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Under what conditions will social commerce business models survive?

Dohoon Kim

School of Business, Kyung Hee University, Hoegi-dong 1, Dongdaemoon-gu, Seoul 130-701, South Korea

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ABSTRACT

This study provides a model that captures the essential features of the social commerce business. The model focuses on the relationship between key decision issues, such as marketing expenditures and the revenue streams that are created. As more social commerce businesses enter the marketplace, they are faced with fierce competition, which may lead to sharp increases in marketing and advertising expenditures. This type of competition may lead the industry away from its optimal development path, and at worst, toward a disruption of the entire industry. Another goal of this study is to examine the possibility that the tragedy of commons may occur in the industry. The basic analysis presents Nash equilibrium results with homogeneous and heterogeneous players. The analysis further specifies the conditions that the tragedy of commons can occur. I discuss the strategic implications and policy directions that may be able to overcome the shortcomings of current business model, and help the industry to achieve more sustainable development.

1. Introduction

Social commerce is an emerging category of e-commerce, based on social media platforms like social network services. It allows its users to participate in buying and selling products and services through the platforms (Marsden 2010, Curty and Zhang 2011). Many social commerce providers started their business by combining group-buying with selling discount coupons offered from their partners over the Internet. These social commerce providers split the revenues with their business partners at a predefined rate. Groupon initiated this business model in 2009. It required more than a certain number of customers to buy the coupons for future delivery of goods or services. This has been referred to as a form of *group-buying*. Social commerce services also involve *daily deals* and *flash deals*; these service offerings are usually valid for a short period of time.

Social commerce has grown rapidly in the past 3 years, and more customers, business partners and investors have joined the industry. More than 500 providers are running social commerce businesses worldwide now (Reibstein 2011).[1] In South Korea, the associated transactions amount to more than US$200 million (Digital Daily 2011, Lee 2011). According to Kim (2011), the sales revenue for these kinds of businesses in the country has increased from US$45 million in 2010 to almost US$500 million in 2011. These figures suggest that the industry has grown ten times in terms of sales revenue and twenty times in terms of transactions over a year. By the end of 2011, more than a third of the population in South Korea subscribed to and experienced the service (Kim 2011). Similar figures reflect industry growth in East Asia, where the social commerce business has gotten very popular (Chung and Chen 2012, Kim 2011, Lee 2011). Over the past few years, sales revenues have increased from US$1.2 billion dollars to US$3.55 billion dollars in China, and from US$8.4 billion to US$11 billion in Japan (Financial News 2011). In addition, they have gone from US$780 billion to more than US$1 trillion in the US.

The emergence of social commerce reflects the collective bargaining power of end-users as the Internet has shifted the bargaining power from sellers to consumers (Gu et al. 2012, Wei et al. 2011). An exemplar of this change is what social networking services brought to the distribution channels and marketing efforts. Thanks to this new opportunity, consumers and the younger generation who are now initiating and shaping market trends have been exposed to more deals, discounts and new information around their local areas (Stephen and Toubia 2009, 2010). Accordingly, they have been easily attracted to the service proposals from social commerce firms and boosted the industry in its early stage.

Some criticisms about social commerce firms are emerging now though. For example, MacMillan (2011a, 2011c) reports on the diminishing popularity of Groupon in the US and China. Reibstein (2011) asserts that the fundamental weaknesses of the group-buying business model is that its success will eventually limit growth due to a huge increase in competition that is likely to arise, as well as a sharp decrease in its capability to deliver the original value business proposition that was promised to consumers. Webster

E-mail address: dyohaan@khu.ac.kr

[1] The statistics vary to some extent since the ways to define the social commerce industry are different across countries. Other statistics argue that the number of social commerce firms in the middle of 2011 amounted to 320 in the US, more than 5000 in China, more than 300 in Japan, and 230 in Korea (Chung and Chen 2012, Kim 2011, Lee 2011, ROA Holdings 2011).

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(2011) suggests that operational cost is one of the weakest links of the group-buying business model. "... Groupon's cost line will increase as more staff are needed to find new merchants, expand to new geographies or both. And according to the FT article, that is just what is happening. In Q1 of 2011, administrative and marketing expenses rose from US$11 million to US$387 million against revenues of US$270 million, creating a cumulative deficit of US$522 million" (Webster 2011). Last, Wheeler (2011) also addresses problems beginning to surface in Groupon's current business practice that requires massive upfront investments for customer acquisition.

Social commerce startups have also drawn skepticism due to their unusual accounting practices, rising marketing costs and quality assurance issues. This has made it more difficult for social commerce firms to lure investors now. Groupon, for example, experienced fluctuation of stock price after its initial public offering, and LivingSocial decided not to do it. However, the most critical views on the social commerce industry point out that the industry's growth rate is unsustainable (Reibstein 2011). Some observers have argued that the business model has flaws and valuations cannot be justified in the market (Webster 2011, Wheeler 2011). The resulting instability has left customers, business partners and investors disenchanted.

According to the Korea Consumer Protection Board, the number of cases involving problems and customer complaints reached 500 in 2011 (Kim 2011). Many social commerce firms seem to have been suffering under a large load of marketing expenses and low *average revenue per user* (ARPU). This result has been predicted since the firms' business practices have to invest a big portion of revenue on advertising and promotion. They also have maintained a wide range of service offerings, but the assortment is too broad, and the operational costs are too high, while user revenues remain low (Kim 2011, Lee 2011).

The prosperity and adversity of the social commerce industry has implications for other e-commerce industries. The business model of social commerce may seem to be IT-intensive, but it heavily relies upon other things too. Human resources and manpower are critical and costly in the competition that occurs in this industry. The business model needs to operate effectively across different regions, requires negotiation and contracting with partners, and needs advertising and promotion of its service offerings to attract consumers. All of these activities require human intervention. This explains why average sales per employee is lower than in other e-commerce sectors, such as social networking services, search engines, and business portals (Financial News 2011, Lee 2011).

These features allow social commerce providers to lower the initial fixed cost. On the other hand, low capital investment also diminishes the entry barriers making it easier for late-comers to copy the business model. The low barriers to entry make it difficult for a marketing campaign to be effective. One possible outcome is that the business model could end up with a bubble and the entire industry may collapse. Social commerce firms in this new phase of the industry should revise their value propositions and develop a differentiated niches in comparison to online shopping malls and open markets.

This study presents model to capture the essential features of the social commerce business model. I will analyze the model to see whether social commerce is sustainable, and discuss conditions for stable evolution of the industry. First, I will focus on the relationship between a firm's marketing effort and the revenue stream that it produces. As more social commerce firms have joined the industry, fierce competition has ensued, resulting in additional sharp increases in the firm-level marketing and advertising expenditures. This type of competition may lead the industry away from its optimal development path, and at worst, result in disruption. So one intended contribution of this study is to examine the possibility that *the tragedy of commons* (Greco and Floridi 2004, Hardin 1968) may occur in the industry.

In Section 2, I present a model to demonstrate the essential features of the social commerce business process and the competitive landscape. I will analyze the model in the next section and investigate the possibility that the tragedy of commons occurs in the industry due to an excessive competition in market share. The implications of my findings and analysis follow in Section 3. Section 4 discusses the future development of the social commerce business model to overcome its limitations, and concludes.

2. Model

Marsden (2010, p. 4) has offered a broad definition of *social commerce* as follows: "Simply defined, social commerce is the fusion of social media with e-commerce, or in the words of IBM, social commerce is basically the concept of word-of-mouth applied to e-commerce. More fully, social commerce is a subset of electronic commerce that uses social media, online media that supports social interaction and user contributions, to enhance the online purchase experience." Social commerce is an emerging business that incorporates Internet-based online media, such as social connections, mobility, openness, and participation. Social commerce takes on various business formats in practice: for example, buyer communities, group-buying, purchase sharing, social curation, social advice, co-shopping, and so on (Cavazza 2012, Marsden and Chaney 2012). In this study, I will focus on group-buying, the most popular format of social commerce (Chung and Chen 2012, Lee 2011, Kim 2011).

Social commerce offers a value proposition to potential customers by allowing them to buy in groups and receive quantity discounts (Anand and Aron 2003, Jing and Xie 2011). Merchants or suppliers, who act as business partners with social commerce firms, also gain benefits from selling a high volume of goods or services to a group through a single social commerce channel, instead rather than selling on a one by one item or service basis. Further, suppliers can use social commerce firms as a marketing channel to access new customers and increase sales. The key to the social commerce business model lies in deep discounts and the pooling of consumers willingness-to-pay, and then turning that potential to an effective real demand. Although business practices vary by region (Chung and Chen 2012, ROA Holdings 2011), my study focuses on the pooling of potential demand and the generation of revenue.

Potential investors have expressed uncertainty about whether the business model is sustainable, and seem less interested than before (MacMillan 2011a, Wheeler 2011). The weakest link of the business model comes from its simplicity. It is simple enough to be copied without large initial investment, and it is difficult to prevent potential competitors from entering. Competition has been intensifying as a result.

Social commerce firms also appear to forced to spend more money to acquire customers due to the intensifying competition. In 2010, Groupon spent US$4.95 per new customer, but in 2011 it had to spend US$5.30, an increase of about 7% (MacMillan 2011a). This increase is worrisome to potential investors since it may signal that that it is getting more costly to acquire and retain customers.

This problem arises in the presence of lower available inventory or service capacity. When thus is the case, the willingness of suppliers to offer deep discounts will decline, and price-sensitive shoppers may switch to other social commerce firms that offer a better deal. In the long run, competition among social commerce firms will drive down the discount rate to the minimum required customer service configuration threshold.