
Research-in-Progress

Huifang Li  
School of Management, University of Science and Technology of China  
96 Road Jinzhai, Baohe District, Hefei, China  
huifangli3@gmail.com

Yulin Fang  
Dept. of Information Systems, City University of Hong Kong  
83 Tat Chee Avenue Road, Kowloon, Hong Kong SAR  
ylfang@cityu.edu.hk

Youwei Wang  
School of Management, Fudan University  
220 Handan Road, Yangpu, Shanghai, China  
ywwang@fudan.edu.cn

Kai H. Lim  
Dept. of Information Systems, City University of Hong Kong  
83 Tat Chee Avenue Road, Kowloon, Hong Kong SAR  
iskl@cityu.edu.hk

Abstract

A fundamental question in e-commerce field is how to explain and predict sales performance of e-marketplace sellers. We draw on competitive repertoire perspective and strategic group theory to understand the interaction between competitive repertoire and strategic group membership in influencing sales performance over time. To empirically test these relationships, we will collect a longitudinal dataset consisting of seller-month observations on Taobao. We plan to analyze the data using Latent Growth Modeling and Latent Class Modeling. This study contributes to research in three ways. First, it develops and tests the dynamic relationship between competitive repertoire and performance by focusing on the “dynamic” process rather than “static” characteristics. Second, it extends strategic group theory, which has historically been applied to traditional industrial environment, to the e-marketplace. Third, it responds to Chen and Miller’s (2012) call for study on bridging macro strategy perspective and micro action perspective in strategic management field.

Key words: Competitive repertoire, strategic group, performance, e-marketplace

Introduction

Both researchers and practitioners are keen to be able to predict the sales performance of sellers in the crowded e-marketplace. Using several theoretical lenses, previous studies have identified and examined
the influence of several online functions on sales performance, including bundling (Elberse 2010; Hu et al. 2012), buy-it-now options (Gallien and Gupta 2007; Li et al. 2009; Walia and Zahedi 2013), website design characteristics (Bagchi and Cheema 2013), online in-store displays (Breugelmans and Campo 2011), and money-back guarantees (Li et al. 2009; Ou and Chan 2014). All extant studies have focused on the individual influence of these online functions on sales performance; none have considered them to be a repertoire of online functions that sellers should leverage, except for Li et al. (2012). These authors introduced the competitive repertoire perspective to the e-marketplace and investigated the influence of online functions on sales performance by focusing on three structural characteristics (volume, complexity, and heterogeneity). However, it would be more useful for sellers to be informed by a detailed analysis of the dynamic patterns of competitive repertoire and its impact on sales performance over time, rather than just a simple and static characterization. Thus, the first objective of this study is to investigate the dynamic relationship between competitive repertoire and sales performance of e-marketplace sellers over time.

The mobility barrier, which refers to structural factors that protect successful firms from invasions by adjacent rivals and is associated with seller strategic group (Lee et al. 2002), may also influence sales performance. Specifically, rivals in the highly transparent and competitive e-marketplace are more likely to observe and replicate a seller’s competitive strategies, than is the case in the traditional offline environment. Sellers in the same industry may be categorized according to their scope of product and resource commitment. The strategic group theory literature defines all sellers with similar strategies across these two dimensions as a strategic group (Ferguson et al. 2000; Short et al. 2007). Previous studies have examined performance differences among strategic groups in various industries; however, we do not know how the change trajectories of seller performance are consistent or different among strategic groups over time. Hence, the second objective of this study is to examine the differences in sales performance change trajectories of e-marketplace sellers over time among strategic groups.

Furthermore, both competitive repertoire (Chen 1996; Chen and Miller 1994; Ferrier 2001; Ferrier and Lee 2002; Ferrier and Lyon 2004) and strategic group (Hatten and Hatten 1987; Leask and Parker 2007; McGee and Thomas 1986; Osborne et al. 2001; Smith et al. 1997) have been accepted as important units of analysis for understanding competitive strategy. The former, representing a micro perspective, focuses on the seller-level influences of competitive actions (Chen and Miller 2012); the latter, representing a macro perspective, considers the group-level influences of strategic group (Short et al. 2007). However, these units do not operate independently; in contrast, competitive repertoire and strategic group are interdependent, interacting with each other to affect sales performance. This interaction effect has rarely been studied. Thus, the third objective of this study is to examine the interaction between competitive repertoire and strategic group over time, in response to Chen and Miller’s (2012) call for researchers to study the bridge of micro- and macro- perspectives in strategic management.

To address these questions, we developed a research model that draws on competitive repertoire perspective and strategic group theory. We plan to test the model with a longitudinal dataset consisting of seller-month observations of sellers in different industries over twelve months. Our study contributes to research in three ways. First, it develops and tests hypotheses on the relationship between competitive repertoire and performance by focusing on the “dynamic” process rather than “static” characteristics. Second, it extends strategic group theory, which has been widely used in the traditional offline environment, to the e-marketplace context. Third, it responds to Chen and Miller’s (2012) call for more work that bridges the macro strategy perspective and the micro action perspective, in the field of strategic management. The paper begins with a brief literature review of the competitive repertoire perspective and strategic group theory, followed by hypotheses development, and then a description of the data collection and analysis strategy.

**Theory and Hypotheses**

There are two parts to the theoretical foundations of the present study: the competitive repertoire perspective and the strategic group theory. Figure 1 shows the research framework of this study.
Competitive Repertoire Perspective

Competitive repertoire is an important research stream in the competitive dynamics literature; it consists of studies of “inter-firm rivalry based on specific competitive actions and reactions, their strategic and organizational contexts, and their drivers and consequences (Chen and Miller 2012, pp.4)”. The most distinctive feature of the competitive repertoire perspective is that it focuses on the entire set of a firm’s competitive actions in a given period (hereafter named competitive repertoire). This approach allows researchers to richly and elaborately characterize competitive strategy in a concrete way (Chen and Miller 2012). This perspective conceptualizes strategy as “a pattern in the stream of decisions (Chen and Miller 2012, pp.15)” and in this way it differs from most other conceptualizations of strategy such as Porter (1979)’s generic strategies of low-cost or differentiation.

The competitive repertoire perspective suggests that there are three structural characteristics influencing firm performance; namely, volume of competitive repertoire, complexity of competitive repertoire, and heterogeneity of competitive repertoire (Chen 1996; Chen and Miller 1994; Ferrier 2001; Ferrier and Lee 2002; Ferrier and Lyon 2004). Volume of Competitive Repertoire is the total number of actions carried out by a firm in a given period (Smith et al. 2001). Complexity of Competitive Repertoire refers to “the extent to which a given uninterrupted series of competitive action carried out by a firm is comprised of a wide (versus narrow) range of actions of different types (Smith et al. 2001, pp.75)”. Heterogeneity of Competitive Repertoire denotes “the extent to which a given uninterrupted series of competitive actions carried out by a firm deviates from that of a matched rival (Smith et al. 2001, pp.75)”.

The relationships between competitive repertoire and firm performance have attracted much research attention. For instance, Ferrier et al. (1999) investigated the influences of competitive repertoire volume, competitive repertoire simplicity (the antonym of complexity), and competitive repertoire dissimilarity (the synonym of heterogeneity) on firm performance in 40 traditional industries over a seven-year period. Ferrier and Lee (2002) proposed U-shape relationships between strategic complexity and firm performance and between strategic heterogeneity and firm performance in 11 industries over an eight-year period. Gnyawali et al. (2010) empirically examined the impacts of competitive repertoire volume and competitive repertoire complexity on the performance of social networking firms (e.g., page view) over a three-year period. The extant studies use longitudinal datasets; however, the hypotheses are presented and examined in a static manner, which does not specify the change pattern of the relationships over time. Practically, firms need a detailed analysis of the dynamic patterns of competitive repertoire and its impact on firm performance over time, not just simple and static characterizations (Chen and Miller 2012).

The Dynamic Relationship between Competitive Repertoire and Sales Performance in the E-marketplace

In the crowded and competitive e-marketplace, sellers must spare no effort to boost their sales performance. One option is to use the functions that are embedded in or supported by the transaction platform, known as platform-based functions. These include price-related functions that offer price cuts and sales incentives; marketing-related functions that focus on advertising and promotion; paymen-
related functions associated with the payment channel; and service- and operation-related functions that emphasize distribution systems and aftersales services. Drawing on the competitive repertoire literature, we conceptualize e-marketplace sellers’ usage of these platform-based functions as their competitive actions. Consequently, we define the competitive repertoire of e-marketplace sellers as the entire set of such platform-based functions deployed by a seller in a given time period.

This study uses Latent Growth Modeling, which is a powerful method for modeling of the process of change over time as well as building longitudinal theories (Zheng et al. 2014), to disentangle the static and dynamic components of variables measured at several time points (e.g., six time points). Specifically, Figure 2 illustrates nine hypotheses about the dynamic relationships between three competitive repertoire structural characteristics (volume, complexity, and heterogeneity) and sales performance. The four variables of interest in this study are all identified by two latent variables: namely, intercept—the value of the variable at the beginning of the study, and slope—the rate of increase or decrease on the variable over the period of the study (Bollen and Curran 2006). In the next sections, we develop our hypotheses regarding how the initial status and change of three structural characteristics relate to the initial status and change of sales performance. In so doing, we rely on the competitive repertoire perspective in which performance is determined by the temporal advantage gained from deploying a voluminous, complex, and heterogeneous repertoire of competitive actions (Chen 1996; Chen and Miller 1994; Ferrier 2001; Ferrier and Lee 2002; Ferrier and Lyon 2004).

First, the competitive repertoire perspective (D’Aveni 1994; Ferrier et al. 1999; Gnyawali et al. 2010; Young et al. 1996) suggests that a large competitive repertoire gives sellers a better chance of perusing fleeting opportunities ahead of their rivals, thereby gaining and maintaining a temporal competitive advantage. Hence, we propose that a seller’s initial level of competitive repertoire volume is positively associated with the initial level of sales performance. Second, although adopting a large volume of competitive actions at the beginning of the competition can give a seller a temporal competitive advantage, this advantage dilutes over time. This weakening occurs because deploying a large volume of competitive actions at the beginning of the competition can give a seller a temporal competitive advantage, this advantage dilutes over time. This weakening occurs because deploying a large volume of competitive actions can intensify competition by immediately increasing the number of actions taken by rivals, which negatively affects the focal seller’s performance (Derfus et al. 2008). Thus, we argue that the seller that initially has a larger competitive repertoire will exhibit a lower rate of change in sales performance over time. Third, we further argue that the rate of increase in competitive repertoire volume is negatively associated with the rate of increase in sales performance, for two reasons. On the one hand, the more competitive actions a seller undertakes, the more aggressive rivals perceive it to be (Ferrier and Lee 2002), provoking them to react and thus slow down the increase in the focal seller’s sales performance. On the other hand, consumers, who are the capture target of sellers, will more or less benefit from these competitive actions (e.g., low prices, high quality service, etc.). Thus, competitive actions directly or indirectly impact consumer purchase intentions by providing consumers with some benefits. But with the sustained increase of the number of competitive actions, its marginal effect would decrease as it has become more and more difficult to satisfy the emerging expectations of consumers. To summarize, we propose that:

- **H1a**: The initial level of competitive repertoire volume is positively associated with the initial level of sales performance.
- **H1b**: The greater the initial level of competitive repertoire volume, the less the rate of increase in sales performance over time.
**H1c:** The greater the rate of increase in competitive repertoire volume, the less the rate of increase in sales performance over time.

The competitive repertoire perspective (Chen 1996; Eisenhardt and Martin 2000; Ferrier et al. 1999; Gnyawali et al. 2010; Zhang et al. 2011) suggests that the more complex the set of competitive actions undertaken by a focal seller, the more difficult it is for rivals to understand and respond. Thus, a complex set of competitive actions usually buys the focal seller a temporal advantage in attracting customers and persuading them to buy. Hence, we first propose that the initial level of competitive repertoire complexity is positively related with the initial level of sales performance. In addition, the e-marketplace is a relatively transparent environment in which all competitive actions can be observed by rivals (Granados et al. 2010). Although it might initially be difficult for rivals to understand and respond to a focal seller’s actions (Ferrier and Lyon 2004), over time they will gradually develop a response strategy. As a result, the temporal advantage gained from adopting a complex repertoire of competitive actions will attenuate over time. Hence, we propose that the greater the initial level of competitive repertoire complexity, the lower the rate of increase in sales performance over time. Furthermore, we argue that the rate of increase in competitive repertoire complexity will be positively associated with the rate of increase in sales performance. Specifically, a seller which adopts a complex repertoire of competitive actions will be perceived as more resourceful and capable than its competitors because it can meet the diverse needs of customers in multiple ways, thus gaining temporal advantage (Gnyawali et al. 2010). A more complex competitive repertoire benefits a broader range of consumers, thus sustaining the temporal advantage. In sum, we propose that:

**H2a:** The initial level of competitive repertoire complexity is positively associated with the initial level of sales performance.

**H2b:** The greater the initial level of competitive repertoire complexity, the less the rate of increase in sales performance over time.

**H2c:** The greater the rate of increase in competitive repertoire complexity, the greater the rate of increase in sales performance over time.

According to the competitive repertoire perspective (Chen and Miller 1994; Chen et al. 1992; D’Aveni 1994; Ndofor et al. 2011; Prahalad and Hamel 1990), a seller, which adopts competitive actions that deviate from its rivals, gains a temporal competitive advantage by surprising rivals and developing distinctive appeals to consumers. Thus, we argue that a seller’s initial level of competitive repertoire heterogeneity is positively associated with the initial level of sales performance. Rivals will quickly notice the seller that adopts a heterogeneous repertoire of competitive actions (e.g., new platform-based functions) and perceive it as an aggressive attempt to break away from the norms of everyday competition (Ferrier et al. 1999; Miller and Chen 1996). However, rivals may not be able to quickly respond to these actions because they are difficult to replicate without appropriate resources. So, the focal seller’s competitive advantage might sustain over time. Hence, we propose that a seller with a high initial level of competitive repertoire heterogeneity will exhibit a high rate of increase in sales performance over time. We also argue that the rate of increase in competitive repertoire heterogeneity is positively associated with the rate of increase in sales performance over time. Specifically, when a focal seller adopts more competitive actions that differ from its rivals, these rivals will perceive this as an aggressive attempt to break away from the norms of everyday competition and most likely avoid its sharpness. On the other hand, the ever-increasing new actions distinguish the focal seller from its rivals and enable it to deliver distinctive value to consumers. The above discussion leads to the following hypothesis:

**H3a:** The initial level of competitive repertoire heterogeneity is positively associated with the initial level of sales performance.

**H3b:** The greater the initial level of competitive repertoire heterogeneity, the greater the rate of increase in sales performance over time.

**H3c:** The greater the rate of increase in competitive repertoire heterogeneity, the greater the rate of increase in sales performance over time.

**Strategic Group Theory**

Strategic group, commonly defined as “a group of firms in the same industry following the same or similar strategies (Porter 1980, pp.129)”, has received increasing research attention in both the strategic management literature and industrial organization economics literature since Hunt first introduced the
term in 1972 (Hunt (1972). A firm’s strategies are identified by two categories of variables: scope of operation and resource commitment (Ferguson et al. 2000; Short et al. 2007). Scope of operation captures variables that represent the extent to which the products that a firm sells are offered by the industry (e.g., product scope, product diversity, firm size, firm age, etc.). Resource commitment includes variables that denote a firm’s deployment of resources to obtain and maintain competitive advantage (e.g., distribution methods, production methods, financial strategies, and investment strategies, etc.). Strategic group theory has flourished over the past decades and has been applied to many industries. However, most of the extant studies have concentrated on the offline research context. There has been little work to date on the e-marketplace, where strategic group analysis is also important because sellers’ understanding of groups may serve as a strategic reference point and shape their interpretations of their competitive environment. In addition, prior studies on strategic group have been biased toward large public companies because data about such companies are much more accessible; for example, via annual financial reports. Thus, we extend strategic group theory to the e-marketplace and expect that our findings will enrich this theory.

Porter (1979) attributes the emergence of strategic group to firms making systematically different decisions in response to the strategic initiatives of competitors. Similarly, it is commonly observed that e-marketplace sellers in the same industry often differ from one another along a variety of dimensions, such as product scope, store age, store size, and product/service/distribution quality. These variations reflect differences in sellers’ competitive strategies in that industry. Here, competitive strategies refer to e-marketplace sellers’ strategic decisions about their scope of operations and resource commitments, rather than their specific competitive actions as per the competitive repertoire literature. Hence, an industry in the e-marketplace can be viewed as comprising groups of sellers, where each group consists of sellers choosing similar competitive strategies.

A fundamental question in the strategic group literature is whether there are performance differences among strategic groups, but extant studies have produced inconsistent findings. For instance, Fiegenbaum and Thomas (1990) found that there were differences on some performance measures among strategic groups in the insurance industry, while Houthoofd et al. (1997) found no significant performance differences among strategic groups in the Belgian brewing industry. More recently, Athanassopoulos (2003) found performance differences both between and within strategic groups in the UK grocery industry. These inconsistent results motivate us to investigate sales performance differences within and between strategic groups in an industry in the context of the e-marketplace and the potential firm-level contingent factors that might explain these inconsistent findings.

Strategic group theory suggests that firms within the same strategic group adopt similar strategies (e.g., product diversity, service quality, product quality); thus, they generally react the same way to the external environment and in turn achieve similar performance. In contrast, firms belonging to different strategic groups usually take different actions and achieve different performance levels (Leask and Parker 2007). In the e-marketplace, tens of thousands of sellers compete for consumer attention in the same industry. The transparent competitive environment allows sellers to access and process information on their rivals and position themselves accordingly. As a result, it is easier for e-marketplace sellers to recognize their strategic group membership when compared to firms in the traditional offline environment. In the absence of clear rules of competitive behavior in e-marketplace, these sellers would spontaneously use this membership as a strategic reference point to interpret and react to the competitive environment (Short et al. 2007). Hence, sellers in the same strategic groups under the influence of similar strategies resemble each other in the change trajectory of sales performance, while the underlying difference of sellers in different groups drives them to react to the environment in different patterns and have their own trajectory of sales performance over time. Accordingly, we propose that:

\[ H4a: \text{Sellers belonging to the same strategic group realize a similar change of pattern in sales performance (initial level and rate of change) over time.} \]

\[ H4b: \text{Differences exist among different strategic groups in realizing sales performance (initial level and rate of change) over time.} \]

The Interaction between Competitive Repertoire and Strategic Groups

The stability of strategic group structure has attracted much research attention in the past three decades; however, extant research has tended to overlook the contingencies under which group structure changes.
In this study, we focus on the firm-level factor (i.e., competitive repertoire) by integrating the competitive repertoire perspective and strategic group theory based on their shared focus—competition—but at different levels (Chen and Miller 2012). Specifically, the former treats firms as heterogeneous entities which decide to undertake different repertoires of competitive actions to enhance their performance; thus, it focuses on the firm-level competitive action influences (Chen and Miller 2012). In contrast, the latter brings in an intermediate-level concept—strategic group—and divides an industry into different groups comprising firms with similar strategies. Strategic group theory suggests that firms’ understanding of groups may serve as a strategic reference point and shape their interpretations of the competitive environment. Thus, it considers the group-level influences of strategic group membership (Short et al. 2007). Nevertheless, these two levels of strategies are interdependent, especially when considering the dynamics of competitive repertoire and strategic group over time. Thus, the present study attempts to interpret the interactions between competitive repertoire and strategic group. More importantly, the competitive repertoire perspective operates at a more fine-grained, specific, and micro level than strategic group theory; thus, integrating these two perspectives responds to Chen and Miller (2012) call for study to bridge the micro-macro perspectives. Specifically, we argue that competitive repertoire and strategic group dynamically interact with each other, along the way influencing sales performance over time.

On the one hand, the competitive repertoire—sales performance relationship is shaped by strategic group membership over time. This is because, in addition to guiding macro strategy, strategic group membership is also a reference point for the seller to position itself in the competitive environment and efficiently change its specific competitive actions (Short et al. 2007). Specifically, sellers can quickly conform to group norms through imitation or tacit collusion and accurately acquire a competitive repertoire that best matches their scope of operation and resource commitment. This optimized competitive repertoire results in better sales performance over time. On the other hand, the sales performance differences among strategic groups are contingent on the competitive repertoire because they impact the mobility barriers among seller strategic groups. In the strategic group literature, mobility barrier is an inherent part of the construct of “strategic group” (Lee et al. 2002). In the e-marketplace, there are three main mobility barriers, which deter movements: 1) from low product diversity to high product diversity; 2) from small-scale size to large-scale size; and 3) from low reputation to high reputation for product/service/distribution. The competitive repertoire a seller adopts can reduce these mobility barriers and simultaneously influence sales performance. First, the increased sales performance caused by competitive repertoire over time will in turn enable the focal seller to launch new products and increase its product diversity (Smith et al. 2001). Second, deploying a voluminous, complex, and heterogeneous competitive repertoire will help a seller attract consumers and increase transaction amounts (Chen and Miller 2012) and so gradually grow in size (measured by cumulative transaction amounts). Third, such a repertoire will also help a seller better satisfy consumer needs and increase customer satisfaction. Hence, the competitive repertoire will weaken the difference in the change trajectory of sales performance between strategic groups over time. To summarize, we propose that:

\[ H_{5a}: \text{The relationship between competitive repertoire and sales performance is positively moderated by strategic group membership over time} \]

\[ H_{5b}: \text{The competitive repertoire will weaken the difference in the change trajectory of sales performance between strategic groups over time}. \]

**Methodology**

**Data Collection.** To test the research model, we will collect a longitudinal dataset consisting of seller-month observations of sellers in different industries over a period of 12 months on Taobao. It is the biggest e-marketplace in China and the dominant retail platform in Asia; it provides its e-marketplace sellers with a variety of online functions. Table 1 shows the measurements of variables for hypotheses testing.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sale Performance</td>
<td>Actual average transaction revenue per day within the past 28 days.</td>
</tr>
<tr>
<td>Competitive</td>
<td>The sum of the number of all actions of a seller in the past 28 days (Smith et al.)</td>
</tr>
</tbody>
</table>
Competitive Repertoire Complexity: $1 - \sum_{\alpha} \left( \frac{N_{\alpha}}{N_T} \right)^2$, where $N_{\alpha}$ represents the number of actions in the $\alpha$th action category, $N_T$ is the total number of actions across all action categories discussed above, and $N_{\alpha}/N_T$ represents the proportion of actions in the $\alpha$th action category (Ferrier et al. 1999).

Competitive Repertoire Heterogeneity: $s_t(x_i, \bar{x}) = \frac{1}{4} \sum_{j}^{} \left( (x_{i1} - x_{j1})^2 + (x_{i2} - x_{j2})^2 + \ldots + (x_{ij} - x_{ij})^2 \right)$, where $x_{ij}$ represents the number of actions in each action type $j$ that were undertaken by a seller $i$ in the past 28 days, $i=1,2,3,\ldots, N$; $\bar{x}_{ij}=[x_{i1}, x_{i2}, \ldots, x_{ij}]$ (Ferrier et al. 1999).

Strategic Group Membership: Category variable; denotes the group a seller belongs to and is defined on scope of operation and resource commitment at each time point in a given industry.

Data Analysis. The potential issues of serial correlation (Bhargava et al. 1982) and heteroscedasticity (Baltagi and Li 2006) are the two common challenges in panel data analysis (Jabr and Zheng 2014). First, we will use Wooldridge (2002) test the null hypothesis of which is there is no first-order serial correlation to check serial correlation. Second, we will perform Breusch-Pagan test where the null hypothesis is that the errors are homoscedastic to check heteroskedasticity (Breusch and Pagan 1979). In addition, we will ensure that multicollinearity is not a major concern in this study based on two criterions: (1) the highest correlation coefficient is below the critical value 0.7 (Gnyawali et al. 2010); (2) the highest Variance Inflation Factor (VIF) is below 10 (Wael and Zheng 2014).

The research model will be tested in three steps: First, we will use Latent Growth Modeling (Bollen and Curran 2006; Qureshi and Fang 2011; Serva et al. 2011; Zheng et al. 2014), to examine the trajectories of sales performance and the three structural characteristics of competitive repertoire and the relationships between their intercept and slope. Second, we will run Latent Class Modeling (Antonio et al. 2009; Pearce and Osmond 1999; Vermunt et al. 2008) based on the variables in Table 2 to identify strategic groups and examine systematic differences in sales performance among e-marketplace sellers in the same industry. Third, we will deploy Growth Mixture Modeling (Jung and Wickrama 2008; Mo and Bodner 2007; Petras and Masyn 2009; Qureshi and Fang 2011) to test the interactions between competitive repertoire and strategic group membership in influencing sales performance.

### Table 2. Variables to Identify Strategic Groups

<table>
<thead>
<tr>
<th>Group Variables</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scope of Operation</strong></td>
<td>Number of the types of products.</td>
</tr>
<tr>
<td>Product Diversity</td>
<td>Main products.</td>
</tr>
<tr>
<td>Product Scope</td>
<td>Number of months since the store was opened.</td>
</tr>
<tr>
<td>Store Age</td>
<td>Scale of the store measured by volume of cumulative transaction amounts.</td>
</tr>
<tr>
<td>Store Size</td>
<td>Detailed seller ratings with regard to concerns about product quality at the end of each month.</td>
</tr>
<tr>
<td>Resource Deployment</td>
<td>Detailed seller ratings with regard to concerns about distribution at the end of each month.</td>
</tr>
<tr>
<td>Detailed Seller Rating on Product Quality</td>
<td>Detailed seller ratings with regard to concerns about service at the end of each month.</td>
</tr>
<tr>
<td>Detailed Seller Rating on Distribution</td>
<td>Detailed seller Rating on Service</td>
</tr>
</tbody>
</table>

Conclusion

This work makes three important theoretical contributions, as described in the Introduction. In addition, our use of Latent Growth Modeling to track the change trajectories of variables of interest will add to IS studies using this approach, as suggested by Zheng et al. (2014). We use Latent Class Modeling in Mplus 7 (Muthen 2004) to identify strategic groups in the e-marketplace and this will contribute to the strategic group literature. We expect that our upcoming data analysis will reveal some very interesting findings.
References


Thirty Sixth International Conference on Information Systems, Fort Worth 2015


**Acknowledgements**

This study was primarily supported by the National Science Foundation of China (NSFC) of NO.71571155. It was also partially supported by NSFC of NO. 71271181 and NO. 71371056, Hong Kong University Grant Council (CityU 142512), and Program for New Century Excellent Talents in University offered by the Ministry of Education in China, and the Zhuoyue Program of Fudan University.