Summer 5-27-2016

Study on Competitive Strategy of B2C Platform

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Abstract:The article builds a competitive model of the incumbent and later entrant, considering the case of single-homing andmultihoming. Results show that the conditions that later entrant platform profits exceed incumbent platform are the same underthe case of single homing and multihoming. At the same time, the later entrant should turn to charge rather than subsidizingenterprise when two platforms get an equilibrium. Later entrant platform can focus on improving user's evaluation of one sideif it wants to exceed the incumbent in profits. Finally, the case of Tmall and Amazon China in B2C market is discussed.

Keywords:two-sided market, B2C platform, competition strategy

1. INTRODUCTION

Along with the tremendous growth in B2C market, the concentration of market increases constantly.Tmall captures more than half of market and occupies the leading position in domestic B2C market since 2011.However, other B2C platforms,such asAmazon China accounts for a small part of market. Online shopping competition developsconsistently, and the question whether Amazon China, as a later entrant representative, canexploitfollower advantages and achieve performance breakthrough is the keystone of the study.

Platform competition has been studied extensively, and much of the literature focuseson pricing strategy of single platform, such as strategy of fee structure[1-4]and multihoming[5-7].Several studies investigate the issues of competitive coexistence between platforms. Shapiro and Varian(1999)[8]explain the causes of winner-take-all in networked market based on network effects,namely,there will be only one winner in the end when two or more companies are competing for a big market with positive feedback. Sun and Tse(2007)[9] discuss the coexistence condition of two competition networks in two-sided market.It is easier to emerge an only winner in a market with single-homing while market with multihoming tends to coexist.Goettler and Gordon(2014)[10]usea dynamic oligopoly model to examine the relationship between competition and product innovation and find an inverted-U relationship between product substitutability and innovation. Innovation benefits increase initially for enterprises. However when the market tends to be a winner-take-all one, laggards will abandon pursuit of the leader for the reason of few residual profits to fight.Other papers investigate market positioning strategy of later entrants.Bardey and Rochet(2010)[11]take risk factor into account and argue that heterogeneity of patient risk level provides a differentiated positioning opportunity for medical institutions.Medical institutions can successfully enter the market as long as its positioning strategy is reasonable. Based on the study of Bardey and Rochet,Fu(2011) [12]brings risk factor to bank card market and analyzes price strategy of China UnionPay and VISA. Results show that winner-take-all is not necessarily normal in bank card market which share the characteristics of two-sided market. Later entrant will find niche market whenever its market positioning and price structure are reasonable. Kim and Tse(2011)[13]study the strategy of later knowledge-sharing websites and consider the influence of accumulated knowledge,complexity of questions, and price structure of advertising on survivabilityof a latercomer.Paper shows that the longer the life span of accumulated knowledge, the higher the chance of survival of the latecomer.Eisenmann et al.(2011)[14]consider the barrier to enter for a potential entrant because of network effect, trying to explore the conditions under which envelopment strategies are likely to succeed. Research indicates that platform can envelope incumbent platform and take market share of rivals by

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bundling two platforms function together.Zhu and Iansiti (2011)[15]discuss the competition based on platform quality and installed base between two platforms, which is alater entrant and an incumbent withoutstanding superiority.Adynamic game is developed and results indicate that installed base does not necessarily present barriers to entry. Mcintyreand Chintakananda(2014)[16]think that entrepreneurs seeking to enter a market effected by network effects needto solve threemajor problems before making entry decision. The first one is where is the network effects from in this market? The second is what is the strength of network effects in a given market?The last is whether there a dominant standard that has already locked in the market?

Those studies are mainly aimed at competition between platforms with feature of two-sidedmarkets, while few work for B2C platform competition. Sounlike prior studies, we principally research on the competition strategy of B2C platform. Enterprises and consumers are the two sides in B2C platform. Their asymmetrical status makes B2C platform different from other platforms in two-sided markets.Ma and Liu(2013)[17]compare three B2C platforms revenue by building both static and dynamic pricing models.Findings reveal thatrevenues of platforms are consequently different because of their price structure. However the study focuses on the effect of price structure. In this paper, an asymmetric duopoly situation is considered to model competition between an entrant and an incumbent platform, where platform 1 is characterized by a larger market. In the cases of single-homing and multihoming, we want to know whether it is possible for later entrant platform to exceed the incumbent in profits. There are no fees for customers in B2C platform, such as Tmall, Jingdong Mall and Amazon China. So we assume that platform charge no fees toconsumers. Theincumbent charges a fixed fee to enterprises while later entrant subsidizes the enterprises.

2. THE MODEL

We assume that there are two platforms in B2C market. Platform 1 is the incumbent and platform 2 is later entrant. N_{c1} and N_{c2} are the number of consumers of platform 1and platform 2,respectively. N_{s1} and N_{s2} are the number of enterprises of platform 1and platform 2. V_1 and V_2 representthe service level of platform 1and platform 2 $\left(V_i > 0, i = 1,2\right)$. λ_c and λ_s denote the evaluation coefficient of platform 1 and platform 2 for consumers and enterprises, where $\lambda_i \in [0,1]$ .User will not joinone platform when $\lambda_i = 0\left(i = c,s\right)$. α_c and α_s denote the cross network externality coefficient $\left(\alpha_i > 0, i = c,s\right)$. P_{s1} represents that the incumbent charges a fixed fee to the enterprises. P_{s2} represents that later entrant subsidizes enterprises $\left(P_{si} > 0, i = 1,2\right)$.

$$U_{c1} = \alpha_c N_{s1} + \lambda_c V_1 \tag{1}$$

$$U_{c2} = \alpha_c N_{s2} + (1\text{-}\lambda_c) V_2 \tag{2}$$

$$U = \alpha_c + \lambda_c V_1 + (1\text{-}\lambda_c) V_2 \tag{3}$$

Formula(1),(2),(3)represent the utility when consumersjoinplatform 1,platform 2 and both platforms,respectively,where consumer network effects is denoted by $\alpha_c N_{si}$,the perceived service utility of platform 1 for consumer is denoted by $\lambda_c V_1$ andthe perceived service utility of platform 2 for consumerdenoted by $(1\text{-}\lambda_c) V_2$.

$$U_{s1} = \alpha_s N_{c1} + \lambda_s V_1 - P_{s1} \tag{4}$$

$$U_{s2} = \alpha_s N_{c2} + (1\text{-}\lambda_s) V_2 + P_{s2} \tag{5}$$

$$U = \alpha_s + \lambda_s V_1 + (1\text{-}\lambda_s) V_2 + P_{s2} - P_{s1} \tag{6}$$

Formula(4),(5),(6)represent the utility when enterprisesjoin platform 1,platform 2 and both platforms,respectively,where enterprise network effects is denoted by $\alpha_s N_{ci}$,the perceived service utility of platform 1 for enterpriseis denoted by $\lambda_s V_1$ andthe perceived service utility of platform 2 for enterprise denoted by $(1\text{-}\lambda_s) V_2$ .A consumer will join platform 1 rather than platform 2if $U_{c1} > U_{c2}$,and vice versa. Similarly, an enterprise will join platform 1 rather than platform 2 if $U_{s1} > U_{s1}$,and vice versa.

2.1 Platform competition in the case of single-homing

User can only choose to join one platform and make sure that utility is always positive, that is $U_{ci} > 0 (i = 1,2)$ and $U_{si} > 0 (i = 1,2)$ .We assume that market is completely covered[18],so $N_{c1} + N_{c2} = 1$ and $N_{s1} + N_{s2} = 1$ are satisfied.In the case of single-homing, wethink of aHotellingtype of model where a mass 1 of enterprises are uniformlydistributed on a (0, 1) interval. Let's suppose that platform 1 is located at 0 and platform 2is located at 1. t representsa transportation cost proportionalto their distance with platform 1 and platform 2.It is used to reflect the degree of difference between platforms and the greater the t ,the stronger the heterogeneity. Thenet utility function derived fromanenterpriselocated at x of platform 1and platform 2can be expressed as following formula(7).

$$\begin{aligned} \Phi_{s1} &= \alpha_s N_{c1} + \lambda_s V_1 - P_{s1} - tx \\ \Phi_{s2} &= \alpha_s N_{c2} + (1\text{-}\lambda_s) V_2 + P_{s2} - t(1-x) \end{aligned} \tag{7}$$

The address of indifferententerprise is $\bar{x} = \frac{1}{2} + \frac{\alpha_s (N_{c1} \text{-} N_{c2}) + \lambda_s (V_1 + V_2) - V_2 - (P_{s1} + P_{s2})}{2t}$, thus

$$\begin{aligned} N_{s1} &= \frac{1}{2} + \frac{\alpha_s (2N_{c1} \text{-} 1) + \lambda_s (V_1 + V_2) - V_2 - (P_{s1} + P_{s2})}{2t} \\ N_{s2} &= \frac{1}{2} - \frac{\alpha_s (1\text{-}2N_{c2}) + \lambda_s (V_1 + V_2) - V_2 - (P_{s1} + P_{s2})}{2t} \end{aligned} \tag{8}$$

Similarly, we can get:

$$\begin{aligned} N_{c1} &= \frac{1}{2} + \frac{+a_c (2N_{s1} - 1) + \lambda_c V_1 - (1-\lambda_c) V_2}{2t} \\ N_{c2} &= \frac{1}{2} - \frac{+a_c (1 - 2N_{s2}) + \lambda_c V_1 - (1-\lambda_c) V_2}{2t} \end{aligned} \tag{9}$$

We can know N_{ci} and $N_{si} (i = 1,2)$ are cross-correlationfrom formula(8)and(9).When $N_{ci}(N_{si})$ increase,there is a corresponding increase of $N_{si}(N_{ci})$ .It means,when more users of one side join the platform,it will also attract more users on the other side.Thisjust reflects the positive cross network externalities.

By considering formula(8)and (9), we can get enterprisesnumber of platform 1and platform 2, respectively.

$$\begin{aligned} N_{s1} &= \frac{1}{2} + \frac{(t\lambda_s + a_s\lambda_c)V_1 - [t(1-\lambda_s) + a_s(1-\lambda_c)]V_2 - t(P_{s1} + P_{s2})}{2t^2 - 2a_c a_s} \\ N_{s2} &= \frac{1}{2} - \frac{(t\lambda_s + a_s\lambda_c)V_1 - [t(1-\lambda_s) + a_s(1-\lambda_c)]V_2 - t(P_{s1} + P_{s2})}{2t^2 - 2a_c a_s} \end{aligned} \tag{10}$$

Thus, profits of platform 1and platform 2are:

$$\begin{aligned} \prod_1 &= P_{s1} N_{s1} = P_{s1} \left(\frac{1}{2} + \frac{(t\lambda_s + a_s\lambda_c)V_1 - [t(1-\lambda_s) + a_s(1-\lambda_c)]V_2 - t(P_{s1} + P_{s2})}{2t^2 - 2a_c a_s} \right) \\ \prod_2 &= -P_{s2} N_{s2} = -P_{s2} \left(\frac{1}{2} - \frac{(t\lambda_s + a_s\lambda_c)V_1 - [t(1-\lambda_s) + a_s(1-\lambda_c)]V_2 - t(P_{s1} + P_{s2})}{2t^2 - 2a_c a_s} \right) \end{aligned} \tag{11}$$

We demand $\prod_1$ and $\prod_2$ on P_{s1} and P_{s2} first orderpartial derivativesrespectively to obtain maximum profits.

$$\begin{aligned} \frac{\partial \prod_1}{\partial P_{s1}} &= \frac{1}{2} + \frac{(t\lambda_s + a_s\lambda_c)V_1 - [t(1-\lambda_s) + a_s(1-\lambda_c)]V_2 - tP_{s2}}{2t^2 - 2a_c a_s} - \frac{t}{t^2 - a_c a_s} P_{s1} \\ \frac{\partial \prod_2}{\partial P_{s2}} &= -\frac{1}{2} + \frac{(t\lambda_s + a_s\lambda_c)V_1 - [t(1-\lambda_s) + a_s(1-\lambda_c)]V_2 - tP_{s1}}{2t^2 - 2a_c a_s} - \frac{t}{t^2 - a_c a_s} P_{s2} \end{aligned} \tag{12}$$

We can get pricing strategy of two platforms according to the necessarycondition of profit maximization.

$$\begin{aligned} P_{s1} &= \frac{(t\lambda_s + a_s\lambda_c)V_1 - [t(1-\lambda_s) + a_s(1-\lambda_c)]V_2 + 3(t^2 - a_c a_s)}{3t} \\ P_{s2} &= \frac{(t\lambda_s + a_s\lambda_c)V_1 - [t(1-\lambda_s) + a_s(1-\lambda_c)]V_2 - 3(t^2 - a_c a_s)}{3t} \end{aligned} \tag{13}$$

Replacingformula(13)into(10),we can know enterprisesnumber of platform 1and platform 2.

$$N_{s1}=\frac{3\left(t^2-2a_ca_s\right)+(t\lambda_s+a_s\lambda_c)V_1-\left[t(1-\lambda_s)+a_s(1-\lambda_c)\right]V_2}{6(t^2-2a_ca_s)}$$
$$N_{s2}=\frac{3\left(t^2-2a_ca_s\right)-\left\{(t\lambda_s+a_s\lambda_c)V_1-\left[t(1-\lambda_s)+a_s(1-\lambda_c)\right]V_2\right\}}{6(t^2-2a_ca_s)} \quad (14)$$

Replacingformula(13)and (14)into(11),profits of platform 1 and platform 2 are as follows.

$$\Pi_1=\frac{\left\{3(t^2-a_ca_s)+(t\lambda_s+a_s\lambda_c)V_1-\left[t(1-\lambda_s)+a_s(1-\lambda_c)\right]V_2\right\}^2}{18t(t^2-a_ca_s)}$$
$$\Pi_2=\frac{\left\{3(t^2-a_ca_s)-(t\lambda_s+a_s\lambda_c)V_1+\left[t(1-\lambda_s)+a_s(1-\lambda_c)\right]V_2\right\}^2}{18t(t^2-a_ca_s)} \quad (15)$$

Then, the difference between platform 2 and platform 1 is:

$\Delta_\pi=\Pi_2-\Pi_1=-\frac{2}{3}\left\{(t\lambda_s+a_s\lambda_c)V_1-\left[t(1-\lambda_s)+a_s(1-\lambda_c)\right]V_2\right\}$.When profits of platform 2exceeds platform 1,it should satisfy $\Delta_\pi>0$,that is to say, $(t\lambda_s+a_s\lambda_c)V_1-\left[t(1-\lambda_s)+a_s(1-\lambda_c)\right]V_2<0$.After simplifying, we can get that $\frac{V_1}{V_2}<\frac{t(1-\lambda_s)+\alpha_s(1-\lambda_c)}{t\lambda_s+\alpha_s\lambda_c}$,that is when $\frac{V_1}{V_2}<\frac{t(1-\lambda_s)+\alpha_s(1-\lambda_c)}{t\lambda_s+\alpha_s\lambda_c}$,profits of platform 2 will exceed platform 1.

2.2 Platform competition in the case of multihoming

User can choose to join both two platforms, and according to Hotellingmodel, we can know:

$$N_{s1}=\frac{1}{t}\left(a_sN_{c1}+\lambda_sV_1-P_{s1}\right)$$
$$N_{s2}=\frac{1}{t}\left[a_sN_{c2}+(1-\lambda_s)V_2+P_{s2}\right] \quad (16)$$

Similarly, we can get:

$$N_{c1}=\frac{1}{t}\left(a_cN_{s1}+\lambda_cV_1\right)$$
$$N_{c2}=\frac{1}{t}\left[a_cN_{c2}+(1-\lambda_c)V_2\right] \quad (17)$$

It can be seen from formula(16)and(17), N_{ci} and $N_{si}(i=1,2)$ are cross-correlation.When $N_{ci}(N_{si})$ increase, there is a corresponding increase of $N_{si}(N_{ci})$.That meanswhen more users of one side join the platform,it will also attract more users on the other side. Thisjust reflects the positive cross network externalities.

By consideringformulas(16)and(17),we can get enterprisesnumber of two platforms in the case of multihoming,respectively.

$$N_{s1}=\frac{\left(a_s\lambda_c+t\lambda_s\right)V_1}{t^2-a_sa_c}-\frac{t}{t^2-a_sa_c}P_{s1}$$
$$N_{s2}=\frac{\left[a_s(1-\lambda_c)+t(1-\lambda_s)\right]V_2}{t^2-a_sa_c}+\frac{t}{t^2-a_sa_c}P_{s2} \quad (18)$$

Thus, profits of platform 1 and platform 2 are:

$$\Pi_1=P_{s1}N_{s1}=P_{s1}\left[\frac{\left(a_s\lambda_c+t\lambda_s\right)V_1}{t^2-a_sa_c}-\frac{t}{t^2-a_sa_c}P_{s1}\right]$$
$$\Pi_2=-P_{s2}N_{s2}=-P_{s2}\left\{\frac{\left[a_s(1-\lambda_c)+t(1-\lambda_s)\right]V_2}{t^2-a_sa_c}+\frac{t}{t^2-a_sa_c}P_{s2}\right\} \quad (19)$$

We demand Π_1 and Π_2 on P_{s1} and P_{s2} first orderpartial derivativesrespectively to obtain maximum profits.

$$\begin{aligned}&\frac{\partial\Pi_1}{\partial P_{s1}}=\frac{(a_s\lambda_c+t\lambda_s)V_1}{t^2-a_sa_c}-\frac{2t}{t^2-a_sa_c}P_{s1}\\&\frac{\partial\Pi_2}{\partial P_2}=-\frac{[a_s(1-\lambda_c)+t(1-\lambda_s)]V_2}{t^2-a_sa_c}-\frac{2t}{t^2-a_sa_c}P_{s2}\end{aligned}\tag{20}$$

We can get pricing strategy of two platforms, according to the necessarycondition of profit maximization.

$$\begin{aligned}&P_{s1}=\frac{(a_s\lambda_c+t\lambda_s)V_1}{2t}\\&P_{s2}=-\frac{[a_s(1-\lambda_c)+t(1-\lambda_s)]V_2}{2t}\end{aligned}\tag{21}$$

Replacingformula(21)into(18),we can know enterprisesnumber of two platforms, respectively.

$$\begin{aligned}&N_{s1}=\frac{(a_s\lambda_c+t\lambda_s)V_1}{2(t^2-a_sa_c)}\\&N_{s2}=\frac{[a_s(1-\lambda_c)+t(1-\lambda_s)]V_2}{2(t^2-a_sa_c)}\end{aligned}\tag{22}$$

Profits of platform 1andplatform 2 are as follows.

$$\begin{aligned}&\Pi_1=\frac{(a_s\lambda_c+t\lambda_s)^2V_1^2}{4t(t^2-a_sa_c)}\\&\Pi_2=\frac{[a_s(1-\lambda_c)+t(1-\lambda_s)]^2V_2^2}{4t(t^2-a_sa_c)}\end{aligned}\tag{23}$$

The ratio between platform 2 andplatform 1 is $\frac{\Pi_2}{\Pi_1}=\left\{\frac{[a_s(1-\lambda_c)+t(1-\lambda_s)]V_2}{(a_s\lambda_c+t\lambda_s)V_1}\right\}^2$,when profits of platform 2exceed platform 1,it should satisfy $\frac{\Pi_2}{\Pi_1}>1$,After simplifying,we can get $\frac{V_1}{V_2}<\frac{t(1-\lambda_s)+\alpha_s(1-\lambda_c)}{t\lambda_s+\alpha_s\lambda_c}$,that is to say, when $\frac{V_1}{V_2}<\frac{t(1-\lambda_s)+\alpha_s(1-\lambda_c)}{t\lambda_s+\alpha_s\lambda_c}$ profits of platform 2 will exceed platform 1.This is consistent with the conclusionin the case of single-homing.

3. MODEL ANALYSIS

In this paper, number of enterprises, pricing strategy and profits of two platforms are discussed in the case of single-home and multihoming.Results suggest that the conditions thatplatform 2outstrips platform 1in profits are the same. Thisindicates that the impact of user'sstate of attributionplays a minor role in platform competition.

Conclusion 1: inthe case of single-home and multihoming, the conditions thatplatform 2outstrips platform 1in profits are the same.

When profits of platform 2exceeds platform 1,itwill satisfies $\frac{V_1}{V_2}<\frac{t(1-\lambda_s)+\alpha_s(1-\lambda_c)}{t\lambda_s+\alpha_s\lambda_c}$,now two cases are discussed.

- λ_c and λ_s are symmetric

When 0< λ_c <1/2,0< λ_s <1/2, $\frac{t(1-\lambda_s)+\alpha_s(1-\lambda_c)}{t\lambda_s+\alpha_s\lambda_c}>1$,the size of V_1 and V_2 can notbe ascertained.

When1/2< λ_c <1,1/2< λ_s <1, $\frac{t(1-\lambda_s)+\alpha_s(1-\lambda_c)}{t\lambda_s+\alpha_s\lambda_c}<1$,thus, $V_1<V_2$.

- λ_c and λ_s are asymmetric

When0< λ_c <1/2,1/2< λ_s <1,we can not determine the value of $\frac{t(1-\lambda_s)+\alpha_s(1-\lambda_c)}{t\lambda_s+\alpha_s\lambda_c}$ compared with 1,sothe size of V_1 and V_2 cannot be ascertained;It is the same when 1/2< λ_c <1,0< λ_s <1/2.Table 1 is discussion on differentvalues of λ_c and λ_s .

Table 1.Discussion on different values of λ_c and λ_s

	0< λ_c <1/2	1/2< λ_c <1
0< λ_s <1/2	cannot be determined	cannot be determined
1/2< λ_s <1	cannot be determined	$V_1 < V_2$

From table 1,we know thatwhen1/2< λ_c <1,1/2< λ_s <1,the value of $\frac{t(1-\lambda_s)+\alpha_s(1-\lambda_c)}{t\lambda_s+\alpha_s\lambda_c}$ will less than 1,thus $V_1 < V_2$ .It means when the evaluation coefficient ofconsumers and enterprises are both very high,theservice level of platform 2will be superiorto platform 1 if it outstrips platform 1in profits.When0< λ_c <1/2,0< λ_s <1/2 or in the case of λ_c and λ_s are asymmetric,the servicelevel of platform 2 can be higher or lower than platform 1 ifitexceeds platform 1 in profits,socondition isrelatively loose. Platform 2 will obtain much more profits than platform 1 as long as $\frac{V_1}{V_2} < \frac{t(1-\lambda_s)+\alpha_s(1-\lambda_c)}{t\lambda_s+\alpha_s\lambda_c}$ is satisfiedregardless of service level.For platform 2, it will need to pay more effort and cost to improve evaluation to a high level simultaneously. So it can reduce user evaluation of both two sides or focus on improving user experience of one side to get highevaluation.However, it is difficult to survivein the market for platform with low evaluation of both two sides. Therefore, to vie for market and get more profits than platform 1,platform 2 should primarily improve evaluation of one side.

Conclusion 2: to vie for market and get more profits than platform 1,platform 2 should primarily improve evaluation of one side.

From formula (13)and(21) we can see $P_{s2} < 0$ when competition equilibrium existsin the case of single-home and multihoming.Itindicatesplatform 2 should charge fees to enterprises instead of subsidy under maximization of profit. Soin early phase of entry, it is not a permanent measure to subsidize enterprises to get them on board.

Conclusion 3:later entrant should chargefees to enterprises in order to obtain much more profits than the incumbent whencompetition equilibriumexists.

4. CASE ANALYSIS

Tmall, beingthe leader of B2C market inChina since 2011,comes from Taobao which started from 2003.Large numbers of enterprises and numerous consumers are attracted for its large market share and unexampled advantages in flow.Enterprises of Tmallnot only need pay deposit and use cost,but also need pay high advertisement costs togainplatform flow.Amazon is the world's largest electronic business company.Combinedwith joyo.com,it began to enter into Chinese market in 2004 and renamedAmazon China in 2011.Different from other B2C platforms in China,such as Tmall,Jingdongmall,Amazon Chinaadopts“zero investment” patternwithout deposit and use cost. Enterprises only need to pay commission and logistics expense. What’s more, there’s no advertising cost. It provides a fair competitive environment for different sellers of the same product to enjoy same exposure opportunity and flow.Meanwhile,Amazon China creates unifiedpromotion and marketing, whichprovides numerousfree services,includingpage display, mail advertising and personalized recommendation engine.Thanks tosimplified marketing process,enterprisescan focus on selling all manner of products.Amazon China subsidizes enterprises by offering free services.

However,Amazon China has been in a tepid state since its entry to China.Fromfigure 1,we can seeTmallranks first with 441 billion while Amazon China,less than a tenth of Tmall,ranksseventh.Meanwhile, Amazon Chinais at the bottom of the list with a rate of 42.6% in the top10 China B2C online retail growth rates of 2013.

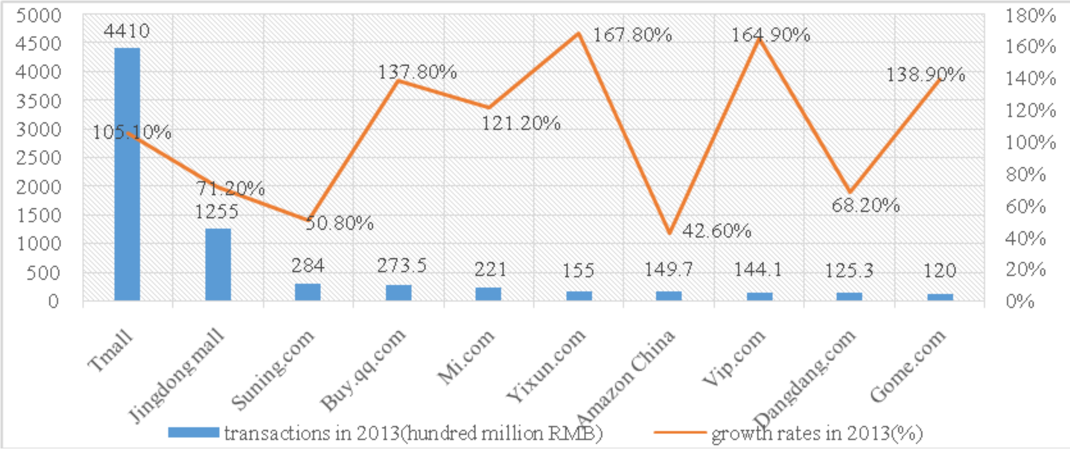

Figure 1.The top10 China B2C online retail transactions and growth rates in 2013

Comparing withrapid growth of China B2C platforms, the development of Amazon China appears to be excessively slow. This phenomenon mainly comes from threeaspects.Firstly,Amazon China put emphasis on developinginfrastructureconstruction at the beginning, like layout of warehousing logistics andthe building of IT system for instance.However,Amazon China made its first ever loss in 2012 because of the impact of high input in logistics and technology.There is no deposit or use cost in Amazon China and enterprises are provided with various promotionservice,which also lead to a considerable expenditure.Secondly,it is not in accordance with consumer shopping habits for its monotone website design.Thirdly,there are different kinds of sales promotion in China, such as Double 11shopping spree of Tmalland“6·18”anniversary sale of Jingdong.They aregood ways to attractconsumers and receivepraise.But,Amazon Chinais not keen tolower prices to entice customers. Hence,platformevaluation of consumers are generally not high.

Conclusion 1 indicates that user state of attribution is not the key factor in profit competition.ThusAmazon China will get ahead of Tmall as long as $\frac{V_1}{V_2} < \frac{t(1-\lambda_s)+\alpha_s(1-\lambda_c)}{t\lambda_s+\alpha_s\lambda_c}$.According to conclusion 2,Amazon China shouldimprove its site layoutcombined with user habits toenhance user experience.In tandem,it is essential to provide more personal service toimprove consumer evaluation.

In order to make a profit breakthrough,Amazon Chinashould shrinks its spending and reduce the construction of logistics infrastructure investmenton the one hand. On the other hand, charging fees to enterprises is needed.It is not a permanent solution to subsidize enterprises to get them on board in initial phase of platform development.This is also consistent with conclusion 3.

5. CONCLUSIONS

In the case of single-home and multihoming,we firstly consider competitive strategy of the incumbent and later entrant,whichdiffer in service level and evaluation.Then the condition of later entrant profit exceeding the incumbent is studied.Finally,the case of Tmall and Amazon Chinaisdisscussed.The conclusions are as follows:

- In the case of single-home and multihoming,the conditions that platform 2 outstrips platform 1in profits are the same.
- In order tovie for market and get more profits than the incumbent,laterentrant should substantively improve service level and evaluation of one side in platform.
- Later entrant should chargefees to enterprises in order to obtain much more profits than the incumbent when competition equilibriumexists.

The B2C market of China is developing rapidly,and the duopoly market pattern consist of Tmall and Jingdongis gradually being formed.Other B2C platforms are trying to seek for new market space and enhance its core competitive advantage by supply chain integration,productdevelopment,brand building and service optimization.Burgeoningvertical B2C platforms,such asVipshop and Jumei areexamples of later entrants.Thus,later entrant can still create a better performance as long as itsmarket positioning is appropriate.

REFERENCES

[1] Evans D S,Schmalensee R.(2005).The industrial organization of markets with two-Sided platforms.Working Paper.

[2] RochetJ,Tirole J.(2006).Two-sided markets: a progress report.RAND Journal of Economics,37(3):645-667.

[3] GaleottiA,Moraga-Gonza´lez J L.(2009).Platform intermediation in a market for differentiated products.European Economic Review,53(4):417-428.

[4] Jeon D S,Rochet J C.(2010).The pricing of academic journals:atwo-sided market perspective.Ameriean Economic Journal:Microeeonomies,2(2):222-255.

[5] CaillaudB,Jullien B.(2003).Chicken&egg:competition among intermediation services providers.RAND Journal of Economics,24(2):309-328.

[6] GabszewiczJ,Wauthy X.(2004).Two-sided markets, price competition, multihoming. Working Papers.

[7] Armstrong M.(2006).Competition in two-sided markets.RAND Journal of Economics,37(3):668-691.

[8] Shapiro C,Varian H R.(1999).Information Rules:A Strategic Guide to the Network Economy.Zhangfan.Boston:Harvard Business Press,155.

[9] Sun M,Tse E.(2007).When does the winner take all in two-sided markets?Review of Network Economics,6(1):16-41.

[10] Goettler R L,Gordon B R.(2014).Competition and product innovation in dynamic oligopoly.Quantitative Marketing & Economics,12(1):1-42.

[11] BardeyD,Rochet J C.(2010).Competition among health plans:a two-sided market approach.Journal of Economics & Management Strategy,19(2):435-451.

[12] FuL Y.(2011).Study on the weak feature of two-sided market in China payment card and pricing structure strategy.PhD Thesis.Shanghai:University of Fudan.

[13] Kim K,Tse E.(2011).Dynamic competition strategy for online knowledge-sharing platforms.International Journal of Electronic Commerce,16(1):41-76.

[14] EisenmannT,PakeG,Alstyne MV.(2011).Platform envelopment.Strategic Management Journal,32(12):1270-1285.

[15] Zhu F,Iansiti M.(2011) Entry into platform-based markets.Strategic Management Journal,33(1):88-106.

[16] Mcintyre D P,Chintakananda A.(2014).Competing in network markets: can the winner take all? Business Horizons, 57(1):117-125.

[17] Ma HW,Liu X X.(2013).The comparative study of price structures and revenue on B2C platforms.Chinese Journal of Management Science,21,513-518.

[18] Cao JH,Chen HM,Sun W J.(2010).On the effect of multi-homing on competitive strategies of B2B platform based on two-sided market theory. Journal of Finance and Economics,36(9):91-99.