

# Purchase Intention in Live-Streaming Context -A Self-Presentation Perspective

*Research-in-Progress*

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## **Abstract**

*Digital items purchase from live-streaming is becoming a key source for revenue for virtual community (VC). However, some VCs face uncertainty and high turnover rate and the understanding about how to transform users' motivation into purchase intention remains absent. This study aims to fill the gap by proposing a motivation-goal-intention model based on a self-presentation perspective. The model proposes that purchase intention is determined by goal achievement, which in turn is affected by motivation for management of social activities. We characterize motivation as self-efficacy, norms, and social motivation, and goal achievement as community support and identity verification. The model was evaluated by using data collected from Twitch. This work contributes to our understanding of the decision processes of digital items purchase by extending theory of self-presentation and deepening understanding of VC goal achievement. This has implication for both VC users and vendors (streamers).*

**Keywords:** Motivation, Purchase Intention, Identity, VC, Self-Presentation, Relationship Development

## **Introduction**

Virtual communities (VC) refer to online meeting places where people separated by time and space can interact with others, and reach a variety of goals such as relationship development, information exchange, and engagement in transactions (e.g., digital item purchase) (Kim et al., 2012; Tsai & Bagozzi, 2014). VC leverages a variety of social media-enabled tools (e.g., video live-streaming), content sharing (e.g., user-generated content(UGC)), and platforms (e.g., Facebook) to help one create value (e.g., social support, information seeking)(Lin et al., 2017; Hilvert-Bruce et al., 2018; Wan et al., 2017). Despite the popularity and expected value of VC, the lack of an underlying business model prevents advancing understanding on leveraging resources in VC and increasing its prosperity for goal

achievement and subsequent purchase decision. Thus, understanding how and why VC members' motivations (expected value) are transformed into purchase intention through goal achievement (actualizing value) becomes critical.

Unlike traditional ways of creating revenue through membership fees and advertisements, VC relies on a new way of revenue recently--sale of digital items through different means such as entertainment and social interactions (Hilvert-Bruce et al., 2018; Lin et al., 2017). Digital items refer to a variety of items generated by social media applications that enable one to create identity and perform interaction with others (Wan et al., 2017). Examples of these items incorporate avatars, graphics, and other applications (e.g., video live-streaming Apps) (Hilvert-Bruce et al., 2018; Sjoblom & Hamari, 2017). Selling digital items has high potential for value creation because of low management cost for transaction and production (Kim et al., 2012). For example, the revenues from YY platform (a live-streaming similar to Twitch) created more than 600 million yuan in 2014 (YY Inc., 2015). Cyworld refers to a social media enabled website for selling digital items (e.g., music, works of art) that performed transactions with revenues more than US\$220,000 per day in 2010. However, selling digital items face uncertainty. Data revealed that VC members have high turnover rate and many members register multiple VCs because they have much choice for purchase decision (Yang et al., 2017). Some studies are skeptical about VC members' willingness to purchase because in certain context such as UGC, member behavior is guided by a voluntary basis (e.g., free of charge to view game playing in Twitch) (Wan et al., 2017). Thus, understanding value creation from purchasing digital items in UGC becomes important.

Prior work on VC has examined various ways for value creation, including attracting members (e.g., reducing vendor risk) (Gupta & Kim, 2010) and social capital for leveraging resources (e.g., social connections) (Sheer & Rice, 2017). Others considered knowledge contribution through identity communication and relationship development enabled by information technology (IT) features (e.g., avatars, digital items) (Ma & Agarwal, 2007), and interpersonal influence for group contribution (Tsai & Bagozzi, 2014). While this stream of work provides a basic understanding about the influence of external drivers (e.g., IT features, external resources) for VC phenomena, less attention has been paid on the impact of internal drivers at UGC context, which emphasizes the self-presentation perspective to analyze one's decision processes. Self-presentation theory considers why and how one is willing to manage identity and what goals are attained from it (Leary, 1996). Identity refers to one's self-evaluation on a variety of attributes (e.g., abilities, personal traits) and social roles (e.g., community citizen) such as "who am I" (Swann et al., 2000). The goal of identity is to increase shared understanding and connect people who have a consensus regarding identity.

Consumer behavior literature has focused on two types of goals—functional value and expressive value (Smith & Colgate, 2007). While most VC and e-commerce research focused on functional value (e.g., App usefulness, trialability) (Kim et al., 2016), few studies considered UGC phenomena from the perspective of expressive value. This creates a gap because UGC reflects a voluntary basis participation in VC activities and focuses on self-presentation to attract similar others (e.g., presenting a desired self-image through purchasing digital items) (Kim et al., 2012). In the light of growing interests in social media-enabled applications (e.g., UGC, live-streaming), Lin et al. (2017) call for more advanced and systematic understanding on UGC phenomena. Thus, this study responds to this call and aims to address the gap mentioned above by posing the following research questions.

**RQ1:** How do goal achievements affect intention for digital items purchase?

**RQ2:** Why VC members are motivated for goal achievements?

This study builds on several theories to deepen our understanding about how decision process for digital items purchase is formed, including uses and gratification (U&G) theory, self-presentation theory, and social influence (Katz, 1959; Kelman, 2006; Leary, 1996). U&G paradigm is widely used as a theoretical lens to explain individuals' social media behavior (e.g., live-streaming, Internet-based social activities), in terms of the relationship between motivation, goal achievement, and decision process (Hilbert-Bruce et al., 2018; Salehan et al., 2017). U&G theory explains one's motivation (expected value) for using media from three aspects—content (information from medium), process (value from using the medium such as joy), and social (social communication) motivation (Stafford et

al., 2004). The underlying premise of this study is that purchase decision is most likely to be affected by the goal achievement that transforms VC members' expected value into actualized value.

In particular, we integrated self-presentation and social influence with U&G to conceptualize expected value from live-streaming as three types of motivation, including self-efficacy for online presentation, self-presentation norms, and social motivation. These motivations represent one's efficacy to ensure the preferred identity, social influences on VC members, which include compliance with norms, congruence with the VC's values, and maintaining a positive self-defining relationship with the VC. Self-efficacy represents individuals' ability to control and present their desired image of themselves to others. Self-presentation norms and social motivation represents two types of social influence. Social motivation is a second-order variable incorporating two first-order variables, which capture one's social capital embedded in interpersonal relationships—including bridging capital (weak ties) and bonding capital (close ties). We conceptualize value transformation mechanism as two types of (dual) goals—perceived community support and perceived identity verification, which reflect the “content/process” and social goal achievement respectively. The proposed hypotheses were evaluated through live-streaming site (Twitch), which represents an example of UGC in VC that aims to create value through selling digital items. This study builds on a combination of theories (e.g., U&G, self-presentation) with the aim to deepen our understanding about the role of goal achievement in intervening the relationship between motivation and purchase intention. This understanding contributes to the research of VC and live-streaming management by accounting for the role of goal achievements based on self-presentation and social influence, including their conceptualization, antecedents, and consequence.

## Theoretical Background

### *Digital Items Purchase*

Online purchase literature has identified four critical dimensions that affect shopping decision and transaction management—vendor, transaction channel, customer, and product (Jiang et al., 2010; Kim et al., 2016; Wells et al., 2011). Vendor and customer capture two opposite (objective vs. subjective) evaluations during purchase. The former emphasizes an objective evaluation on vendor features such as trust and risk, while customers' subjective evaluation focuses on their own perception for purchase, such as self-efficacy, attitude (Gupta & Kim, 2010; Yeh & Li, 2014). Transaction channel emphasizes the purchase processes and VC features, including website quality (e.g., interactivity) and attitudinal appraisals of these processes such as perceived usefulness, and enjoyment. Finally, product represents the characteristics that may affect purchase decision such as product quality, price, value, and review. While comprehensive, these dimensions cannot be used to explain all purchase phenomena because customers' purchase decision is dependent on product and context (e.g., a voluntary basis purchase in live-streaming). Therefore, an extended model is required to explain the purchase in the UGC context.

In particular, purchase decision in UGC has the following unique features. First, online purchase of mobile App ignores the role of vendors in decision making due to purchase from trustworthy vendors (e.g., Google) (Kim et al., 2016). In contrast, *vendor* issues play a key role for explaining decision making in UGC, because distrust and uncertainty prohibit VC members from participating in live-streaming activities and disclosing their information and identity. For example, in the study of digital item purchase, Kim et al. (2012) used VC members' desire for self-presentation (satisfied goals) to capture their willingness and effort on showing identity that affect their cognitive process and resource allocation (e.g., information seeking, purchase of digital items). Thus, evaluation on vendor issues is aggregated into goal achievement such as presenting identity.

Second, prior work viewed transaction channel-related factors in mobile App as less critical to purchase decision because App purchase is from two major channels (App store, Google play), which have high website quality and efficient transaction processes (helpful, high interactivity)(Kim et al., 2016). However, the quality of transaction channel in UGC relies on VC support, in terms of helpful comments and interaction between members that facilitate one to acquire the needed information, content, and satisfaction of the participation/value from social activities and processes (e.g., live-streaming related communication, information exchange).

Third, one's cognition (belief, attitude) is the main focus of customer-related factors for purchase decision. Literature has used U&G theory to capture how and why one is motivated for goal-related activities from social media (Salehan et al., 2017). This theory is conceptualized by the beliefs for meeting needs and the attitude appraisals for goal achievement. For example, Hilvert-bruce et al. (2018) found that information seeking, social interactions, social support, and sense of community play a key role in motivating one's live-streaming decision. Others noted that one's beliefs and attitudinal appraisals is context (or applications) dependent. For example, in the context of mobile App purchase, consumers' cognition towards App-related features (e.g., monetary value of App, merits of the deal) is salient to their purchase decision (Kim et al., 2016). Besides, they also emphasized customers' self-efficacy to explore the target App, in terms of App trialability (ability to try out new App applications) and website design (e.g., characterized as App enjoyment). This study extends this stream of work by conceptualizing customer cognition for using live-streaming applications (e.g., self-efficacy, norms, social ties) and goal achievement from this use.

Finally, regarding product-related factors, most prior work on online purchase built on an explicit aspect to examine their impact on purchase decision (Kim et al., 2016). Examples include App functions, App software trial, perceived value of App compared to its price. However, live-streaming product' value is usually assessed through a tacit aspect, such as service (e.g., joy, information, support) and customers' consumption experience and perceived goal achievement (Hilvert-Bruce et al., 2018). For example, Kim et al. (2012) drew on self-presentation theory to characterize individuals' evaluation on products (digital items) as satisfied desire for identity presentation (presenting symbolic and aural meanings through these products), reflecting one specific goal in VC.

### ***Use and Gratification (U&G) Theory and Live-Streaming Literature***

Given the above difference, deep analysis of live-streaming phenomena and purchase decision becomes essential. Prior work on VC and UGC has drawn on a social-technical perspective to explain one's decision processes, emphasizing the importance of actualizing value (in terms of goal achievement), which reflects the transformation mechanisms from expected value based on individuals' perceived management and control of self-presentation and social influence at online settings that enable VC members to gain benefits (e.g., rewards) and reduce uncertainty (e.g., avoidance of punishment) (Kim et al., 2012; Wan et al., 2017). This stream of work has drawn on U&G and self-presentation theory to analyze how and why motivation and goal achievement influence decision phenomena. For example, in the studies of social media-enabled outcomes, Salehan et al. (2017) built on U&G theory to analyze the relationship between various motivations (e.g., social, utilitarian, hedonic), goal achievement (communication, relationship development), and performance. U&G theory mainly focuses on three dimensions of goal-oriented motivation—content (e.g., message presented by media), process (e.g., cognition from using media), and social (e.g., social interactions) (Katz, 1959; Stafford et al., 2004).

Others (Wan et al., 2017) emphasized the features of social (e.g., interaction) and technical (e.g., personalization) factors that motivate UGC (e.g., YY platform of a live stream website) users' donation through their attitudinal appraisals, in terms of attachment. Attachment refers to one's attitude toward a specific target (e.g., a person or object) which affects her/his allocation of emotional, cognitive, and behavioral resources to the target. Attachment has been used by marketing literature to represent one's attitudinal appraisals for goal achievement and social behavior which exert impact on purchase decision (Esch et al., 2006; Fedorikhin et al., 2008). IS literature (Ren et al., 2012) extended this by conceptualizing attachment as two dimensions—identity-based (individuals' feeling connected to a group's purpose; interpersonal congruence) and bond-based (individuals' relationship development with other VC members, perceived support from VC), which reflect one's attitudinal appraisals that affect one's behavior (e.g., intention for knowledge sharing) in VC. Empirical work on VC and social media use found that attachment and attitudinal appraisals play a key role in affecting one's cognition and behavior, including participation in VC activities, willingness to help, decision, and knowledge sharing (Ren et al., 2012; Wan et al., 2017). Other examples of attachment incorporate identity-based attachment in "My Starbucks Ideas" which refers to fans who contribute ideas to help the firm improve service quality. In contrast, girlfriendcircles.com reflects VC that enables women to

increase interpersonal connections (bond-based). In the studies on digital items purchase, Kim et al. (2012) built on social influence and self-presentation theory to conceptualize buyers' motivation as both VC norms and self-efficacy, which affect their attitudinal appraisals on self-presentation goal (characterized as desire for self-presentation) for subsequent purchase decision.

In sum, the review of prior work shows the following gaps. First, there is a lack of comprehensive analysis of why users (or viewers) of live-streaming are motivated to VC activities and how their goal achievement influences purchase decision. Second, due to the unique features of live-streaming purchase phenomena (goal achievement regarding purchase), prior work on digital items purchase decision and social behavior may not be suitable to explain the phenomena.

### **Research Model**

This current study expands theory of online purchase and VC by proposing a model that combines two streams of prior work—motivation (*expected value*) and goal achievement (*value creation*). First, we build on VC and U&G literature by positing that users' purchase intention depends on *value creation* from live-streaming purchase, which captures the transformation mechanism from *expected value* (motivation, reasons for VC participation) into purchase decision. Value creation is characterized as *goal achievement*, which represents motivational content or actualizing value that serves as a direct impetus to purchase intention. U&G explains decision making through one's evaluation on features (e.g., online purchase) that control and sustain actions to meet goals/needs (Katz, 1959; Salehan et al., 2017). This theory explains why individuals are willing to participate in online social activities and better manage interpersonal relationships such as identity communication and relationship development in VC (Kim et al., 2012; Ma & Agarwal, 2007). Individuals with self-efficacy are more likely to remove anxiety and improve confidence on deal with difficulties related to tasks (Venkatesh, 2000; Wei et al., 2011). Self-efficacy for online presentation enables one to better handle online activities such as self-presentation of one's image, interaction, and relationship development in different social settings (Kim et al., 2012; Ma & Agarwal, 2007).

The conceptualizations of online norms and social motivation are based on social influence theory. This theory incorporates three aspects: compliance (norms to gain rewards), internalization (congruence between one's own value system with the group's value), and identification (acceptance of social influence to improve one's self-defining relationship with a group) (Kelman, 2006). Prior work on online behavior and VC has used this theory to explain how different types of social influences affect one's cognition and pro-social behavior such as self-presentation, goal achievement, and purchase decision (Kim et al., 2012; Tsai & Bagozzi, 2014).

In this study, we define online norms as informal rules to capture the features of compliance and internalization, which affect streamers' self-presentation and goal achievement such as identity communication and relationship development in live-streaming and VC. Social motivation is a manifestation of identification. Weak ties capture bridging capitals that are irregular, heterogeneous in backgrounds, and low in interpersonal closeness, such as unfamiliar people with different views. In contrast, close ties represent homogeneous ties and high in interpersonal closeness, including close friends. A combination of different ties and resources embedded in these ties enables individuals to increase identity communication (e.g., one's preferred image in a VC) and shared understanding with others. For example, members of social network ties may acquire social benefits, including presenting image by asking digital item information, and watching and sharing entertaining content (e.g., funny videos of live-streaming) (Kaplan & Haenlein, 2010).

Second, regarding goal achievement, we conceptualize it as *identity verification* and *community support*, which represent identity-based and bond-based attitudinal appraisals respectively. These two goals reflect VC members' perceived value creation which transforms their expected value into purchase decision. Identity verification is an extension of identity-based evaluation and represents live-streaming users' perceived confirmation of identity from other members of VC. This verification reflects the interpersonal congruence between group members (e.g., congruence between a focal person's self-view (perceived identity) and other group members' evaluation on this person) (Swann et al., 2000). This congruence facilitates harmonious interactions, and removes uncertainty such as

distrust in communication and interpersonal conflict. Empirical work on VC and digital item purchase reported that members' attitude towards identity is suitable to explain their purchase decision and social behavior (Kim et al., 2012; Ma & Agarwal, 2007).

Community support extends bond-based evaluation and captures members' perceived relationship development and support from other members that facilitate a variety of live-streaming activities. These activities incorporate information support, and social support (exchanges of personal information and self-disclosure, interpersonal relationship development). For example, information support entails various information regarding digital item purchase processes, including comments of streamer, products, and transaction. Empirical work on live-stream reported that social support and information support play a key role in affecting purchase decision (Hilvert-Bruce et al., 2018).

## **Hypotheses**

The research model includes how purchase intention is affected by goal achievements (H1-H2), which in turn are influenced by three types of expected value (H3-H8).

### ***Hypotheses Between Goal Achievements and Purchase Decision***

In this study, we build on self-presentation theory to conceptualize relationship development as perceived community support, which reflects VC members' positive attitudinal appraisals of attachment to the interpersonal relationship with other VC members and represents goal achievement. We characterize this community support as support of a variety of live-streaming activities, including information support (comments regarding vendor, product, and transaction, information exchange) and social support (feeling of friendship, members' self-disclosure, rewards) that facilitate purchase activities in live-streaming. From a self-presentation perspective, VC members' perceived community support implies their preferred presentation of personal identity and relationship development, in terms of social support and rewards, and needed information for digital items purchase. This support also captures members' goal achievement, in terms of process, content, and social aspects of value creation, which positively affects their purchase decision. Thus, we propose H1.

#### **H1: perceived community support is positively related to purchase intention.**

When live-streaming users perceive identity verification, they tend to believe that their live-streaming purchase activities (e.g., information, product content, transaction processes) are facilitated and helped by similar others (social interactions) who are willing to verify the users' identity. This implies that these users perceive that their goals related to content, processes, and social are satisfied. Thus, from U&G theory, we propose H2.

#### **H2: perceived identity verification is positively related to purchase intention.**

### ***Hypotheses Between Motivation and Goal Achievement***

Studies on online behavior (intention, decision making) reported that efficacy belief plays a key role in affecting activity participation, aspirations, and goal achievement such as identity verification, desire, and relationship development (e.g., information exchange) (Kim et al., 2012; Ma & Agarwal, 2007; Salehan et al., 2017). This implies that one's self-efficacy and confidence in social activities management represent his/her expected value from these activities, including acquiring information (i.e., content gratification) and removing uncertainty. Applying this to the live-streaming context, when users have self-efficacy of online presentation, they have confidence in managing transaction and acquiring comments regarding products and vendors from others. This reflects that the users' goals can be met successfully, because the confidence in good self-presentation tends to result in verified identity and relationship establishment with similar others. Thus, we hypothesize the following.

#### **H3: self-efficacy of online presentation is positively related to community support.**

#### **H4: self-efficacy of online presentation is positively related to identity verification.**

VC members' goal achievements are likely to be affected by norms for self-presentation, because when these members feel their value system is congruent with that of VC and comply with it (e.g., obtaining rewards and reducing uncertainty). The goal achievements are conceptualized as identity and relationship development. When VC members perceive high value congruence and compliance with the VC (norms), they tend to believe their online self-presentation (i.e., identity) is likely to be verified by other viewers of the VC. Similarly, these norms also enable VC members to better manage interpersonal relationship development with similar others and gain support from them because of their similar value systems on online self-presentation and willingness to comply with the norms for getting support.

**H5: norms of online presentation is positively related to community support.**

**H6: norms of online presentation is positively related to identity verification.**

When live-streaming users have high social motivation, they tend to focus effort and time on management of self-presentation, such as presenting their identity through live-streaming activities (e.g., interaction with and responding to streamers, donations) (Hilvert-Bruce et al., 2018). This management and effort enable the users to better presenting identity and develop relationships with other VC members. Thus, we hypothesize the following:

**H7: social motivation is positively related to community support.**

**H8: social motivation is positively related to identity verification.**

## Conclusion

We will use a questionnaire-based approach to collect data from Twitch users and then adopt partial least squares (PLS) to test the proposed hypotheses, including measurement model and structural model. This study integrates U&G theory with self-presentation and social influence theory, which aims to provide new insight into live-streaming purchase phenomena. We explain these phenomena through the dual goals for self-presentation which serve as the transformation mechanisms from expected value into purchase intention. We argue that purchase intention relies on dual goals (identity verification, community support), which in turn are motivated by three types of antecedents, including self-efficacy of online presentation, norms of online presentation, and social motivation. Our model contributes to both theory and practice. For theory, the proposed model expands uses and gratification theory by integrating self-presentation theory and social influence that offers a fine-grained analysis of how and why motivation and goal achievement should be consolidated together to explain purchase decision in live-streaming context. As to practice, our model proposes a useful guideline for VC managers to better manage live-streaming and digital items purchase activities from a self-presentation perspective.

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