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Store survival in online marketplace: An empirical investigation

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ABSTRACT

In the past, many studies on business survival have been conducted but very few have explained the survival of online stores operating in the “long tail” market. To address this paucity, this study proposes a theoretical model, hypothesizing that online social networks, structural assurance, and online word-of-mouth (WOM) affect online store survival. An empirical study on 5772 online stores in two industries was conducted to validate the model. For social network factors, socialization efforts in SNS (social network site) personal space and online discussion forums were not found to be related to store survival. Structural assurance, as operationalized by the status of abiding by the “faithful description” consumer rights safeguarding program, has a significant impact on store life span. Furthermore, positive WOM, manifested as consistent DSR (Detailed Seller Rating) evaluations, was found to contribute to store survival. However, another WOM indicator, average DSR ratings, was found to be negatively related to store survival. In general, these results confirm some of our earlier hypotheses, while revealing some discrepancies from the theoretical predictions. Theoretical and practical implications on store survival in online environments are also discussed.

1. Introduction

The topic of firm survival has attracted scholars from economics [51], industrial organization [39] and strategy management [36, 57] for decades. Long time survival is an important goal of organizations, and a prerequisite for success in other terms such as profitability and market share. In recent years, researchers have begun to attend to a new group of firms, Internet firms, and study their patterns of survival and exits from online marketplaces [31]. The turbulent online environment adds to the complexity of Internet firm survival.

This research focuses on the survival of a special group of Internet firms, stores operating on third party online marketplaces, such as eBay, Amazon and Taobao (the biggest e-Commerce platform in China, with a lion's share of 80% of the Chinese B2C and C2C markets). The number of stores has increased dramatically in recent years, accounting for a significant portion of the online marketplace sales. For example, in 2011, third party online sellers accounted for 30% of Amazon's total sales [58]. On Taobao, there were 8 million independent stores at the end of 2011 [35]. The reasons for the dramatic increase in the number of independent stores are two-fold. First, aiming at a higher market share, e-Commerce giants have a strong tendency to pursue the “long tail” retail strategy, wherein the platforms offer a large number of unique items in relatively small quantities (compared to the selling of few popular items in large quantities by traditional retail firms) by aggregating numerous independent sellers [3]. Second, the facilities and technical capabilities offered by these shopping platforms lower the entry barriers to Web-based store operation, and encourage the participation of small and medium sized (SME) merchants, many of which are Internet entrepreneurs that take a product niche on platforms.

The literature on entrepreneurship suggests that small firms may not choose to grow, but manage to survive [14, 15]. This is especially true for online stores working in niche markets, for which business success indicators not only include sales volume and growth rate, but also, more fundamentally, survival. Just as Brynjolfsson, Hu, and Smith [10] pointed out, “niches do not translate to riches for everyone”, pursuing niche markets while surviving online becomes very challenging, especially for small online stores [11, 37]. This is because the small online stores not only face fierce competition from long-established and large sellers, and demanding customers that expect lower prices online [4,9], but also suffer from the insufficient financial, human, and other resources, and lack of experience and formal management training [2].

Despite the practical pertinence of addressing the concern of online store survival, to our best knowledge, few prior studies have

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addressed it at the microeconomic level. Previous studies have either examined factors that lead to the survival of traditional organizations [39], or focused on the survival of Internet firms in general [31]. Among the few expectations that focus on small online store survival, Cabral and Hortacsu [11] attributed the exit of sellers to the negative feedbacks that they received. Lin et al. [37] studied the distribution of the reputation scores of sellers staying in or exiting the business. Although highlighting the importance of social capital, such as customer feedback and reputation score, on online store survival, none of these studies offered systematic and theory-grounded accounts of online store survival and its antecedents.

The objective of this paper is thus to fill the research gap by proposing a theoretical framework of online store survival and validating the framework through an empirical investigation. This paper specifically asks the question of "*what explains the survival of online stores*". It adopts a social capital perspective to answer this question [1], and proposes that three dimensions of social structure wherein social capitals are embedded, *social relations* with peers and customers, *hierarchical relations* as reflected in the obedience to online marketplace rules, and *market relations* as operationalized by online word-of-mouth (WOM), explains the survival of online stores. The social capital perspective is especially important online since the Internet is impersonal, and proper use of social tools can lubricate relations of various natures, thus help enhance the likelihood of online store survival. The visibility of online social structures also made the empirical tests feasible. A dataset covering 5772 sellers in two industries on a Chinese marketplace was collected and analyzed to validate the proposed model. This research makes theoretical contributions by integrating important social capital resources an online seller can mobilize in one framework, and therefore provides a more coherent account of online store survival.

The rest of the paper is structured as follows. Section 2 reviews the relevant theories that ground the key hypotheses. Section 3 introduces the research contexts, research methods, and major findings. The last section concludes the study by discussing the implications of this paper and prospects for further studies.

2. Theoretical background and hypotheses

This section reviews studies concerning the survival of organizations, as well as social capital theories, to develop a research model on online store survival.

2.1. Literature review

The question of why some firms die while others survive is one of the basic concerns of business scholars. Survival or longer-term viability has long been recognized as a basic goal for a business organization. It is not only a prerequisite for firm success in other terms such as market share and growth but also different from these success criteria. For example, the SME literature has noted that people start and operate their own firms for a variety of reasons other than maximizing economic returns, so that many small firms stay small over lifetimes, and owners' growth attitude significantly affects firm growth [59]. Firm survival has been addressed from multiple perspectives, such as industrial organization (see [39] for a review), firm capability [36], business model [31], dominant design [52], and organization ecology [13]. To date most research focuses on traditional firms, and few have studied Internet firms. Survival is also an important criterion for internet firm success, because first, as widely known, it takes a long time for internet firms to breakeven [56], and the fierce online competition makes firm exit and entry more frequently, so that initial survival can be an important milestone for success; second, online stores are SME niche players who may be satisfied with operating in a niche rather than pursuing high speed growth by diversifying offerings.

Our research aims to explain the survival of online stores from a social capital perspective. The theory of social capital is originated from sociology, and has long been introduced into the management domain to account for the differential business performance of organizations [55]. Nahapiet and Ghoshal [41, p.243] defined social capital as "the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit." The resources specified in their definition can be physical resources such as materials, fund and information, or nonphysical resources such as trust, belief and norms. The central idea underlying the social capital theory is that valuable resources of the focal actor (called ego) are not necessarily possessed directly by the ego and may be embedded in the ego's social relations with others; when necessary, these resources are mobilized to meet desired outcomes.

Social relations that an individual/organization possesses are generally regarded as the source of social capital. In general, rich inter-personal connections foster mutual understanding, norms, and trust, thus facilitating cooperation and collective action among members. According to the strength of the interpersonal relationships [24], social relations are further classified as strong and weak ties that play different roles in affecting information flow: strong ties are more important in promoting information flow about activities within an organizational subsystem, whereas weak ties are more important in promoting information flow about activities outside an organizational subsystem. Adler and Kwon [1] extends the original social capital theory by including not only social relations, but also hierarchical and market relations, as key factors driving business success.

Relationships between social capital and the ego's performance have been empirically examined at the individual, team, and firm levels [7]. At the firm level, some researchers have examined the strength of social ties in relation to differences in firm performance. Granovetter [27] argued that although strong ties better serve the objectives of integrating and mobilizing resources, only weak ties can bring new information. Later studies on this area centered on contexts under which strong and weak ties can be optimally configured to advance business performance. Bruderl and Preisendorfer [8] showed that both weak and strong ties can improve the sales performance of start-ups. In contrast, Rowley et al. [50] suggested that the influence of relational embeddedness (in particular, strong and weak ties) is contingent upon industry contexts.

More important in the case of our study, social networks can enhance firm survival probability. Raz and Gloor [49] found that Internet start-ups with larger informal communication networks have higher chances of surviving the dot-com bubble. When a social network is full of goodwill, members tend to be more cooperative and helpful, eventually improving the survival and success chances of start-ups [8, 28]. Some studies found that social networks of different natures have different impact on firm survival. In their study of Gujarati immigrant entrepreneurs in the lodging industry of the United States, Kalnins and Chung [30] found that the likelihood of survival of an immigrant entrepreneur's hotel increases when surrounded by branded hotels owned by individuals from their ethnic group, but the likelihood of survival is not affected by unbranded motels or by branded hotels owned by individuals from other ethnic groups. Uzzi [57] found that the probability of organization survival increases as the network with which the focal firm transacts tends toward an integrated network of embedded and arm's length ties; conversely, the probability of organizational survival decreases as the network with which the focal firm transacts tends toward either all arm's-length ties or all embedded ties.

In sum, social networks have been found to contribute to firm performance and survival. However, the relationship between online social networks and online store survival as an empirical question seems to be not addressed before.