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Virtual item sales as a revenue model: identifying attributes that drive purchase decisions

Vili Lehdonvirta

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Abstract The global market for virtual items, characters and currencies was estimated to exceed 2.1 Billion USD in 2007. Selling virtual goods for real money is an increasingly common revenue model not only for online games and virtual worlds, but for social networking sites and other mainstream online services as well. What drives consumer spending on virtual items is an increasingly relevant question, but little research has been devoted to the topic so far. Previous literature suggests that demand for virtual items is based on the items' ability to confer gameplay advantages on one hand, and on the items' decorative value on the other hand. In this paper, I adopt a perspective from the sociology of consumption and analyse examples from 14 virtual asset platforms to suggest a more detailed set of item attributes that drive virtual item purchase decisions, consisting of functional, hedonic and social attributes.

Keywords Consumer behaviour · Online communities · Business model · Purchase drivers · Virtual consumption · RMT

1 Introduction

Virtual goods are understood to refer to objects such as characters, items, currencies and tokens that exist inside various online games and hangouts. Selling virtual goods has arguably become a major new source of revenues for consumer online services, complementing the existing palette of advertising, usage fees, sales of customer data and miscellaneous value-added services (see e.g. [13]). The global volume of real-money trade of virtual goods was estimated at 2.1 billion USD per year in 2007 [20]. To provide context, online advertising revenues in 2006 in the U.S. were approximately 16.9 billion USD [27]. The purpose of this paper is to outline the basics of

V. Lehdonvirta (✉)
Helsinki Institute for Information Technology, PL 9800, 02015 TKK, Finland
e-mail: vili.lehdonvirta@hiit.fi

virtual goods-based business and examine the question of why people spend money on virtual goods.

Real-money trade of virtual goods first emerged in 1999 as player-to-player trade in massively multiplayer online role-playing games ('MMORPG'). Users would list their hard-earned game possessions on eBay and let other users bid for them [18]. In recent years, the growth of the market has increasingly been driven by game operators selling goods directly to their players. This is particularly true in the East Asian market. In September 2005, 32% of titles surveyed by Nojima [25] in Japan used virtual item sales as their main revenue model. In October 2006, the share had grown to 60%. Besides games, another type of service that frequently utilises the revenue model are so-called "virtual worlds", simulated spaces where users spend time socialising, creating and shopping for virtual goods. Latest-generation connected video game consoles are also experimenting with the model.

In addition to games, virtual goods are also increasingly being sold in mainstream online services. Finnish online image gallery *IRC-Galleria,* Korean social networking site *Cyworld*, Chinese instant messaging service *Tencent QQ* and U.S. social networking site *Facebook* are examples of extremely popular online services that earn revenues by selling virtual goods to their users. Common objects are priced at a dollar or less, while notable objects can be sold for tens of dollars. In 2006, it was reported that *Cyworld*'s virtual item sales amounted to nearly 300 000 USD per day, or approximately 7 USD per user per year [30]. At the same time, advertising-heavy *MySpace* made an estimated 2.17 USD per user per year [30]. This suggests that virtual item sales may in some cases be able to rival advertising as the primary revenue model for mainstream online services, which represents a major shift in consumer online business.

Due to the novelty of the revenue model, designing virtual goods is still an undisciplined pursuit. Service operators put considerable effort into overall design and marketing, identifying the tastes of their target consumer and positioning their service favourably among competing offerings. But when it comes to designing the virtual goods inside the service that ultimately generate the revenues, similar rigour is rarely applied. Virtual commodity design is driven by artists and concept designers, while the marketing department, which in theory has the analytical tools and customer insight necessary to maximise customer value, is rarely involved.

One common approach to product design in marketing is to attempt to identify which product attributes influence consumers' purchase decisions. For example, in some industries and product categories such attributes could be size, shape, performance and style [15, p. 376]. These "purchase drivers" can then be used to guide prototyping and follow-up research. In this paper, I take an analogous approach to virtual consumption, attempting to identify attributes and features of virtual goods that influence consumers' interest in purchasing them. The advantage of this approach is that the results can be quite readily translated into practice, since they describe concrete product attributes. A shortcoming of the approach is that not all consumer behaviour can be explained in terms of individual preferences for attributes. Social, economic and contextual factors also play an important part.

The following section contains a survey of previous research on virtual goods and a brief theoretical review of what kinds of uses consumption researchers identify for