

The Supply-side Analysis and Countermeasures of Exuberant Phenomenon of Outbound Consumption at Present

Chai Guojun, Li Jianping

(The School of Business, Hebei University of Economics and Business, Shijiazhuang 050061, China)

Abstract: In recent years, the exuberant phenomenon of Chinese residents leaving the country shopping has caused much attention in academic circles. Applying game theory, from the supply-side not the demand-side interpreting outbound consumption boom, it is the addition of brand value and reputation guarantee, as a result, the middle- and high-end consumers in our country are more willing to go abroad to purchase well-known foreign brand products, not to purchase domestic products with low prices, and not to favor the high domestic prices of foreign brands. Therefore, to guide the overseas consumption backflow of middle- and high-income families, we need to implement supply-side structural reform such as strengthening the brand construction of national enterprises, attaching importance to scientific research input and human capital accumulation.

Key words: outbound consumption, brand value, repeated game, supply-side structural reform

1 Introduction

Since the proposal of the New Normal, China's economic growth has slowed, but the scale of citizens' outbound tourism consumption has increased dramatically. The fact that the outbound shopping soaring in the context of the economic downturn has aroused great concern: ordinary people think that high import tariffs are inappropriate for buying well-known foreign brands (the so-called "foreign brands") at home. The Ministry of Commerce and The Ministry of Finance have begun to compete for the new domestic consumer groups, and the academic field have also shown strong interest. Several studies

point out that a large number of Chinese citizens travel abroad and go shopping, which reflects the problems of consumption alienation and even conspicuous consumption, reminding the authorities to control the income gap and advocate rational consumption of the public^[3]. Different from the previous demand-side analysis, based on the game theory, this paper analyzes the important reasons for the rise of Chinese citizens' outbound shopping from the supply side, which is: in view of the increase of brand value and the protection of reputation, the domestic price of foreign brands is much higher than that of the domestic brands. However, the foreign brand price is lower abroad, so purchasing them abroad is cost-effective. Therefore, the "supply-side structural reform" is proposed, which calls for the strengthening of brand building in national enterprises. We should attach importance to scientific research investment and human capital accumulation to attract citizen's consumption reflux. First of all, the following explains from the perspective of price structure that the exuberant shopping abroad originates from the brand value difference. Then we can see that the difference of brand value is able to be alleviated by repeated games. Finally, specific suggestions are given.

2 The Exuberance of Shopping Abroad is due to the Difference of Brand Value

Public data show that China's economy has been downgraded from high-speed growth to medium- and high-speed growth, such as 10.6% speed of growth in 2010 and 6.9% in 2015, leading to a "New Normal" in all fields. At the same time, the number of residents

traveling abroad has increased year by year, from 57 million in 2010 to nearly 0.12 billion in 2015. As is shown in figure 1, the economic downturn and exuberant outbound shopping coexist and contrast to each other sharply. In terms of the specific cost of leaving the country, Chinese tourists spent 19,871 yuan per capita on overseas consumption in 2013. The spending on shopping accounts for 57.8% [4]. In 2015, the per capita consumption of Chinese tourists going abroad during the Spring Festival is estimated to be 15,000 yuan, and the consumption of shopping is more than half of the total spending on traveling, mainly being cosmetics, watches and luxury goods [5]. The vast majority of ordinary consumers choose overseas shopping, to a large extent because of the price difference between domestic and foreign goods [6-7].

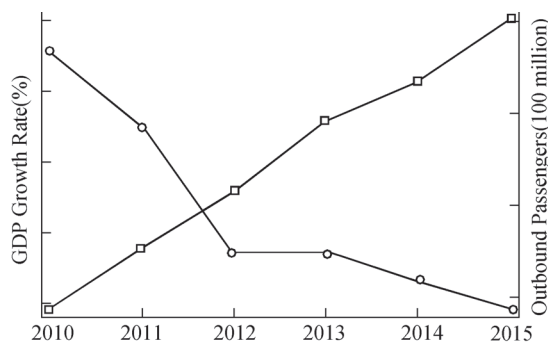


Fig. 1 China's GDP growth rate and outbound passenger trend from 2010 to 2015

Data source: GDP growth rate comes from *China Statistical Yearbook*, and outbound population comes from *China Tourism Statistics Bulletin*.

The principles of price science tell us that commodity price includes production cost, circulation cost, profit and tax, in which production cost is made up of direct expenses such as raw materials and processing cost, and overhead expenses such as management expenses, sales expenses, financial expenses and so on [8]. Generally speaking, brand value is an intangible asset of an enterprise, belonging to an expanded, large-scale trademark, which is the added value brought by the brand for commodity pricing, and ultimately reflected in the appreciation of the value of the enterprise and its products in the financial market. It can remain attractive for consumers for a long time.

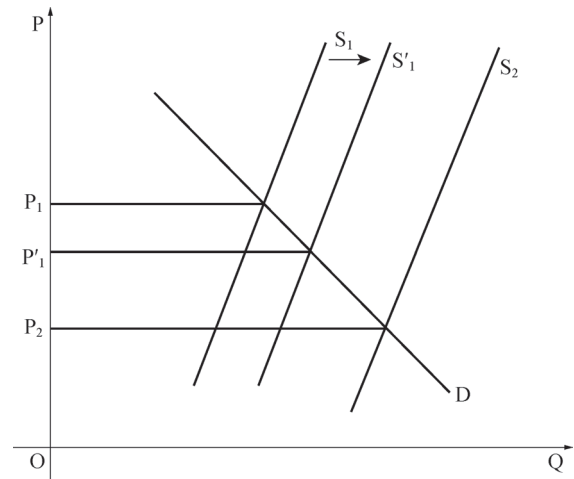


Fig.2 The difference of brand value leads to the difference of equilibrium price of the same commodity at home and abroad

Note: S1 and S2 represent the supply curves of foreign brand enterprises and national enterprises respectively in China products market, while S' 1 represents the supply curve of the products of foreign brand enterprises in the international market. P1 and P2 represent the equilibrium price of products of foreign brand enterprises and national enterprises respectively in Chinese market, while P' 1 represents the equilibrium price of foreign brand products in the international market.

Brand value, as an important high value-added component of commodity price, will be converted into high profit, which will raise the overall price level of commodity. As is shown in figure 2, under the condition that tariffs, raw materials, processing costs, overhead costs, etc. remain unchanged and established consumption D is fixed, foreign brand commodity with higher brand value will naturally correspond to higher supply curve S1. Those with low brand value or even unlicensed national enterprises will correspond to lower supply curve S2. Compared with the resulting equilibrium price, it is easy to see that the former P1 is larger than the latter P2. Obviously, simple analysis of supply and demand can conclude that higher brand value or added value can set a higher price and then rake in more enormous monopoly profits. In fact, this is the theoretical basis of the supply-side for many foreign brands to implement high-pricing strategies in emerging markets including China. According to a CCTV's program in 2013, a bag of the foreign brand Chanel in France costs 23,000 yuan, but it sells for 37,500 yuan in China. Foreign firms' high-to-low pricing strategy earns excess profits after removing the outbound travel costs of Chinese consumers [6]. Admittedly, high sales price

of foreign brands in China indeed force the low-end consumers to choose products of national enterprises and decrease the total number of transactions (as is shown in Figure 2). Nevertheless, with the growth of the differentiation of domestic consumer groups^[1,9], the medium- and high-end consumers of wealth will turn into relatively mature markets in Europe and the United States, purchasing the similar foreign brands commodity indirectly. The economics theory behind this phenomenon is that developed countries' foreign brands compete with each other, leading to squeezed profit margins, which is shown in graphics as the supply curve S1 moves to the right S' 1, and then cause its equilibrium price in foreign market fall to P'1. If we combine the foreign brands' formation mechanism of equilibrium price in the domestic and foreign markets and the function of brand value to ensure the performance aiming at consumers, it is not difficult to explain why some consumer groups in China are keen on buying a large number of foreign brand goods with lower prices rather than national enterprises with lower prices when they travel abroad.

Brand value, or added value, is closely related to industry type and value chain position. A large number of empirical studies confirm that capital- and technology-intensive industries have higher added value, while labor-intensive industries' is lower. According to the principle of comparative advantage, China with an abundance of labor is rich in labor-intensive products. As is shown in figure 2, theoretically, it is speculated that domestic consumers prefer the national brands of these products. However, the fact is that even for labor-intensive products such as luggage, clothing, leather shoes and so on, domestic high-end consumers are still keen on buying big brands abroad and seldom favor similar products of national enterprises. The reason for this is that under the model of division of labor in global value chain, this kind of manufacturing, though called "labor-intensive", still has the difference of "high-end" and "low-end"^[10]. China has advantages in the low value-added processing and assembly, while high value-added chains such as brands are still dominated by developed economies. As a result, China's manufacturing industry remain less competitive throughout the world, even less than India. This can also explain from the supply side that the 2013 CCTV survey revealed that "India's tariff is high, but its domestic price of similar foreign brands is lower than China"^[6].

3 Repeated Game Can Alleviate Difference of Brand Value

Further, where do the brand and other high value-added chains come from? This paper believes that they are from the long-term market test and research and development activities. The reason why brand has intangible value is that it can deliver reliable prestige and excellent quality to consumers. The Game Theory tells us that, on the premise of adequate information, when consumers finitely repeat to select and purchase certain kinds of goods, those with good credit and high prices are not chosen. However, similar goods at lower prices will easily win as "Nash equilibrium" in the final stage, so the final "sub-game perfect Nash equilibrium" unfortunately falls on the domestic products with lower brand value, which is the so-called "chain store paradox"^[11]. Concerning how to convert from inefficient "national commodity" to "high-priced foreign brand", two approaches are given theoretically: one is to repeat the game infinitely; the other is to change the complete information into incomplete.

3.1 Infinitely Repeated Game with Complete Information

The economic implication of this approach is clear. In the implementation of cold strategy, even if there is still low efficiency equilibrium, enterprises will still focus on the long-term benefits of cooperation rather than the short-term gains of non-cooperation so as to get rid of the "prisoner's dilemma". The premise is that the discount factor δ is quite large, which contains both the objective meaning of time value and the subjective meaning of tolerance. In particular, $d = \frac{1-\rho}{1+\rho}$,

ρ represents the objective discount rate, such as the bank's benchmark interest rate; p , which represents the probability of participant's end of the next game with their subjective expectation, that is, the degree of intolerance. Obviously, the smaller the interest rate or the more tolerant the firm is, the larger the discount factor is. Then the more opportunities each party has for cooperation in numerous competitions.

The long-term competitive state of foreign well-known enterprises and domestic enterprises is considered as the possibility of repeated game, and the low interest rate under the mature financial system will raise the discount factor. Therefore, the indefinitely repeated game between domestic and foreign enterprises

can theoretically get rid of the prisoner's dilemma. However, after more than 30 years of reform and opening up, China has not yet left the inefficient sub-game perfect Nash equilibrium: compared with foreign enterprises in Chinese territory, domestic enterprises producing similar products have not significantly increased their brand value; on the contrary, foreign big brands take advantage of the opportunity to over-elevate brand value to grab more profits. How to work with risks for approximately infinite times to strengthen the national enterprise brand? This needs "foresighted" national enterprises in the society willing to be the leader. They either go out of the country, in the competition with foreign big brands, realizing the importance of brand construction imperceptibly, or "irrationally" advocate the first cooperation in the native country, that is, attaching importance to the occurrence of brand value. Only when a certain number of national enterprises which are not eager for quick success and instant profits emerge in the society, will other enterprises try to cooperate, and the low-level equilibrium of brand value will be transferred to the high-level equilibrium which pays close attention to the high added value. It is admitted that during this period, the government has to deal with external factors that are produced by the leaders and cannot be internalized by national enterprises. Otherwise the process of economic upgrading will also be delayed^[12]. Alibaba is the current outstanding representative of Chinese national enterprises. It came into being in the Internet age, from Alipay to Ali small loans and asset securitization, from Hangzhou to Taobao global villages and sharing bicycles. Alibaba has been pioneering and innovating, daring to be the first in the world in the field of Internet finance and setting up an excellent national brand.

3.2 Finitely Repeated Games of Incomplete Information

This approach is more realistic, because domestic and foreign enterprises have limited life expectancy, and consumers often can not "shop around to get the best price". In the case of asymmetric information, consumers tend to choose enterprise products with high brand value. In fact, the classic "Gang of Four" model tells us that reputation is crucial in a finite repeated game^[13]. Axelrod's experiment also shows that even if the number of repeated games is limited, cooperative behavior can still occur, especially in the period which is still far from the end of the game^[14]. Life experience

and the game theory help people realize that when consumers don't know much about certain product or service, the goodwill function of brand value can actually attract them to buy. Therefore, we call upon certain national enterprises to work seriously in the initial stage, creating a good reputation for future actions. We'd better guide other enterprises including foreign-funded enterprises to attach equal importance to brand cultivation. National enterprises should take a say in global value chains and international division of labor until in the corporate collapse phase when they lose all the reputation. Compared with the first strategy, this is a more realistic solution to creating a sound institutional atmosphere. Alibaba claims to only remain in business for 102 years, so in these years they have been working hard and integrating trading big data in the platform of consumers and small- and micro-enterprises. Besides, they have been adopting mutual network thinking to solve the problem of private financing, providing platform members with good faith and accumulating valuable goodwill at the same time. Ali's pragmatic and hardworking practice has made it to achieve the title of "one of the largest e-commerce platform companies in the world", leading to the improvement of China's business environment under the New Normal economic background and promoting the construction of a new type of government-to-business relationship.

4 Advice on Supply-Side

In view of the increasing trend of shopping abroad, this paper gives economic explanation on supply-side rather than demand-side according to the Game Theory. The author believes that the lack of brand value leads to little attention to domestic enterprise products, though they have a comparative advantage in price. The reality that foreign brands with excessive brand value will force the low-end consumers to choose the products of national enterprises, while medium- and high-end consumers will go abroad to buy high-valued but slightly lower-cost foreign brands. The repeated game can give a supply-side interpretation: on one hand, the infinitely repeated game of complete information will lead domestic and foreign enterprises to valuing long-term benefits such as brand building; on the other hand, in the case of information asymmetry, some enterprises will induce others to form cooperative sub-game perfect Nash equilibrium and attach importance to the long-term construction of brand value in the

initial stage, even if it is a finitely repeated game. These conclusions have important implications on policy.

4.1 Strengthening Supply-Side Structural Reforms

Theoretically, the school of supply economics rediscovered Say's law and confirmed that the growth of production depends on the supply and effective utilization of factors of production, such as labor force and capital, encouraging the expansion of production from the angle of supply and encouraging innovation. Under the context of New Normal, the Chinese government begin to realize the consequences of fiscal deficit and inflation, change the demand management tendency in Keynes' thought, and pay more and more attention to the supply management policy. However, supply-side reform is not a one-size-fits-all, but structural adjustment. The demand upgrade characterized by outbound tourism consumption requires the upgrading of domestic industries, and demand guides supply to improve the quality of supply. That's the policy implication of "supply-side structural reform". Authorities believe that "supply-side structural reform" is "to promote structural adjustment by means of reform in order to improve supply quality, to correct the distortion of the allocation of elements, to expand effective supply, and to improve the adaptability and flexibility of the supply structure to changes in demand. By improving the total factor productivity, we can better meet the needs of the masses and promote sustainable and sound economic and social development"^[15]. This paper shows that brand value is crucial to maintaining consumer loyalty, so we should call on national enterprises of certain products such as luggage and clothing to explore product characteristics, and attach importance to brand construction and enhance bargaining power so as to provide effective and high quality supply. It is undeniable that China high value-added brands still exist in large numbers, such as wine and traditional Chinese medicine in the international market. Therefore, while continuing to carry forward high quality brands, the national brand shortcuts that complement the new demand of customers constitute an interpretation and application of supply-side structural reform.

4.2 Paying Attention to R & D Input

Brand value and high added value are closely related to each other. High-value-added production and management activities are the result of long-term

accumulation and can provide the impetus for sustained economic growth. High added value comes from scientific research activities and human capital investment, which is the effective development of the potential of the most important factor of production - human. It takes ten years to grow trees, but a hundred to rear people. The more people pay attention to long-term interests, the more human capital accumulation, the wider the application of science and technology, the more positive externalities that enterprises enjoy in cooperation and interaction. Theoretically, δ in repeated game represents the importance of future profits to participants^[16]. A high degree of concern for long-term interests is also a response to supply and market clearing from both classical and neoclassical economists. It can guide the government to pay attention to incentive and quality, which is strictly different from Keynes' short-term control thought and quantity tendency. To carry out supply-side structural reform, we must work on cutting overcapacity, destocking, deleveraging, reducing costs and identifying growth areas. The fundamental solutions to these measures must rely on reform and innovation. New structural economics points out that China should have abandoned the strategy of catching up and overtaking, and instead implemented the strategy of comparative advantage, and creatively solved the problem of enterprise's viability in traditional sectors in the process of transformation. It also points out that structural differences in industry and technology require a combination of efficient markets and efficient government to achieve rapid, inclusive and sustainable growth of underdeveloped economies^[12]. Under the current New Normal, our country relies on learning and imitating to narrow down the technological gap with the developed countries, through which the "late-development advantage" is getting weaker^[17]. The new changes on the supply side are bound to require the state to attach importance to originality and further enhance the support for basic scientific research and higher education. Straightening out the incentive mechanism oriented by increasing the value of knowledge is also required.

4.3 Working on Supply and Demand Side Simultaneously

It is important to note that this paper only provides analysis on supply side, but this does not mean that the demand side is not important. Supply and demand

are not us and them issue, being two conditions and mutual transformation. Both should be grasped, but the primary and secondary order should be clear[15]. In fact, the understanding of the supply-side structural reform at the national level is that while expanding aggregate demand moderately, efforts should be made to strengthen the supply-side structural reform so that new demand can trigger new supply and new supply will create new demand to achieve economic development through mutual promotion. To deal with the new normal of China's economy, it is necessary to increase the quality demand and the quality supply at the same time, and the growth of the quality demand must precede the quality supply[17]. Therefore, it is important to narrow the gap between the rich and the poor in order to enhance the overall marginal propensity to consume, develop cross-border electronic commerce, implement departure tax refund scheme, levy tax on shopping overseas and set up additional duty-free shops. These are all useful complements to the flow of overseas shopping to wealthier Chinese.

(This paper was given as key report at the 2016 annual meeting of the National College Price Theory and Teaching Research Association of China Price Association. I give my gratitude to the participants for their comments. Thanks to Hebei University of Business and Economics for the funds for high-level talents and scientific research and to Industrial Economics of the Credit Office for the funding support of key subjects.)

References

- [1] Bai Kai. Consumption Alienation of Outbound Tourism: Phenomena, Causes and Solutions [J]. *Tourism Tribune*, 2011(8): 5-6.
- [2] Zhou Qing. High Consumption behaviors and causes of Chinese Outbound Tourists [J]. *Consumer Economics*, 2013(1): 75-78.
- [3] Dai Xuefeng. A Preliminary Study on the Advanced Development of China's Outbound Tourism Based on International Comparison [J]. *Tourism Tribune*, 2012(9): 9-16.
- [4] World Tourism Cities Federation, Ipsos. An Investigation Report on the Outbound (Urban) Tourism Consumption Market of Chinese Citizens[R]. Beijing: WICF, 2014.
- [5] Xinhuanet. When To Go Home If "Shop Constantly"? [N/OL] *Economic Newsweek*, 2016-02-22 (B03). <http://www.jjxwzk.org/home/show/?pid=4761>.
- [6] CCTV. Why Do There Exist Such a Great Price Difference Between Shopping at Home and Abroad? [EB/OL]. (2013 - 02 - 17) [2017 - 09 - 01]. <http://news.cntv.cn/2013/02/17/VIDE1361100793549244.shtml>.
- [7] Zhao Xin, Chen Run. Thoughts on the Rapid Growth of Chinese Residents' Outbound Consumption [J]. *Price Theories and Practice*, 2016(7): 71-74.
- [8] Li Jianping, Ann George. Principles of price [M]. Beijing: China Renmin University Press, 2015.
- [9] Gan Li, Yin Zhichao, Tan Jijun. Report on Financial Investigation of Chinese Household 2014[M]. Chengdu: Southwestern University of Finance and Economics Press, 2015.
- [10] Dai Xiang. International Competitiveness of Chinese Manufacturing Industry-Measurement based on Value-Added Trade [J]. *China Industrial Industries*: 2015(1): 78-88.
- [11] Pu Yongjian. A Brief Course on Game Theory [M]. Beijing: China Renmin University Press, 2013.
- [12] Lin Yifu. New structural economics[M]. Beijing: Peking University Press, 2014.
- [13] KREPS D, MILGROM P, ROBERTS J, et al. Rational cooperation in the finitely repeated prisoners' dilemma [J]. *Journal of economic theory*, 1993, 27(2): 245-252.
- [14] AXELROD R. The emergence of corporation among egoists[J]. *American political science review*, 1981, 75(2): 124-152
- [15] Gong Wen, Xu Zhifeng, Wang Ke. Seven Questions About Supply-Side Structural Reform (Authoritative Interview) [N]. *People's Daily*, 2016-01-04(02).
- [16] Zhang Weiyang. Game and Society[M]. Beijing: Peking University Press, 2013.
- [17] Su Jian. New Supply Economics: Theory and Practice[M]. Beijing: China Renmin University Press, 2016.