



Study on Undeveloped Areas Sustainable Development: A Theoretical Framework of Place Marketing Strategy and System Analysis

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Abstract

Place marketing strategy plays a key a key role for the success of regional/local especial undeveloped areas in gaining competitive edge, optimally allocate economic resources, and make long term economic development strategy and policies. To discover the behavior and mechanism of organization, nowadays, more and more people have paid attention to the complexity theory such as self-organization, dissipative structure theory, synergetic theory, etc. The paper introduces the concept of self-organization theories and place marketing strategy firstly. Then enlightened by the systematical methodology, the paper puts forward the concept of sustainable development of urban on the basis of analyzing the characteristics of self-organization place marketing strategy. A thorough analysis of the mechanism of place marketing strategy sustainable development has been made accordingly. Finally, the paper adopts the strategy of Xian Yang as an example, indicating that the success of undeveloped areas is mostly due to its effective and efficient self-organized place marketing strategy.

Keywords: Complexity phenomenon, Undeveloped Areas, Self-organization, Sustainable development, Place Marketing Strategy

1. Introduction

The globalization with more diversified and frequent communion and an increase in business and culture make a chaotic and complex environment for regional especial undeveloped areas. Success or failure for most undeveloped regions is determined by how effectively and efficiently their strategy are planned or controlled in economic environment described "Complexity phenomena". Many new concepts have been put forward such as place marketing, marketing of city parts, local economic development and etc we called regional management mode for sustainable development. The essence of these researches is encapsulated in the development of a metamorphic, self-organizing architecture, which comprises planning, control and application agents that collaborate to satisfy both local and global objectives. The study points out that agility, reactivity, flexibility and autonomous place marketing strategy play a key role for the success of a undeveloped area in gaining competitive edge, investors markets demanding agility and quick market response in global competition. To discover the behavior and mechanism of organization in the complex environment, nowadays, more and more people have paid attention to the complexity theory such as self-organization, dissipative structure theory, synergetic theory, etc. These are all in accordance with theoretic foundation of self-organization mechanism. There are many articles about self-organization, but most of them focus on supply chain management and application of intra-organization system. To the best of our knowledge, past research has paid little attention to self-organization place marketing strategy, and empirical studies remain scarce.

Indeed, self-organization mechanism may be more prevalent in highly complex and uncertain environment such as local government strategy than in simple intra-organizational system. In other words, undeveloped areas organization may produce greater benefits and effectiveness by using self-organization mechanism.

The objective of this study is to propose a self-organization framework for place marketing strategy on the basis of the existing theories, and bring forward place marketing strategy structure. Firstly, the theoretical rationale and concept will be presented, the characteristics of self-organization place marketing strategy will be explained next, followed by the methods and mechanism of undeveloped areas sustainable development directed by self-organized place marketing strategy, finally, a case of place marketing strategy of a undeveloped area in west china is specialized for empirical research.

2. Concept Model of SOPMS (Self-organizational place marketing strategy)

2.1 Place marketing strategy

Cities are created by a society of citizens, entrepreneurs, organizations, public and non-profit sectors, their ideas of a city direction differ. For other subjects it has a coordination importance. Place marketing strategy is a long-term conceptual activity of the city and it should help the city to sell it to given market segments for their different activities (housing, consumption, production), to differ the city from its competition, to use a competitive advantage of the city, e. g. natural conditions, historical and cultural heritage, to achieve satisfaction of citizens, entrepreneurs, visitors, etc.

During the process, the undeveloped areas compete and cooperate with the external circumstance constantly. Management and marketing researchers alike contend that the environment is in a constant process of change, so the adaptation behavior of place marketing strategy is very important, which has been well proved in many relevant articles. Specifically, the structural adaptation and strategies of undeveloped areas to environmental conditions have been shown to be positively related to local government performance.

In another aspect, there has been a growing interest in the issue of place marketing strategy focused on the coordination of business activities, resources allocation, and living condition improving, which brings the essential of structure of strategy and also is concerned with the trust and cooperation relationship among government units members. The objective of this study is to improve the efficiency of marketing strategy in complex developing environment.

2.2 Concept of self-organization

Self-organization is a key concept in complexity theory. According to Tharumarajah, self-organization is defined as the ability of an entity (or a system as an entity incorporating a collection of sub-entities) to adapt itself to prevailing conditions of its environment. Self-organization is also known as the relative agility of an entity, which ensures its optimal function through minimum help or intervention from external (e.g. human operator) or internal (e.g. other entity) components of the system. The Intelligent Manufacturing Systems World Project defines self-organized system as a system that is not coordinated by the exterior. Entities are autonomous and execute the tasks together. Through interaction and mutual comprehension, the sum or the combination of individual tasks allows managing an order, a good or a service which is more global.

Self-organization system must have two aspects. One is spontaneity of internal diversity, the other is instability of internal selectivity in mutual commuting with external environment, maintaining the open state of organization inside or outside. Then the diversified subsystem of organization will compete and cooperate with each other and as a result, a sequence parameter, which coincident with the sequence parameter produced by environment of organization, is produced. The development of self-organization system keeps consistent with the change of environment, which means self-organization has acclimatization.

From the above points, we can view that the associated characteristics of self-organization are (1) autonomous, (2) cooperative, (3) transformative. Term of "autonomous" refers to the possible capability to remain its quality or state without outside control; "cooperative" means to maintain stability relationship among subsystem of inter-organization and with the external environment; "transformative" means the existing independent capability.

2.3 Conceptual model of self-organization place marketing strategy (SOPMS)

I.Prigogine, the founder of dissipative structures theory and K.J.Arrow, the Nobel economics prize winner put forward that economic activity is a continuous evolutive complexity system. Subsystems in organization check each other as the external strength to promote each function to be carried out: Design function and framework of organization according to business procedure, every link puts forward the requirements to the upper region and is appraised by lower member at the same time, forming a "self-organized system" characterizing "function coupling" with internal key motivity at last.

2.3.1 The Structure and the Mechanism of undeveloped area.

The composition principle of the undeveloped areas governs and operation process can be simply summarized and shown as a pursuing structure in figure 1. Real line means the connections of inner local government members and city customers. The output of place is determined by whole organization, and the performance of each member or satisfaction of city customer is determined by place marketing strategy in advance. The connections among each unit are single and the relationship is stiff. Therefore, each unit individual is lack of the right of autonomy and the behaviors

of member depend on control management of the governors instead of the relationships with other members and external environment condition.

Self-organization requires changing the relationships among government unit and customers and external marketing circumstance. It regards each member as an independent decision-maker, which has the nature of autonomy and can make decision according to one's own interests and environmental change. On the other hand, due to the inseparability of working cost and transaction cost, it is necessary to keep all units as one integrative organization, so as to form an organic whole connected with each other. Dotted line means to set up market relationships, which meets the flexible structure and adaptability to change in the government organization.

2.3.2 The Characteristics of Self-Organization Place Marketing Strategy

This study introduces the concept of self-organization place marketing strategy so as to make the sustainable development of undeveloped areas become reality. The characteristics of the self-organization place marketing strategy are concluded as follows.

(1) Self-adaptability to the environment. Self-organization system has the ability to reorganize its structure and interactive mode automatically, so as to firm new hierarchical structure and function to adapt to the changing of environment. There's no fixed system structure and equations but only the advanced learning capacity remained inside the place marketing strategy system.

(2) Key order-parameter slaved system evolution - In Haken's synergetic theory, there's a famous conception called "slaving principle", which means there always have some key parameters in the complex system, which are called "order-parameter" and change relatively slowly and manage the whole system evolution. The place marketing strategy system is open, in the process, inside mechanism arose entropy changing ($d_i s$) and the relationship between system and external circumstance produces system entropy changing ($d_e s$), so $ds = d_i s + d_e s$, $d_e s < 0$ in the open strategy system and $d_e s > d_i s$, the result is $d_s = d_i s + d_e s < 0$, the system becomes orderly from out of order.

(3) Cooperation - Self-organization normally means the existence of both emergence of individual unit behavior of entity and upward flow of behavior and information. The place marketing strategy system is an organic syntheses. Minimal degree of cooperation must exist among distributed system's entities to avoid total disorder, which can be provided by different mechanisms like communication, negotiation. The concept of m place marketing strategy self-organization refers to a variety of distinct systemic attributes, such as: self-creation, self-configuration, self-regulation, self-steering, self-maintenance, self-(re-)production, and at the same time, synergic mechanism make the activity of subsystems consistent with the objective of the place marketing strategy and the integer behavior will be much better.

(4) Environment consonancy -There is much difference among subsystems of undeveloped areas intra-organization, which is away from equilibrium. But the effectiveness among them are quite strong, which gather adequate favorable factors for self-renewing in the process of exchanging substance, energy and information with environment, which is away from equilibrium, to enable the development of self-organization place marketing strategy, which is supposed to be impossible, becomes possible. Many facts prove that objective of sustainable development of the places becomes true when mutual benefits are achieved and friendly relationships with the correlated government units and marketing circumstances are established.

3. The Mechanism of Place Marketing Strategy sustainable development

3.1 Concept of sustainable development

The concept of sustainable development is put forward based on the requirements of adaptability to environment for an organization in cruel competition. It refers to that organization should understand and master the characters of developing and changing environment, so as to make it have acclimatization and forecast the developing tendency of environment accordingly. Organization is required to have ability of self-learning and autonomy. The theory foundation is the synergetic theory of Haken, which has two values: masterdom principle and order-parameter. The mathematic formula is:

$$\xi_s(t) = f_s[\xi_u(t); t] \quad (1)$$

Thereinto, $\xi_s(t)$ means stable pattern, $\xi_u(t)$ means unstable pattern. The formula indicates that unstable pattern dominates stable pattern. $\xi_s(t)$ changes with $\xi_u(t)$ quickly, so the formula of movement process of system is:

$$X(s, t) = X_0(s) + \sum_u \xi_u(t) v_u(s) + \sum_s \xi_s(t) v_s(s) \quad (2)$$

$\sum_s \xi_s(t) v_s(s)$ is a gather of stable factors, which have a large number but normally disappear in short time, in the movement process of system. $\sum_u \xi_u(t) v_u(s)$ is a gather of unstable factors, which are few and change slowly, in the movement process of system. It keeps system away from equilibrium point, break up the old equilibrium point and establish a new one, pass the unstable point and form another new ordered state. ξ_u is called order-parameter. In this process, the system is restructured by itself, which makes the organization harmonize with the changing environment further. Harmonized relationship formed between organization and environment has mutual benefits, which makes the circumstance become reliable and stable for sustainable development of organization.

3.2 The sustainable development of place marketing strategy—mechanism of self-organization

According to I. Prigogine, It is fluctuation that makes the system away from instable state in the area near equation where system has the ability to anti-jamming. Departure deduced by fluctuation will disappear through self-attenuation and the stability of system will be recurred after interference. The negative feedback mechanism attenuates the fluctuation, as a result, the system remains in the original ordered stable structure and structure-function is optimized accordingly.

Away from equilibrium, in Nonlinear Dynamical Systems, the system is in a unstable stationary state. Some little stochastic fluctuation may be magnified through interactional activities and bring gigantic fluctuation of macrocosm. So the system will get new ordered state from instable state. When environment change strongly, the positive feedback mechanism will magnify the fluctuation and realize the transformation of different macro-stability states, so as to improve the adaptability of system to environment.

The relationship between government unit is solid reticulate relationship. Each member forms its own ordered structure in the process of competition, cooperation and self-organization showed in figure 2.

4. The empirical study—place marketing strategy of Xian Yang

The system of modern urban planning of Xian Yang began with the Director Plan in 1990. The strategic planning procedure changed its character and became more complicated concerning economic, social and policies. The fact that the Strategic Planning presented and developed as a part of a total development system was based on the participation and the contribution of the main public and private sectors organizations, operators and institutions on both municipal and metropolitan levels, was very important. Furthermore, the Strategic Planning constitutes an efficient toll of development and local actions achievement. The main five challenges that the strategic planning of Xian Yang has to identify concern the following: a) to improve accessibility and mobility within the city and its metropolitan area, b) to improve the environment and the cultural heritage, c) to modernize Xian Yang's economic base and to increase the economic competitiveness of the city, d) to increase social opportunities.

In the case of Xian Yang, the strategic planning presents differences. A specific Place/ marketing procedure is not mentioned anywhere but as main development strategies were presented: a) the partnerships between the local authorities and the scientific and technological agencies and institutions leading to a greater interaction between them and the city life and b) the modernization of city administration by acknowledging the need to improve the efficiency of service delivery within the local authority.

The Strategic Plan of 1992 has primarily been developed in order to present and to set up the images of the city in the future, focusing on four specific goals: a) Xian Yang to become attractive to live and work, b) to become competitive among the other western cities, c) Xian Yang to be consider as a metropolitan capital and d) to endow Xian Yang with a modern, participate and efficient administration.

The central scope of the Strategic Planning of Xian Yang has been orientated to the creation of Xian Yang regardless of the existing debate that comes forward recently, concerning the potential of the urban areas for vitality and their development across the western areas and furthermore to establish an effective development framework so that Xian Yang will become one of the most attractive western metropolitan areas in future. As we mentioned previously, the place marketing strategic planning in Xian Yang has not followed any particular place marketing structure. However, Xian Yang's development was supported by a variety of events that have taken place in the last decade.

5. Conclusions

Place marketing strategy plays a key role in the development of an urban, but the disorder, complex environment, and diversified objects in traditional government make the strategy inefficient. Lots of studies analyze strategy planning in order to improve the efficiency. The complexity theory includes self-organization and dissipative structure theories, which are applied to the management and economic science so as to bring new method for solving the problem, existed in enterprise or place, such as conflict. Through the interaction of the entities, self-organization behavior is firmed and

government becomes prosperous in disorder. Self-organization of place marketing strategy provides flexibility and agility in responding to customer demand shifts. The fundamental premise of this theory is the synchronization represented in multiple autonomous business entities. The paper introduces the self-organization theory into the undeveloped areas place marketing strategy planning, setting up the concept model of self-organization of place marketing strategy and concept of place marketing strategy sustainable development. Its mechanism is developed in the process of simulating the self-organization behavior of strategy planning. It puts forward a new methodology for the management of government. A paradigm is illustrated to show a successful change from the traditional planning to a new self-organization. Finally, an empirical study is given to prove the concept model of self-organization of undeveloped area marketing strategy sustainable development.

Self-organization principle is one of important theories in system theory domain, which will become a main methodology in the study of management science, whereas it is always thought to be a little far from the view of application. The paper introduces the new concept model of self-organization of marketing strategy planning, which has both theoretical and practical meaning and is tested by the example of Xian Yang, therefore, develops a new mechanism of marketing strategy sustainable development. In addition, more application research will be done after this to test the concept model further, so as to use it in a wider area.

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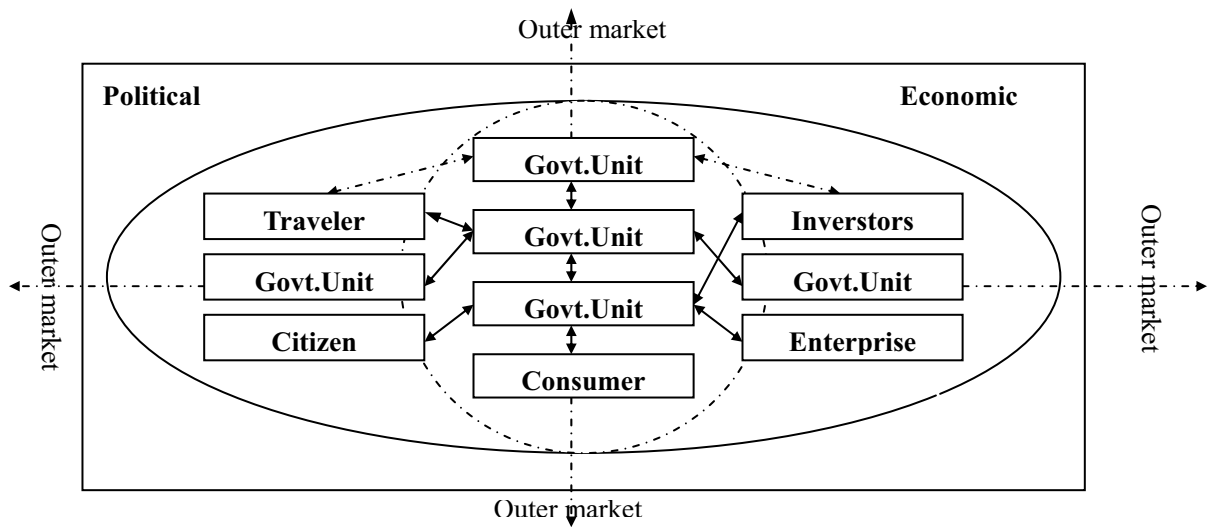


Figure 1. Concept Model of Place Marketing strategy

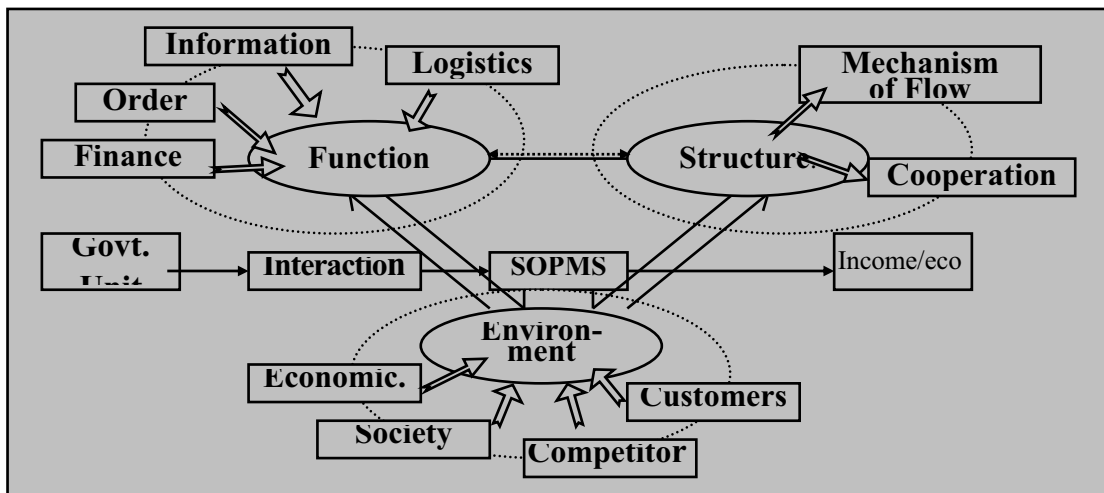


Figure 2. The Mechanism of Self-Organization Place Marketing Strategy