

Equilibrium services of telecom operators: An idea of service resources allocation

Mengru Shen¹, Feng Luo¹, Jianqiu Zeng¹

¹ School of Economics and Management, Beijing University of Posts and Telecommunication, Beijing, China

Abstract: Based on the service resources allocation problems that exists in telecom operators' practical work, by applying the idea of "equilibrium production" from manufacturing to service, this paper first proposes an idea of "equilibrium service", which aims at finding out the optimal allocation path and the strategy of service resources. An equilibrium service model with the value of practical application is then built and suggestions are finally given for telecom operators to enhance their service quality.

Keywords: Equilibrium Service, Service Management, Service Resource Allocation

1. Introduction

In recent years, the trend of mobile communication business has been markedly homogeneous, while service-level competition has become more and more intense. With the constant level of resources quantity, how to effectively allocate service resources has been a main concern for all telecom operators. With the diversification of service channels and forms, "inequilibrium service" problems have become increasingly prominent in telecom operators, thus the traditional "equilibrium production" theories cannot meet the demand of market development and are less supportive theoretically.

Therefore, based on the "equilibrium production" theories an idea called "equilibrium service" is proposed in this paper, which focuses on service resource allocation problems in telecom operators. It is intended to use the resources effectively so as to improve the customer satisfaction and service competitiveness of telecom operators. Based on optimal resources allocation theories, the following contents are focuses on: (1)Proposing the "equilibrium

service ” concept and tracing the source of its theory. (2) Forming the theoretical model of “ equilibrium service ” , and analysing the impact factors.(3) Summarizing the inequilibrium service problems and their forms, and proposing strategies.

2. Service Status of Telecom Operators

In telecom industry, products and services are easy to be imitated, which drives operators to pursue differentiation and facilitation in services providing. However, the non-optimum allocation of service resources in operators limited the promotion of benefit and the sustainable development.

For lack of equilibrium service in telecom operators may lead to unbalanced customer satisfaction among different service channels , which are mainly reflected in service proportion, service quality, service cost, service pattern, service superposition and other aspects. Combined with a large number of investigations, the expressive forms of inequilibrium service can be summed up in the following aspects: (1) Services quality and customers’ satisfaction among different service channels are unbalanced. (2) Distribution of services resources between physical channels and electronic channels lacks of dynamic equilibrium. (3) Benefits of physical channels are not balanced between self-operated channels and cooperative-operated channels. (4) Efficiency of services providing is not balanced among channels. (5) Current assessment mechanisms cannot effectively promote dynamic equilibrium in services resources allocation.

3. Concept of Equilibrium Service

3.1. From Equilibrium Production to Equilibrium Service

Service resources allocation is very important for telecom operators. Only in accordance with proper allocation of service resources, business value and ensure sustainable development can be achieved. The concept of equilibrium service is based on the optimal allocation of service resources, meeting customer needs and responding to the competition as preconditions. The ideas inspired from equilibrium production of manufacturing, its ideological nature is equilibrium in time and space, to the best use of every aspect of resources in enterprise and its production capacity, technical capacity, material supply and equipment capacity, and solve the problems of resources allocation optimizing, which is a meaningful creation of General Equilibrium Theory.

Service as a kind of product also faces to resources allocation optimizing

problems. But over the past years, due to its characteristic (intangibility, inseparability, heterogeneity and perishability), it has been thought that services could not be provided in balanced time and space like tangible products. However, the optimal allocation and lean management thinking and theories can still provide important ideas of reference and methodological basis for the problems focused on in this paper.

Domestic and foreign scholars and institutions have raised some similar ideas or concepts, which provided references for this study. American service management portfolio PZB (Parasuraman, Zeithaml & Berry, 1985) proposed the thinking of "appropriate services" in their tolerance regional models (zone of tolerance, ZOT), which reflected an idea of "moderate degree in services"; Heskett and other five Harvard Business School professors, their service management group in 1994 proposed the service profit chain model, focusing on how to improve service productivity, and discussed how to effectively control inputs and outputs in service enterprises; Ctrip.com brought six sigma methodologies originating from manufacturing into service providing and proclaimed the slogan "Provide services as producing tangible products"; Zhang Wentao (2006) in his study proposed an idea "moderate service", from the perspective of service-based productivity, gave a thinking that enterprises should put a moderate idea into active management, in order to achieve the sustainable development; Moreover, some domestic scholars also put some concept resembling equilibrium services theory, such as equilibrium demand and supply of services (Xiaojun Xue 1994&1996), analysis of differential quality in services (Ying Chai 2004) and formulating the measurement index (Zhe Xu, Yuqing Zhao, Haiqiong Wu 2007) and so on.

Previous studies were mostly longitudinal analysis in a single field, and these studies rarely take into account the impact of competition on service acting and customer satisfaction. Meanwhile, most of the previous studies on service resource allocation were from a single angle to match the enterprise service capacities to meet customer expectations, without putting enterprise service capacities, customer service expectations and external service competition into a unified research framework. Based on this new perspective, this study concerned about the above three factors on the combined effect of service resources allocation. "Equilibrium service" in the dimension of the service touch points considers the three factors of services efficiency, customer satisfaction and service competition, studying on how to achieve the equilibrium between service efficiency and customer satisfaction in telecom operators.

The equilibrium mentioned here in "equilibrium service" refers to the

equilibrium of the service effect (equilibrium in service efficiency and satisfaction at different touch points), not the equilibrium of service resources inputs and means in time and space (the provision of services still comply with the principle of differentiation).

3.2. Implication of Equilibrium Services

In this paper, equilibrium service is defined as in the dynamic competitive environment, premising on the satisfaction of customers, optimizing the service resource allocation among touch points, grasping the principle of effectiveness, efficient and moderate, to achieve equilibrium and sustainable development process combined with steadily improvement of customers' satisfactions. As a management idea, equilibrium service focused not only on the results of distributing service resources, but also on the behavioral strategy of the process in service resources distribution, especially on the evolution of service methods in the dynamic challenging environment.

Equilibrium services theory includes three implications: firstly, the company should achieve the equilibrium benefit of services and optimize the cost-benefit ratio; secondly, the company should pursue the equilibrium satisfaction and supply differentiated services to different customers; thirdly, considering the challenging environment in the market, the company should carry on the dynamic equilibrium service strategy to deal with the effect which the strategy from competitors has on the customer perception and telecom operators.

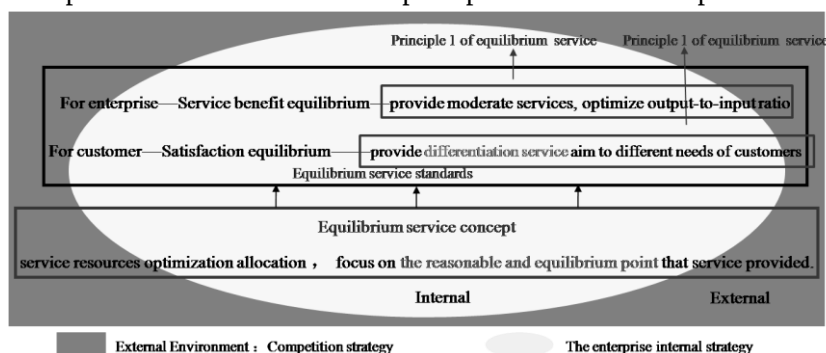


Fig. 1: Illustration of equilibrium services.

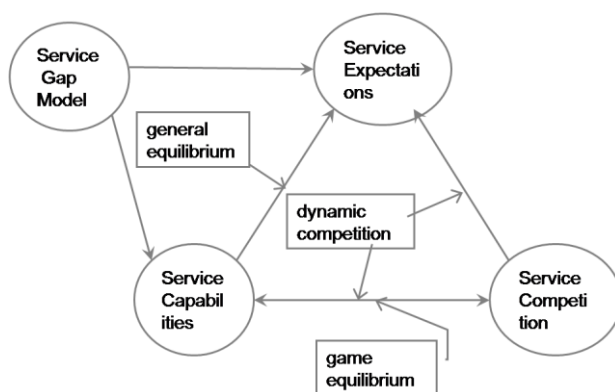


Fig. 2: Three main factors in equilibrium services.

3.3. Effective Factors of Equilibrium Services

Based on the related literature and theory, three main factors on supplying equilibrium services are proposed in this paper: Capacity, competition and expectation. Their relations are showed in Figure 2. Operators should provide services appropriately, distribute the services resources effectively, and then satisfy the customers' expectation and deal with the competitions from target market.

3.4. Applications of Equilibrium Services

Equilibrium services model is formed by the following preconditions: firstly, the services area could be confirmed by the capacity-expectation equilibrium; secondly, in the equilibrium area, the touch points of an operator and its competitors as well as that the customers expected could all be measured; thirdly, the capacities of providing services either in an operator or in its competitors could be stable in a specific period, and the equilibrium services can be achieved through the deployment of customer touch points. The equilibrium services model is set by X, Y axis; the X axis is the service providing capacity and the Y axis is customers' expectation for services (see Figure.3 and Figure.4). Through evaluation of the resources of the operator and its competitors in the same touch point, we can achieve the benefit equilibrium among the operator, its competitors and customers satisfaction, and also achieve partition management, effectively. As Figure.4 shows, the services resources could be divided into four sections: marvelous section, challengeable section, improvable section, and the troublesome section.

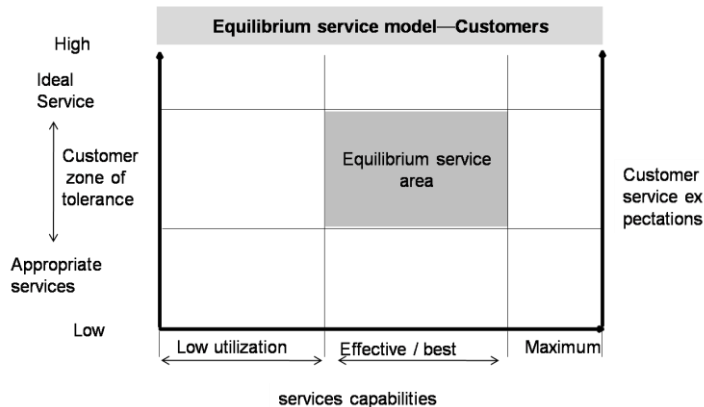


Fig. 3: Model 1 (For customers).

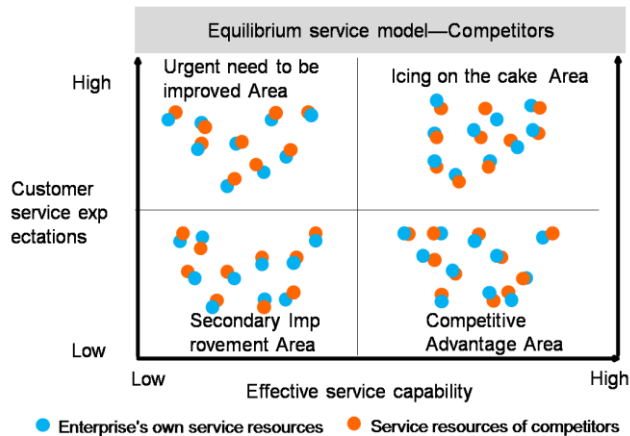


Fig. 4: Model 2 (For competitors).

Referring to the divided section in equilibrium services model and the customers' expectations, the operator could combine the results with the optimization cost of distributed services resources so as to achieve capacity-expectation equilibrium. Considering the touch point distribution situation of competitors, the operator also could be aware of the differences or the commons between the competitors and itself and assess the rationality of these differences; if the difference is unreasonable, the operator could revise the allocation scheme of touch points, satisfying the customers' expectation and achieve the capacity-competition equilibrium in the dynamic competitive environment.

4. Strategies of Equilibrium Services in Telecom Operators

Two aspects of achieving equilibrium services in telecom operators are proposed in this paper, the capacity-expectation equilibrium and the capacity-competition equilibrium.

There are three points in the capacity-expectation equilibrium: firstly, customers' expectation could be satisfied by resources allocation that influence the operators' service providing capacity; secondly, through effective management of customers' expectation, the capacity-expectation equilibrium could be achieved based on service resources allocation between touch points.; thirdly, through assembling the synergy of service capacity and customers' expectation, the operator can achieve the desired equilibrium effects. Equilibrium services strategy formulating is focused on under the situation that consumers' expectation is beyond the capacity one operator owned. (see Figure 5).

Start from the capacity-competition equilibrium at different service touch points, a management system is proposed here, which means taking effective and feasible service resources allocation measures to respond to other competitors' strategy. This system includes six procedures: Diagnosis and analysis of service processes; Decomposition and definition of customer touch points; Distribution and testing of the customer touch points; Commitment and conversion of the service value; Adjustment and optimizing of the service organization; Service monitoring and evaluation (see Figure 6) .Through suitability analysis, operators could provide services to target customers properly by the feasible channels in the appropriate time.

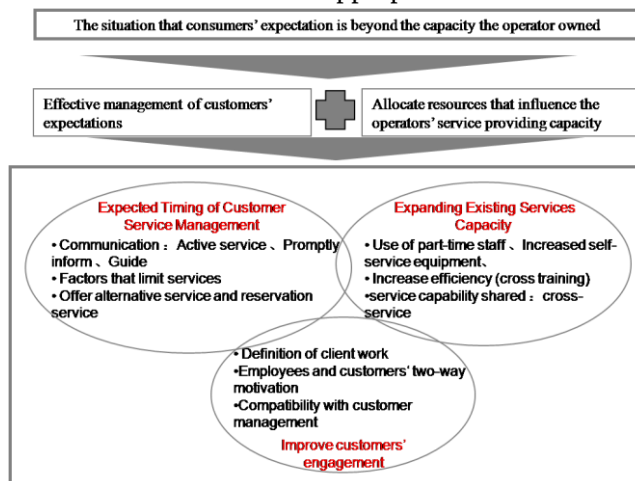


Fig. 5: Capacity-expectation equilibrium.

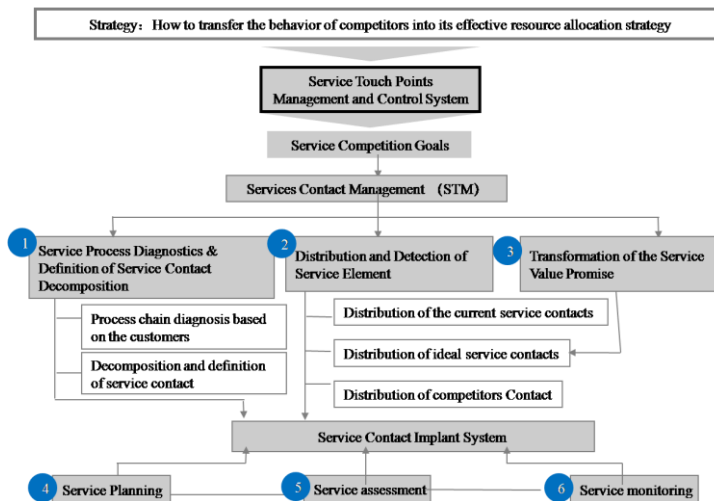


Fig. 6: Capacity-competition equilibrium.

5. Conclusions

Following conclusions are made in this paper: (1) “Equilibrium service” means optimization of service resource allocation in order to meet customers’ demand, and a sustainable developing process in which customer satisfaction is steadily improved. (2) “Equilibrium Service” reflects the equilibrium in three areas: telecom operators achieve equilibrium in service efficiency; customers achieve equilibrium in satisfaction degree; and considering the impact from competitors on its own strategy and customer satisfaction, a telecom operator achieves a dynamic equilibrium. (3) There are three affect elements for “Equilibrium service”: Service capacity, service competition, and service expectations. (4) We can improve the equilibrium level of service from the following two aspects: First, establish the equilibrium between service capacity and service expectations; second, establish the equilibrium between service capacity and service competition.

Acknowledgment

This work is supported by China National Key Technology R&D Program "The application demonstration of home shopping service based on HD interactive TV platform"(No.2011BAH16B07)

The authors would like to thank all the anonymous reviewers for their constructive comments, which undoubtedly served to improve this paper.

References

- Heskett, J.L., Jones, T.O., Loveman, G.W., Sasser, W.E., & Schlesinger, L.A. (1994). Putting the service-profit chain to work. *Harvard Business Review*, 72(2), 164-174.
- Lovelock, C. (1944). *Getting the Most out of Your Productive Capacity*. Product Plus, 241.
- Ly, Z.M. (2005). From general equilibrium to game equilibrium. *Finance and Economics Institute of the Inner Mongol*, (3), 35-37.
- Ojasalo, K. (1999). Conceptualizing productivity in services. *Hanken Swedish school of Economics*, 71.
- Parasuraman, A., Zeithaml, V.A., & Berry, L. L. A. (1985). Conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49, 41-50.
- Shao, C.H., & Zeng, J.Q. (2008). The consistency of contacted points based on brand value. *China New Telecommunications*, (7), 78-79.
- Xue, X.J. (1994). Theory of service supply and demand matching. *Policy Making Reference*, (6), 41-43.
- Zhang, W.T. (2006). Appropriate services: A theoretical construct based on service productivity. *Management World*, (3), 152-153.