connotation, Zhang and Yang (2012) conduct the researches and summaries on the existing confusions of tourism resources compensation to give a clear definition of eco-tourism, on which the study of eco-tourism compensation has a

very important role for coming researches (Kanglong and Alf 2014). Even within large conservation areas, a high cover of quietness indicates that rather limited activities are implemented, thus ensuring ecosystem conservation. Therefore, in the protected areas that have more than thirty percent surface area of the territory, policymaking decisions should be carefully designated to preserve the ecosystem (Nefta-Eleftheria et al. 2014).

Overall, the researches on ecologically sustainable development of tourism have some scientific credibility, which lay a solid theoretical foundation for the practice of sustainable development. Development of eco-tourism in China, however, is still in the primary stage, the current researches on eco-tourism focus on the basic concepts of it and its countermeasures. Based on the current theories and the drawn experiences, this paper emphasizes the interests of unity of the three stakeholders including governments, tourism enterprises and tourists, to deal with the interaction among stakeholders based on the researches of predecessors, resulting in constructing scientific sustainable development model of eco-tourism.

METHODOLOGY

During the process of eco-tourism development, tourism enterprises, tourists and the government are rational decision-makers, which are all seeking to maximize their interests. Tourism enterprises choose to produce eco-tourism products or not do so, the government chooses to supervise the tourism enterprises to protect the tourism resources or not does so, and the tourists choose to accept the tourism products and services or not do so.

The cost of the eco-tourism products and services is assumed to be the same as that of non-eco-tourism products. If tourism enterprises actively take the products and services of eco-tourism to provide for tourists, the cost C_1 should be paid, while a certain reputation benefits R'_2 will be received, with a probability of *p*. If tourism enterprises only consider short-term economic interests to gain more profit without providing the eco-tourism products and services, they will be liable for consequential losses of C_2 (including government fines and loss of reputation). If the government does not make the necessary regulations to the tourism enterprises whether they produce eco-tourism products and services or not, and tourism enterprises will receive additional economic benefits R_2. Meanwhile, government regulators need to take losses C_3 because of the default caused (including social costs), and the tourists need the good quality of experiences to participate in the activities, so the tourism enterprises should assume cost C_4. If government regulators use economic, legal and administrative supervision to regulate tourism enterprises and other means of production and business activities, the government needs to bear the cost of regulation c_5, which will also be awarded reputation gains with probability of *r*. In fact, in order to obtain the reputation (protect the public interests), the government often tends to conduct the incentives of eco-tourism, guiding the way to adjust the ratio of the income of tourism enterprises through appropriate industrial policies, laws and regulations. The social benefits of eco-tourism products and services are often higher than costs, but the tourism enterprises' production strategy depends on the tourists' demands for the products and services. The tourists reduce the consumption of eco-tourism products and services because of the high price, which will affect the tourism enterprises' production. Therefore, the government should establish an encouragement system for guiding eco-tourism products. Based on the analysis of the multi-stakeholders game above, a dynamic game model among the tourists, tourism enterprises and government can be constructed, which is shown in Figure 1.

Assuming the first stage in the game, if the tourists do not chose to buy the eco-tourism products/services, the game will end, the tourists, tourism enterprises and government will obtain the revenue collection (0,0,0). When the tourists choose the decisions of purchasing the eco-tourism products/services, the second stage of the game will begin, when the tourism enterprises have two choices, that is, either they produce eco-tourism products/services or they do not produce eco-tourism products/services. In the third stage of the game, due to the asymmetry of information, the government cannot know the specific selection strategy of tourism enterprises, for which the probabilities of choosing eco-tourism products/services or not are respectively *p* and *1-p*. The government chooses the incentive system for eco-tourism consumption, which will determine the interests of producers/

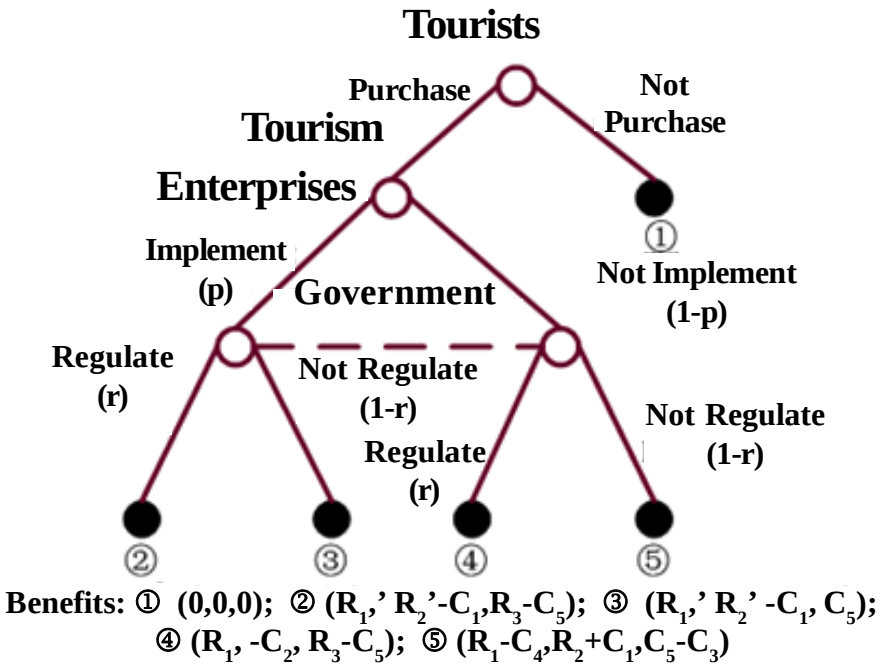

Fig. 1. The dynamic game among tourists, tourism enterprises and government
Source: Author

services by the recognition of tourists and popularity of eco-tourism products/services, which can generate the role of incentives. Since the 1990s, a wave of eco-tourism consumption has swept across the world, which has been penetrated into all aspects of social life. Significant changes in the consumption structure require the production structure should be adjusted accordingly to guide the tourism enterprises to be engaged in eco-tourism production and business activities. In the game model, the presence of both tourism enterprises and government make the equilibrium of the mixed strategy for maximizing benefits and utilities. That is, when the tourism enterprises implement eco-tourism production activity with the probability, the government chooses to regulate the tourism enterprises with the probability. When the eco-tourism products/services or not, which are expected by tourism enterprises, are equal, and when the net expected income of regulation and non-regulation of government supervision are also equal, the interests of both sides will be maximized.

The probability of production of eco-tourism by tourism enterprises is *p*, while the government chooses the grid regulation (r=1) and non-regulatory (r=0) with the expected revenues of the government are respectively as below without considering other factors (such as risk appetite):

$$E_1(1, p) = p(R_3 - C_5) + (1 - p)(R_3 - C_5) \quad (1)$$

$$E_2(0, p) = pC_5 + (1 - p)(C_5 - C_3) \quad (2)$$

According to $E_1(1,p) = E_2(0,p)$, Equation (3) can be drawn:

$$p^* = 1 - \frac{2C_5 - R_3}{C_3} \quad (3)$$

p^* is the optimal probability of tourism enterprises, which implement Eco-tourism products/services.

If the government chooses to regulate eco-tourism products of tourism enterprises or not with the probability, expected net income of the production of eco-tourism products (p=1) and not production of eco-tourism products (p=0) are described as follows without considering the government's risk appetite.

$$E_3(1, r) = r(R_2' - C_1) + (1 - r)(R_2' - C_1) \quad (4)$$

$$E_4(0, r) = rC_2 + (1 - r)(R_2 - C_1) \quad (5)$$

According to $E_3(1,r)=E_3(0,r)$, Equation (6) can be drawn:

$$r^* = \frac{R_2 + 2C_1 - R_2'}{R_2 + C_1 + C_2} \quad (6)$$

r^* is the optimal probability of government to regulate tourism enterprises.

Thereforeÿthe equilibrium solution of the game is

$$(p^* = 1 - \frac{2C_5 - R_3}{C_3}, r^* = \frac{R_2 + 2C_1 - R'_2}{R_2 + C_1 + C_2} \quad (7)$$

Through the above analysis, the findings show that the probability of producing eco-tourism products by tourism enterprises is strongly related to the regulatory costs and the relevant government, as well as the social costs and loss of reputation in the game between tourism enterprises and government.

If the government regulatory costs (C_5) are greater, the probability (p^*) of production of eco-tourism products will be smaller. Due to the current regulatory regimes of the relevant authorities in the field not being perfect in China, many costs need to perform supervisory duties of government, for which the government is not likely to choose regulation (the supervision and management mechanisms are inadequate). Due to the lack of government regulatory mechanisms, tourism enterprises tend to hold the psychological luck, instead of producing eco-tourism products/services, thereby reducing the possibility of actually producing eco-tourism products/services. Based on an environmental perspective, environmental resource property is not clear in the traditional economic model, with the lack of definitive resource trading rules, market trading patterns of environmental resources can be hardly formed. Therefore, the use of natural environmental resources by tourism enterprises are engaged in the production and discharge of waste to the natural environment, without having to pay the costs, which are required for compensating the pollution and destruction of the natural environment. The responsibilities are not fulfilled to cause pollution and damage to the environment, resulting in the production costs of the external environment, which are the consequences of tourism enterprises. In the eco-tourism economy, environmental resource protection is a prerequisite for the production activities of tourism enterprises, because the production and management of environmental resources are based on property rights and protection arrangements for the system, for which the tourism enterprises should pay the use fees of environmental resources in accordance with market rules transaction costs of tourism resources. Meanwhile, the tourism enterprises assume the obligations to protect the legal and economic environment, which not only need to comply with the mandatory provisions of the standard, but also pay for discharging waste. The obligations of tourism enterprises will increase the costs of production. Due to the increased environmental costs, it is bound to encourage tourism enterprises to focus on the rational use of environmental resources and reduce environmental pollution, which occurs in the production process, thereby reducing the costs of production and operation, as well as improving its economic efficiency.

If the costs (C_1) of government due to lack of supervision (or the costs for loss of reputation) are greater, the probability (p^*) of provision of eco-tourism products/services will be bigger. With public oversight measures, the media and network platform are becoming more and more perfect. If the government does not fulfill regulatory responsibilities or demonstrates lack of supervision, it may bear the enormous social costs and loss of reputation because of the social media. Therefore, in order to protect the reputation and image, the government will often increase the performance of the supervisory duties. In this case, the tourism enterprises will be more likely to implement eco-tourism production activities to avoid being penalized by government regulators. The probability of the government selecting to regulate tourism enterprises is related to the costs of eco-tourism products/services and the reputation.

If the costs (C_3) of producing eco-tourism products are greater, the probability (r^*) of government regulation will be bigger. Tourism enterprises take the maximization of profits as the goal, that is, if the costs of eco-tourism products/services increase, the profits will be reduced. Thus, if the costs of eco-tourism products/services are more, the probability of tourism enterprises to provide eco-tourism products/services will be smaller. On behalf of public interest, the government departments will choose the top extent possibility for supervisions to encourage tourism enterprises to provide with eco-tourism products/services.

If the social reputation of the interests of tourism enterprises (R'_2) is larger, the probability (r^*) of government regulation will be lower. If the tourism enterprises provide eco-tourism products/

services, which tourists are attracted to, extensive publicity in the media can effectively enhance social recognition, thereby enhancing corporate reputation and image, resulting in creating a certain brand. The tourism enterprises activities of providing eco-tourism products/services will then be greatly enhanced, for which the costs of government supervision can be reduced to minimum.

Therefore, under a mixed strategy of the Nash equilibrium, the tourism enterprises increase revenues (R_0) without implementing eco-tourism products/services, and the fine (f) for not implementation of eco-tourism products/services. In addition, the government's monitoring costs (c) and financial subsidy (d) both belong to environmental costs (h) of implementation of eco-tourism products/services and environmental protection.

As the environmental costs (h) are not easy to evaluate, the probability of tourism enterprises to implement eco-tourism products/services is mainly dependent on the increased benefits without enforcement by the government. If the benefits of not to implement eco-tourism products/services are more, the probability the tourism enterprises of implementation eco-tourism businesses will be lower. If the government severely punishes the tourism enterprises, which do not implement eco-tourism businesses, and supplies the higher financial subsidies for the tourism enterprises, which implement eco-tourism businesses, the probability of tourism enterprises to implement eco-tourism will be greater. It is clear that tourism enterprises are avoiding disadvantages, for which the profitable tourism business will be executed for the higher returns by the government (financial subsidies), so the government plays a key role in the initial stages of eco-tourism (Giuseppe et al. 2013) (See Fig. 2).

In the game model mentioned above, if tourism enterprises can meet the tourists' demand for eco-tourism products, consumers will actively cooperate, repeatedly purchase the eco-tourism products/services, for which tourism enterprises will further implement ecological activities to achieve economic benefits with an ultimately virtuous environment cycle.

If tourism enterprises do not provide eco-tourism products/services, which are complained by the tourists, meanwhile, the regulators of government will intervene to the game by means of penalty and punishment. Therefore, there is an important role in coordinating relations between the government and tourist. But if the tourists complaint to government departments when they are encountered, or because tourism enterprises do not offer in line with the pursuits of eco-tourism products/services, the tourists neither complaint nor buy the eco-tourism products/services, then the game between tourists and tourism enterprises is terminated. If what tourists seek (tourism demand) is relatively luxury, with the ability to consume a high-carbon emissions, the tourism enterprises want to comply with government regulations, and actively implement ecological initiatives, for which the eco-tourism products/services do not meet the tourism demand, the government should play the role in guiding ideology, by which the majority of tourists will

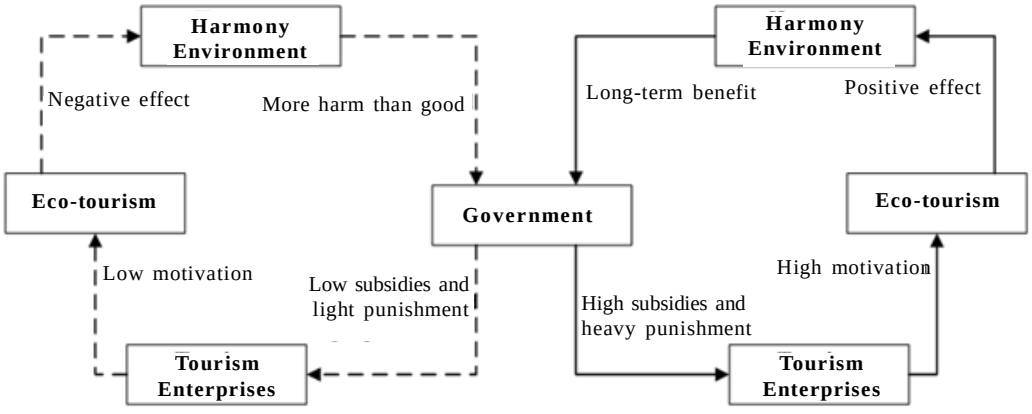

Fig. 2. Game results of government and tourism enterprises
Source: Author

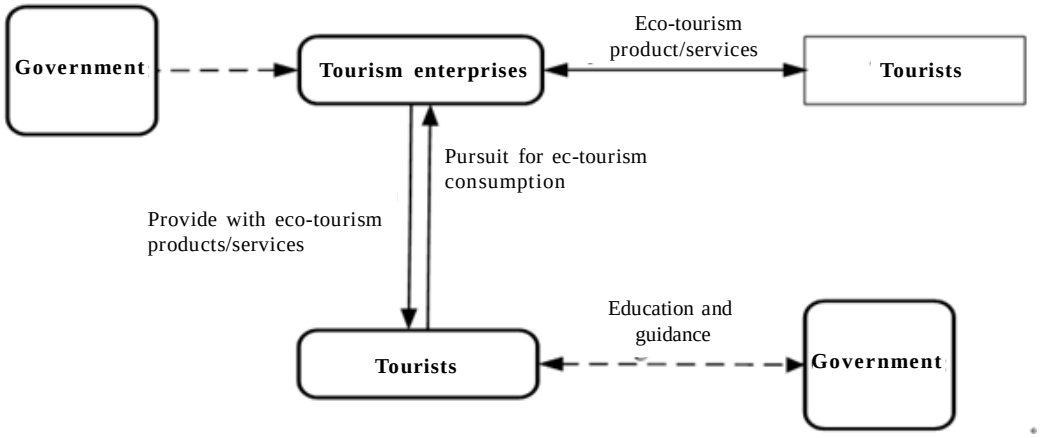

Fig. 3. Game results of tourism enterprises and tourists
Source: Author

encounter publicity and education of energy conservation with the popularity of the ecological awareness. An interactive eco-tourism information network to facilitate communication and conduct consumer guidance can also be created by the media, consumer associations, tourism associations and other organizations. Therefore, the government should fully play the guiding function to improve the rules and regulations, to strengthen government regulation, as well as to increase social education propaganda, by which the real eco-tourism has become a popular way for tourists in general, resulting in ultimately achieving economic, environmental, human and harmonious development (See Fig. 3).

In the game model, there are three participants, including tourism enterprises, tourists (tourism consumers) and government (tourism management department). Suppose that they are rational "economic actors", and any self-selection strategy will be conflicts of interests and competitions from other two parties in order to maximize the interests. Tourism enterprises develop marketable eco-tourism products to meet tourism consumers' demand for eco-tourism products/services. Tourists can select the appropriate eco-tourism products/services from tourism enterprises with appropriate purchase price by consultation, and this series of methods can guarantee the tourists to achieve maximum satisfaction with the law protecting their interests. The government (tourism management departments) should take measures to maintain the interests of all aspects of society including tourism enterprises, tourists and the public. When the behaviors of tourism enterprises or tourists undermine the public interests, the government will solve the tripartite interests of conflict and competition with the use of laws, regulations, ethics and other instruments that require choosing and applying the appropriate policies in tripartite game activities to obtain equilibrium, ultimately reaching the best interests of the tripartite balance.

The tourism market seems to be the most efficient, and the equilibrium is the best status for the three parts, which are willing to keep to be balanced in the long run. Figure 4 shows the relationship among the analysis.

RESULTS

In the absence of government intervention, the tourism enterprises will pay more attention to the interests of short-term results with mutual influence and restricting each other, rather than implement eco-tourism products/services, and the results of eco-tourism development appear to cause market failure, while the environment has been severely damaged. In the case of government intervention, if the government's punishment is more severe, the probability of production of eco-tourism products by tourism enterprises will be bigger. Meanwhile, if the government gives more financial subsidies for the tourism enterprises, which implement eco-tourism products/services, the probability of enterprises to produce eco-tourism products will be

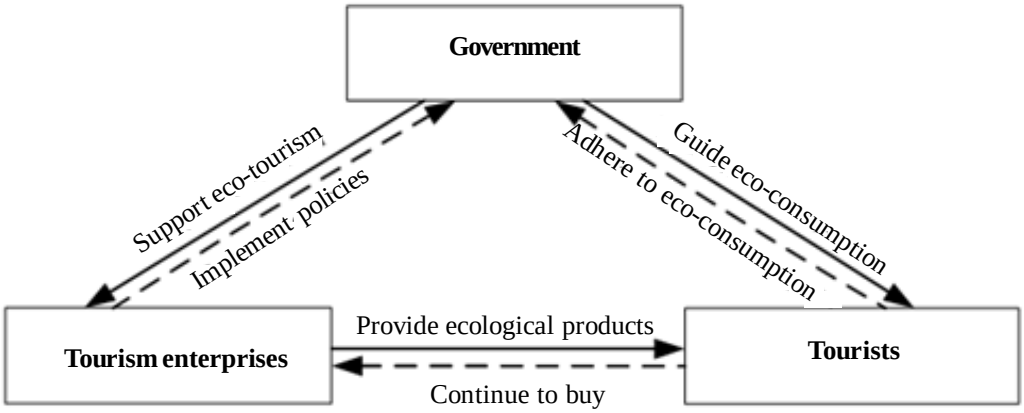

Fig. 4. The best game equilibrium of three stakeholders in the eco-tourism development
Source: Author

greatly increased, resulting in promotion of the development of the eco-tourism industry as a whole (Susanne et al. 2003). During the course of the game between tourism enterprises and tourists, the stakeholders can be influenced and constrained by each other, in which the government should both, further supervise the tourism enterprises to protect the legitimate rights and interests of tourists, promoting environmental sustainability, and guide tourists to cultivate ecological concepts of consumption with ideology. Thus, the findings show that the government bears a major responsibility in the process of development of eco-tourism and plays an irreplaceable role in the game. Based on such factors, the eco-tourism development model can be designed, which is neither different from the free market economic model, nor different from eco-tourism development model highly controlled by government, and it is supervised by government departments to guide the eco-tourism development model with stakeholders including the tourism enterprises, tourists and government (See Fig. 5).

Government - Regulate Behaviors

Based on the conclusions of the game between tourism enterprises and tourists, the tourists' attitudes to eco-tourism consumption are

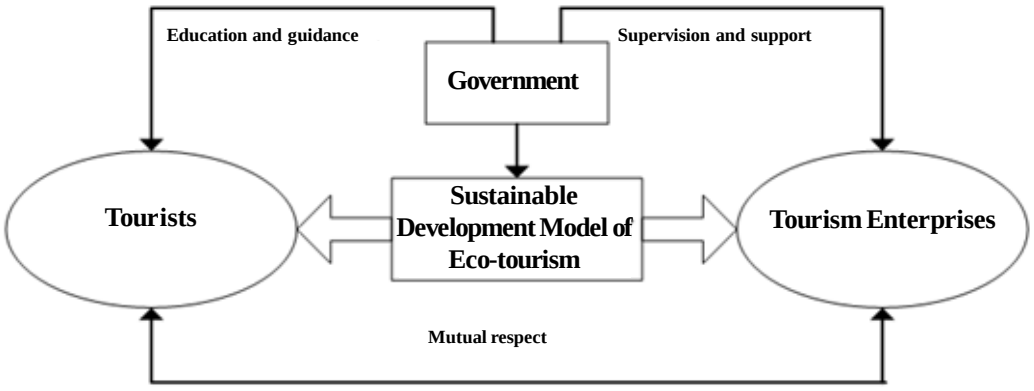

Fig. 5. Sustainable development model of eco-tourism
Source: Author

largely affected by the ecological business practices of tourism enterprises.

When the tourism business does not provide eco-tourism products/services, the tourists who pursuit eco-tourism will complain and refuse to repurchase tourism products/services, affecting the normal operation profitability of tourism enterprises, therefore, tourism enterprises tend to meet the tourists' demands to stay in business. If tourists do not pursue ecological consumption, tourism enterprises will have more indulgent behaviors of high emissions, for which tourists are final consumers. Whether tourists buy the products or not can determine the normal operation of tourism enterprises.

Therefore, the government can take advantage of the tourists' demands (affected by government's education) to guide tourism enterprises to conduct related business, following the tourists' propensity for consumption. It is the most important and wise task to establish the tourists' attitudes and values towards eco-tourism products/services. The government can rely on newspapers, magazines, television broadcasting and other intermediary media and public platforms to create public awareness in the community towards eco-tourism. Correct use of social media is the key factor towards the formation of eco-tourists propensity for consumption. Meanwhile, the government also should carry out a number of sustainable ecological campaigns, by which the concept of ecological education can be provided in schools and other educational institutions, to encourage eco-tourism consumption patterns and ecological way of life to be more accepted (See in Fig. 6).

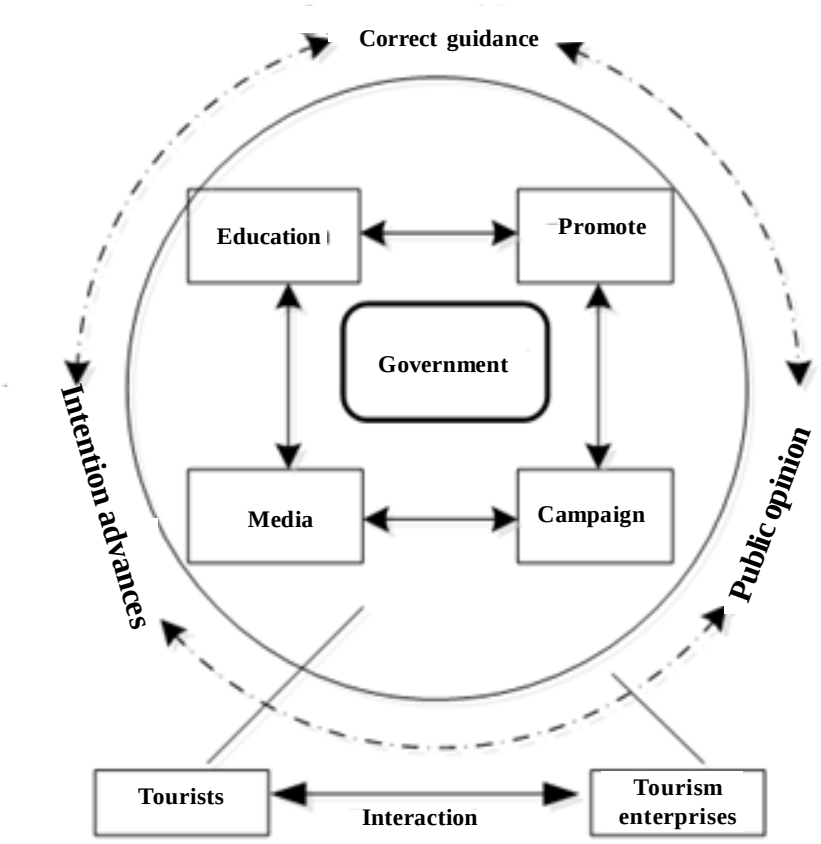

Fig. 6. The Game between tourists and tourism enterprises with government intervention
Source: Author

Tourism Enterprises - Actively Cooperate

Seen from the game between tourism enterprises and tourists, the business of tourism enterprises is to make profit as the fundamental purpose. In many cases, the competition among enterprises is not to reduce costs through technological innovation, product innovation, but more to make simple and high-energy consumption patterns, which does not consider the social and environmental costs to be reduced to remain profitable (Inga and Smith 2009). If tourism enterprises can look to the future to adhere to the new concept, both the introduction of new technology during the competitive process and the use of new technology can reduce energy consumption, improving production efficiency, energy costs, and embark on a path towards eco-development (Paul and Ghislain 2009). Thus, the vicious competition among tourism enterprises, which are not conducive to environmental and social benefits (not implemented, not implemented) equilibrium, will disappear, and even cases of market failure can be effectively avoided with consistent taking (implementation, the implementation of) the equilibrium strategy.

Therefore, the connotation of eco-tourism should be put into tourism enterprises' operation with scientific development, the rational allocation of eco-tourism resources, attention to build ecosystem, emphasizing the construction of low-emission operation (Zhou 2010). The past business ideas of greed for profits, the blind pursuit of convenience, luxury unscientific, and the transformation should be abandoned to lead tourism enterprises to take to an eco-tourism development style (Gao 2007). In order to enhance business philosophy to enhance the overall management level, eco-tourism products/services should be developed with a better approach to learn from advanced experiences of eco-tourism development.

Tourists - Actively Participate

Tourists are the ultimate consumers of tourism products/services. If the tourists still insist on luxury ones, after the government and tourism enterprises play an exemplary role in creating and building the lead in eco-tourism environment, a lifestyle of high carbon emissions will be exist, for which all the efforts and dedication will be in vain and the eco-tourism model will also not be implemented. So tourists should consciously raise ecological awareness, encouraging an approach to practicing eco-tourism (Tzu-Ping 2010). In terms of food, tourists should adjust to the diet selection, to pay more attention to reasonable food near the travel destinations, reducing carbon emissions. In terms of accommodation, travelers should try to refuse to stay in the convenient hotels, which provide with disposable supplies, to reduce energy consumption. In terms of travel, the tourists should try to use public transport for energy saving instead of driving. Even if they go out by car, they should try to take the carpool (Tian 2014). Tourists should gradually establish the concept of eco-tourism consumption, by which small changes in habits can bring together a large influence on eco-tourism. As for a tourist destination, more walking and cycling methods should be supplied for tourists, they should be conscious towards waste disposal, develop love for nature, with good habits to protect the environment. When the tourists go shopping, non-excessive packaging souvenirs should be chosen, rejecting the use of disposable shopping bags. As more tourists penetrate the concept of ecological processes throughout their travel time, it could not only really help improve the tourism environment, but also ensure that the true eco-tourism mode operation to be maintained (Wiwik et al. 2015).

CONCLUSION

Eco-tourism, as an important component of ecological economy, should become a scientific conception for the tourism industry to respond to global climate change, and to protect the environment. This paper applies a game theory to basic relationships among stakeholders in the game to make a more comprehensive analysis, on which the final suggestions from the predecessors are drawn, trying to build up to the eco-tourism development model of the basic framework based on the integration of the concept of eco-tourism and the characteristics. In this framework, the government issued strategic planning and policy guidance, by which tourism enterprises actively implement an eco-tourism management style and constant innovation and development to establish an ecological consumption concept of tourists in the policy guidance and encouragement.

RECOMMENDATIONS

The government needs to not only introduce relevant policies to guide the production of eco-tourism products, increasing the production of eco-tourism products business support, and strict supervision, to protect the legitimate rights and interests of consumers to promote the sustainable development of the ecological environment, but also needs to reasonably guide the tourists in terms of consumption awareness and consumption patterns to cultivate ecological tourism attitudes. Governments need to guide, enforce and participate in environmental protection to achieve a leading role in environmental protection. The regulations mentioned above can influence tourism enterprises' behavior through the use of economic means and the adjustment of economic parameters, including tax, credit and financial subsidies and other economic instruments, such as sewage charges, resource fees, thereby promoting tourism enterprises to reduce pollution emissions and rational exploitation of natural resources. The tourism enterprises can also construct pollution control facilities through low-interest loans or interest-free loans, which are encouraged to reuse various types of waste recycling, cleaning production technology, and friendly environment of eco-tourism products/ services by preferential policies. By means of increasing taxes or suspend loans, tourism enterprises are forced to reduce environmental pollution products until to stop production with the application of environmental pollution facilities. Ultimately, sustainable development of economic, ecological and social aspects for eco-tourism development can be realized.

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