

## Change Characteristics and Factors of Transnational Consumer Goods in China: Taking Muji as an Example

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**Keywords:** Muji, GIS, Change Characteristics, Related Factors

**Abstract:** Taking Muji, a transnational consumer brand, as an example, this paper interprets its changing characteristics and factors through standard deviation ellipse, correlation analysis and network text analysis based on the growth data of its number of stores in domestic cities from 2005 to 2017. It is found that the overall pattern in China is formed with the law of "agglomeration in eastern area- decentralization in western area- incremental decrease from east to west". The allocation of shops is characterized with the trend of periodical change from the direction of "Northeast to Southwest". The shops are evenly distributed. In addition, its change characteristics are mainly related to economy, population distribution, degree of opening to the outside world, brand culture and other factors.

### Introduction

Since December 11, 2004, China has gradually lifted the restrictions on multinational enterprises to invest in China, and Wal-mart, McDonald's and other consumer brands have entered the country [1]. Muji, founded in Japan, has more than 220 stores in China since it opened in 2005. As of December 2017, Muji has about 450 companies outside Japan, and China accounts for nearly half of its overseas market share [2]. With the upgrading of the market and consumption, the change of its scale indirectly reflects the life consumption culture advocated by it. When consumers choose to buy something, they not only consume the economic value, but also consume the reflected culture and brand symbol. It can be seen that this scale change is not only an economic phenomenon, but also a social and cultural phenomenon, with a certain process of cultural production and consumption [3].

The spatial change law of transnational brands is associated with the theory of economic and cultural diffusion [4]. The location selection and scale change of enterprises should be made with the consideration in the economy and population as well as residents' consumption and culture. Seenivasan S, Jeon H J and others have conducted empirical studies on Wal-Mart and other transnational consumer brands [5-6], which is not only a diachronic process, but also involves geographical projection [7]. In the early stage, quantitative data survey and modeling were used to study the scale change of transnational consumer brands [8]. With the continuous expansion of scale, GIS method has also been applied to the research of transnational consumer brands [9][10]. However, it is mostly based on enterprise retail and chain stores, and there are few interpretations of brand culture and other factors reflected by the economy. Transnational consumer brands focus on integrating local cultures in their development to build a brand image acceptable to consumers [11]. Young consumers have a value system that co-exists with localization and globalization, which reflects the dual identity of globalization and locality [12]. Therefore, regional economic and cultural differences and the comparative advantages of urban economy, population and culture should be taken into consideration for the change of brand scale. In addition, the existing research made by Muji focuses on the marketing and function of the products themselves, while the research on spatial variation characteristics is less involved. This study takes Muji as an example and interprets the changing characteristics and factors of the layout of transnational consumer goods in

China by means of GIS and other methods based on the change data of its domestic stores from 2005 to 2017.

## **1. Data Sources and Methods Introduction**

By sorting out the data of the stores of Muji in China during 2005-2017, and inquiring the cities involved to conduct statistical classification. The GDP and permanent population of city with stores of Muji are derived from China Statistical Yearbook 2005-2017 and the social and economic statistical bulletin of each city. Qualitative comment data are derived from official websites such as Dianping.com. The methods used include standard deviation ellipse, correlation analysis and network text analysis.

## **2. Characteristics of Change**

### **2.1 Status Quo of Stores**

Currently, there are 220 Muji stores in China (by the end of December 2017). The overall distribution pattern is eastern agglomeration, western dispersion and incremental decrease from east to west: more than 60% of the stores are distributed in coastal areas, presenting an unbalanced state. With the development of the market, the number of its stores increased by less than 10 in the five years from 2005 to 2010. From 2011 to 2017, the number of stores increased linearly to more than 200, among which the store growth rate from 2011 to 2015 was the fastest and reached its peak. In addition, the number of cities with Muji stores increased from 1 to 17 in the 6 years from 2005 to 2011, 36 cities were added in 2012. By December 2017, there were 53 cities with Muji stores.

### **2.2 Overall Trend**

#### **2.2.1 Business layout shifted to Southwest Area on the whole with Part to Northwest**

The change of center of gravity of standard deviation ellipse can reflect the shift of focus in the spatial distribution of stores. From 2009 to 2017, the change of distribution of stores was significant with the general trend of shifting from Northeast to Southwest area (Figure 1). In 2010, 2011, 2012 and 2014, the distribution of stores was mainly conducted in Southwest area with great efforts. In 2013, the distribution of stores in some areas shifted toward eastern area. The business layout for Muji stores remained unchanged in 2015 and 2014. In 2016 and 2017, the distribution was conducted in Northern area.

#### **2.2.2 The Direction is Periodically Changed the Dispersion Degree Tends to be Balanced**

Standard elliptic flattening represents the directivity and dispersion degree of store change [13]. The oblateness became smaller in 2009-2011, larger in 2011-2013, and gradually smaller in 2013-2017 (Table 1). The intensity of change of stores in direction shifted from strong to weak, from weak to strong, and then from strong to weak. From the first store in Shanghai to the second store in Beijing in 2008, the directional change of stores reached the highest level in 2009, and then stores were opened between Beijing and Shanghai in the corridor, the direction and dispersion degree decreased. From 2011 to 2013, the intensity of directional change gradually increased in the central and southwest regions. Later, the dispersion degree of its distribution shifted from centralization to equilibrium.

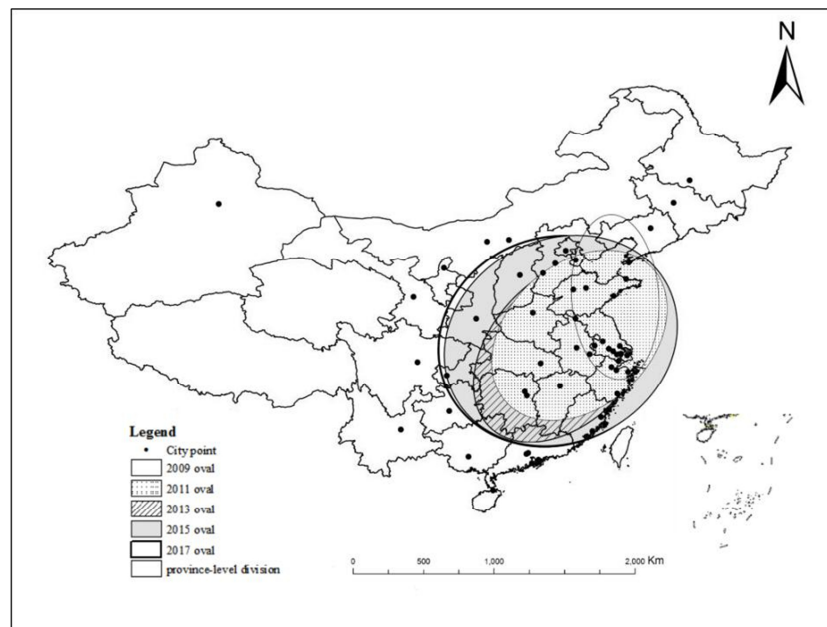
#### **2.2.3 The Axis Tilts from Northeast to Southwest**

The rotation angle of the axis of the spatial distribution of stores fluctuates strongly. The rotation angle decreases sharply from 176.23° (NW) in 2009 to 47.39° (NW) in 2011 and then to 43.46° (NW) in 2013. In 2015, it increased to 63.08° (N by E), and then to 68.61° (N by E) in 2017 (Table

1).The distribution of stores was made with focus on the change from North to South and then East to West with extension from coastal areas to central and Southwest, while the stores were less distributed in Northeast and Northwest areas, which basically coincides with the trend of China's economic development speed changing from coastal to inland.

**Table 1.** Variation parameters of standard deviation ellipse

	2009	2011	2013	2015	2017
Rotating angle	176.23	47.39	43.46	63.08	68.61
Oblateness	0.47	0.28	0.32	0.16	0.11
Central latitude (North latitude)	36.07	32.87	31.64	32.44	32.39
Central longitude (East longitude)	120.47	117.51	116.21	115.96	115.39



**Figure 1.** Variation chart of store standard deviation ellipse

## 4. Related Factors

### 4.1 Economic Development Level

Regional economy affects the consumption ability of residents and the radiation range and value of Muji. Muji is aimed at the middle income group, and it is in great demand in the more developed areas. Through Pearson's test to assess the correlation between the number of stores and GDP, the significance level was 0.01 from 2009 to 2017, indicating a strong correlation between the number of stores and the degree of regional economic development. The coastal area has a high level of economic development, which has a significant impact on its layout and is the main concentration area of stores. The economy of central and western cities is weaker than that of coastal areas, and Muji stores were less distributed at the late stage.

### 4.2 Population Distribution

Transnational consumer goods are mainly purchased by urban population, whose distribution is significantly correlated with permanent resident. Coastal areas are places where young and middle-aged people with certain consumption ability live with fast development of stores. In the central and western regions, except for the provincial capitals with large population, the development speed of other cities is relatively slow. According to the correlation analysis, the correlation between the number of people receiving higher education in each city and the number of stores is significant at the level of 0.01 at 4 time points. Muji is constantly attracting consumer groups with localization and globalization awareness, and young people become the potential consumers of Muji, which affects the distribution of stores.

### 4.3 The Level of Opening to the Outside World

The common indicator to measure the degree of opening to the outside world is the ratio of foreign trade, which reflects the degree of a region's participation in international trade and transnational marketing [14]. By obtaining the foreign trade rate of cities with stores and analyzing the correlation with the number of stores, it was proved that the degree of opening to the outside world was not significant before 2011. After 2011, the effect of the degree of opening to the outside world on the change of stores became more and more obvious. With the consumption upgrading and transformation, the change factors of scale of Muji gradually changed from single factors to comprehensive factors. Since 2013, the number of stores in Shenzhen, Chongqing and other cities had increased and the stores once distributed in eastern and western areas shifted towards provincial capitals with a higher degree of openness to the outside world.

### 4.4 Brand Culture

By grasping and interpreting the core comments on the Internet, Muji's pursuit of minimalism is not simply plain, but another form of "luxury". A wide variety of commodities fill people's lives. Muji pursues quality and comfort and builds its own brand image to consumers to satisfy customers' pursuit of brand and life. Muji recombines local culture with commodities, making it easier for young consumer groups to identify with the lifestyle they advocate, and even realize brand identification through subject identification. Therefore, Beijing, Shanghai, Chengdu and other cities with better integration of local culture and globalization become the best choice for their layout. The green design of Muji products is conducive to sustainable development. Consumers are more supportive of environment-friendly brands. The environment-friendly Muji products are in line with the current concept, which promotes the rapid establishment of more stores.

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