

Title	仮想空間での経済支援—TwitchにおけるPay-What-You-Want donation行動の分析—
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Financial Assistance in the Virtual World: Analysis of Pay-What-You-Want Donation Behavior on Twitch

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Abstract

The donation model such as social tipping and gift-giving, a new monetization model, has been widely introduced against the backdrop of collective action in the virtual world, which expanded rapidly due to the COVID-19 pandemic. This donation is not charity, but a gift by service recipients (buyers) to service providers (sellers) for cheer. Also, this donation has no upper limit and can be repeated, it can be thought of as a pay-what-you-want (PWYW) donation. PWYW donation is a new monetization model that more and more services like Twitter, Facebook, and YouTube have newly introduced or expanded its feature since the pandemic. This PWYW donation monetization model as financial assistance in the virtual world expanded by the pandemic will continue to expand toward the digital twin, the metaverse era. The PWYW donation model as financial assistance in collective action in the virtual world was introduced before the pandemic in social live streaming services such as Twitch. Therefore, this study takes Twitch as a case study, identifies challenges to the PWYW donation model that can be gleaned from its analysis, and makes implications for the future monetization as financial assistance in the virtual world based on this analysis.

Collective action in the virtual world is characterized by a larger scale of collective action and a variety of interactions than in the real world. In social live streaming services, for each service provider (seller) i.e., a streamer, a community is formed by the streamer and many service recipients (buyers) i.e., viewers, and collective action takes place within that community. There are several previous studies on viewers' user engagement with the streamer, including PWYW donation behavior in the services. Given the characteristics of collective action in the virtual world described above, several research gaps lead to the exploration of the challenges of monetization as financial assistance in virtual world from previous studies.

First, regarding the indicator of the scale of collective action in the virtual world, previous studies differ in their opinions on whether to use the number of concurrent viewers to the streamer channel or the number of followers to the streamer, and it is not clear which indicator is more relevant to the PWYW donation behavior. Second, through a variety of interactions between the streamer and the viewers in the community, the viewers make PWYW donations as a way to cheer on the streamer, and the streamer who receives the PWYW donation improves his/her service to receive further PWYW donation, thus increasing its value. However, previous studies have only analyzed PWYW donation behavior on the part of service recipients (buyers) i. e., viewers, and have not analyzed service provider (seller) i. e., streamer behavior to promote PWYW donation by service recipients. Finally, since there are as many communities as there are streamers, community characteristics based on streamers' personalities may influence viewers' PWYW donation behavior. However, previous studies have primarily analyzed the viewer's desire to belong to that streamer's community and have not analyzed the relationship between PWYW donation behavior and community characteristics.

This study fills the above research gaps by using actual Twitch data, applying S-D logic as the analytical framework, and conducting multiple regression analysis and cluster analysis of subscription gifting behavior as PWYW donation behavior. The analysis first reveals that the number of concurrent viewers is an appropriate indicator of the scale of collective action in the virtual world concerning PWYW donation behavior. It also reveals that mutual efforts through interactions between streamers (sellers) and viewers (buyers) accelerated PWYW donation behavior and co-created the value of the streamers' services. In addition, in the communities which are, for each streamer, composed of the streamer and viewers, we grouped the communities based on PWYW donation behavior and found the community with a substantial contribution to monetization that has enthusiastic fan activity for streamers. This study contributes to the future monetization as financial assistance in the virtual world by identifying challenges to the monetization as financial assistance in the virtual world from the results of the above analysis, and by gleaning theoretical and practical implications from them.

Keywords: pay-what-you-want, social live streaming service, subscription gifting, S-D logic, value co-creation