Herd Behavior in Technology Adoption: the Role of Adopter and Adopted Characteristics

Mirmahdi Darban Hosseini Amirkhiz
Kent State University
mdarbanh@kent.edu

Abstract
Herd literature suggests that people tend to discount their own beliefs and imitate others when making adoption decisions. However, different people based on their characteristics exhibit different degrees of herd behavior. In the same vein, the characteristics of technology must fit with the requirements of the task that an adopter wants to fulfill. Characteristics of individuals and of the technology-to-be-adopted both influence adoption behaviors. It is important to understand these phenomena because they are strongly related to the staying power of technology. A research model is developed to study the influence of adopter characteristics and technology characteristics. An online experiment will be conducted to examine the research model.

1. Introduction

Decisions of others can markedly influence an individual’s or organization’s decision in various social and economic situations, such as in financial investment, technology adoption, firms’ strategic decisions, political voting, and dining and fashion trends. We have recently observed the adoption of numerous novel technologies and technology-mediated products/services, from various types of Web 2.0 and e-commerce technologies to Facebook and Apple’s iPhone, iPod, and iPad. The convergent characteristics of certain recent technologies impose rapidness to this pattern. Roughly ten months after its initial launch in February 2004, Facebook had attracted one million active users; by December 2013, this number had grown to 757 million [57]. The iPhone 5 received over two million pre-orders within 21 hours after it was released in September 2012 [27]. The same herd-like behavior happens when people leave a previously trendy technology or service. An interesting example of such a situation is Facebook, again. To preserve their discretion, teens opt for services like Tumblr, Twitter, and Instagram that offer more privacy than Facebook [56]. Obviously, this can become a problematic issue if teens continue to leave Facebook en masse, since they represent an entire generation of people who will grow up using various rivals of Facebook. This phenomenon is important and requires more exploration, since it is linked with the durability of particular products and technologies [55]. We need to take into account many factors to understand and investigate the reasons for individuals’ convergence in using the same form of technology and leaving it later en masse.

Observational learning literature provides another perspective for en masse convergence toward a technology. Observational learning is one of the most useful and universal tools of decision making; it happens when an individual observes the behavior of another person and based on that observation, concludes something about the value and practicality of the behavior [7, 63]. According to Banerjee [9], herd behavior occurs when “everyone does what everyone else is doing, even when their private information suggests doing something quite different” (p. 798). It implies that a person’s decisions can become less responsive to his/her own information when faced with information on which other parties have reached a decision.

Information systems (IS) research can benefit from herd theory as a lens to investigate the adoption of technology and technology-mediated products and services (hereafter simply referred to as “technology”) [55]. IT managers are known to follow each other in making IT investment decisions [28], and computer users often adopt popular software products, thus making them even more popular, such as when the download ranking of software products fluctuates and online users’ choices of software products changes dramatically [18]. This shows that users tend to follow the previous adopters’ decisions as revealed by the download ranking. Another stream of research discusses and compares information cascades, which refers to the situation in which an adopter disregards...
his/her own private information and follows the behavior of the preceding individuals [10], and other parallel notions such as network effects, which states that the value of a technology increases as the number of its users increases [27].

Characteristics of individuals and of the technology-to-be-adopted both influence adoption behaviors [19]. Clearly, not everyone ends up joining a herd, and different people based on their characteristics exhibit different degrees of herd behavior [55], since users’ differences affect their choices about technology [2, 54]. Every technology has unique characteristics, which are perceived differently by different users [3]. In the same vein, not every technology reaps the benefits of herding in the same way. The characteristics of a given technology must fit with the requirements of the task that the adopter wants to fulfill [20]. Therefore, the interaction between the characteristics of the technology and individual users should be considered in order to effectively evaluate if an IS is meeting users’ task needs, as suggested by Goodhue et al.’s Task-Technology-Fit (TTF) model [20]. This study proposes a research model, grounded in herd theory, which incorporates the impact of individual and technology characteristics on herd behavior. The goal is to provide a better understanding of the factors that encourage herd behavior in decisions to adopt a technological product.

2. Theoretical Development

In recent years, most people have both witnessed and participated in countless technology adoption decisions where adopters were influenced strongly by the herd behavior of previous adopters [18, 63]. The herd behavior has been studied at both individual and organizational levels in a variety of contexts [10, 34], such as downloading software applications [63], and in a variety of academic fields, such as finance and economics [24], with this academic research resulting in a well-developed literature. However, in the present study, herding at the individual level is emphasized.

2.1. Herd behavior

The influence of other people on one’s adoption of a technology has been studied from various angles in IS research. It is thus necessary to distinguish herd behavior from another similar concept, network effects, as a separate stream of research has attempted to explain the occurrence of herd behavior in IS employing this concept [18]. However, it is argued that the significant network effects anticipated by IS researchers often fail to materialize [37]. Due to the concerns about the existence of network effects in the IS field, a shift to an alternative driver of herd behavior, information cascades, is required [9, 10, 34].

Katz and Shapiro [27] define network effects as the indication that a product becomes more valuable as its user base increases (e.g., friends connected through Facebook). However, herd behavior does not have this type of value-adding mechanism, since the adopter herds to overcome uncertainty and to avoid information search costs or being blamed for making a particular choice. Another difference between these similar concepts (network effects and herd behavior) is their information sources. While observing others’ actions is the source of people’s information, network effects is often the result of frequent information sharing among new and existing users [54]. Moreover, an adoption decision made via herding is fairly fragile and is prone to reversal, but network effects can serve to reinforce the value of a technology and make the user base less volatile [34].

2.2. Information cascades

Information cascades occur when potential adopters become less responsive to personal information and instead prefer to imitate predecessor adopter’s decisions, presuming that the previous adopter is better informed [10]. Thus, imitation and ignoring one’s own information are two main underlying characteristics of information cascades. Despite the availability of substitutes, information cascades may lead to the dominance of one product or technology over another and sometimes may lead to the rejection of more efficient technologies [10, 18]. Rationally, ignoring personal information and mimicking the prevailing decision results in losing valuable private information as well as poor information aggregation through blocking the flow of new information to later decision-makers [35]. This phenomenon creates a chain reaction, which leads an increasing number of individuals to join a herd. In fact, Bikhchandani et al. [11] argue that following the first few individuals, the likelihood of an information cascade starting is very high.

The underlying idea in information cascades is that decision makers each have some private information that can be regarded as a signal about the utility of a decision. However, the signals are noisy and imperfect, so adopters must make their decisions under uncertainty [63]. This signal can be flawed since in the competitive environments in which most IT adoptions occur, decision makers may rationally employ signal jamming to misinform others [16]. This characteristic of the signal suggests that herd behavior is often influenced by low informativeness, which means the herd does not transfer all of the preferences and
information of herd members [36]. The observable part of this course of actions is the decisions, but not the signals, which are noticeable by other decision makers who then modify their beliefs about the appropriate course of action.

2.3. Observation of prior adoption

Technology adoption behavior is especially prone to learning from observing predecessors’ adoptions, since technology adoptions are fraught with uncertainties [63]. Observational learning suggests that individuals can supplement their private incomplete information by observing the behavior of others. The outcomes of adoption decisions are often uncertain, especially when we are dealing with the most complex artifacts built by humans, technological components. Also, it takes a long time to realize the impact of an adoption [12]. Due to this uncertainty and ambiguity, observational learning becomes a necessary condition for successful herd-like adoption [63]. A follower may infer that the technology is worth adopting, because the predecessors’ information must have supported their decision. Such an inference can save a great deal of cognitive effort for the follower [15]. Ultimately, uncertain technology decisions can be made much easier by observing and utilizing the behavior of others.

2.4. Uncertainty of adoption

Prior studies argue that uncertainty is a driver of herd-like behavior in technology adoption decisions [19, 36, 63, 55]. As a result of asymmetric private or limited information, individuals may join a herd to reduce the uncertainty of their decision. Moreover, observing that a particular decision is gaining popularity among people is essential to encourage individuals to join the herd [50]. In this regard, the number and identity of the previous adopters matters. Rao et al. [48] indicate that as more people choose an alternative, it exponentially affects the herding toward this decision. Also, adopters may rely more on decisions of a particular group of predecessor, whom adopters believe has made a better decision or has more precise information, such as fashion leaders [10].

2.5. Herd behavior in technology adoption

In accordance with previous herd behavior literature, in this study I define herding in the context of technology adoption as the phenomenon in which a potential adopter follows others when making an adoption decision, even if their personal information advocates choosing an alternative. Herding can help individuals decide which technology to adopt; it also assists them in choosing whether to accept or reject a particular alternative. Studies show that a decision to adopt or reject a technology efficiently signifies a situation where herd behavior may occur [11]. Bikhchandani et al. [10] examined how an individual decides to accept or reject the adoption of a particular technology based on an adopter’s observations of the predecessors’ acceptance/rejection decisions. In this vein, Rao et al. [48] indicate that the main focus of herd literature is on addressing the discrete decisions of individuals, such as to adopt or to reject.

3. Research Model

As noted earlier, the key question of interest in this paper is: Why do people herd in adopting a technology or technology-mediated product/service? In general, people adopt only the technologies that they believe will be useful in improving the effectiveness and efficiency of performing some task [62]. In the same vein, individual characteristics are potentially important to successful adoption because different individuals have different needs [31, 67].

These variations in technology and adopter characteristics correspond directly to core underpinnings of the Task-Technology Fit Model (TTF), since it recognizes these two factors as elements that lead to ultimate utilization [20]. Thus, TTF is particularly appropriate as the basis for my research model incorporating herd behavior (Figure 1).

Specifically, TTF has been employed to provide the conceptual basis for understanding individuals’ evaluation of IS. It has also been used to test propositions about the antecedents of user assessments. Goodhue et al. [20] found that both system characteristics and individual characteristics influence user evaluations of IS. Moreover, their study revealed that individual characteristics should interact with or moderate the relationship between information systems and user assessments. Specifically, they found that individual characteristics moderate the strength of the link between information systems and users’ intention to employ them [21]. TTF has constructs that can be easily tailored to study herd behavior. For instance, understanding the role of individual and technology characteristics, and acknowledging their effects, is essential in studying the impact of herd behavior on one’s decision making.

My study adapts and revises TTF in building the proposed research model. Antecedents of herd behavior, observation of others’ adoption and uncertainty of adoption [55], are integrated with TTF. Also, the information cascades construct is integrated
into the model as the primary outcome of IT adoption herding behavior.

### 3.1. Antecedents of herding

As mentioned above the herd literature has suggested two antecedents for herd behavior to occur: the observation of previous adopters’ action and uncertainty of adoption [9, 14, 63, 55, 64]. Observing previous adopters’ performance is now much easier than before. Society and media pay considerable attention to advancements in information systems and offer updated developments on the latest technologies. The Internet and other digital channels let people easily observe the decisions of others concerning technology adoption [18]. For example, Amazon shares the history of its buyers with potential buyers to let them know the popularity of a particular product as well as other similar products, and Apple`s App Store publishes top grossing charts to help users follow trends. Apart from the digital world, people can directly observe the adoption decisions of others, for instance, by simply witnessing the lines in front of Apple stores after the announcement of a new iPad model.

Cost savings that adopters may have achieved is another convincing factor that encourages followers to observe the adoption behaviors of others [48]. To deal with asymmetric information, individuals employ information searching strategies [19]. Information searching requires time, energy, and even financial investment. Sunk costs (wasting personal investment) may occur if an individual decides to maintain the status quo when he or she stops to search for further information. Likewise, a potential adopter may wish to explore the features and benefits of a technology to see if it addresses his/her needs [21, 39, 68]. All of these things require time and energy, and it might be convincing for an individual to ignore personally held information and decide based on predecessors’ actions, assuming that they have done all the necessary information search and studies. The above argument leads me to hypothesize that:

**H1:** Observation of other people’s adoption is positively related to information cascades.

![Figure 1. Research Model](image)

As discussed, one of the major motivations of herd behavior in adopting new technology is the desire to overcome uncertainty and avoid costs or blame for one’s choices [9, 14, 63, 55, 64]. In general, uncertainty occurs when a lack of accurate information reduces an individual’s prediction precision [42]. In the context of technology adoption, therefore, uncertainty can be defined as the inability to foresee the concerns...
related to adoption of a technology because of inaccurate information [63].

Studies have revealed that individuals are likely to herd as the degree of uncertainty about a decision rises [9, 10, 11, 47, 36, 63]. Uncertainty is an important driver of information cascades, in which potential adopters (instead of making decisions based simply on their private information) imitate the actions of their predecessors [63]. Higher uncertainty impedes people from accurately analyzing the linkage between an adoption decision and its consequences [55]. Consequently, I argue that it is an appropriate approach for an adopter to ignore his/her incomplete privately held information and imitate the decisions of others due to higher uncertainty. Therefore I hypothesize that: 

H2: Uncertainty of technology adoption is positively related to information cascades.

3.1.1. Adopter characteristics. Including individual characteristics in the model is important since there is increasing evidence that individual differences affect users’ choices about technology [2, 54]. For example, individuals who are highly risk-averse are less likely to adopt a technology if it involves high uncertainty [32]. However, the impact of decision maker characteristics on herding behavior has not been thoroughly investigated. Prior studies in technology adoption have used different constructs to investigate the role of individual characteristics. For example, computer literacy [20], experience with particular technology [22], experience with technology and with tasks [54], personal innovativeness [1], mindfulness [19], and computer playfulness [1] have all been found to have an influence on technology adoption.

I focus on three specific individual characteristics that are likely to have the greatest effect on herding behavior of potential technology adopters. They are self-efficacy, personal innovativeness, and mindfulness. Self-efficacy is defined as a person’s belief in his/her ability to accomplish a specific task [8]. Computer self-efficacy, defined as an individual judgment of one’s capability to use a computer, has been employed for more than a decade to predict a diversity of information system attitudes and usage outcomes [40]. Although computer self-efficacy has not been studied in the area of herding behavior, there is empirical evidence indicating that individuals with higher self-efficacy are willing to explore a new technology since they perceive technologies to be easier to use [61, 54]. Self-efficacy can also explain one’s purchase intention [60] and willingness to use online learning [44], decision-making systems [65], and smartphones [13]. As these prior studies indicate, self-efficacy is an important predictor of attitude and usage intention. Therefore:

H3a: Self-efficacy will negatively influence the relationship between observation of prior adoption and information cascades.

H3b: Self-efficacy will negatively influence the relationship between uncertainty of adoption and information cascades.

To further investigate the effect of individual difference variables on adopters’ decisions regarding whether or not to join a herd, I consider the role of personal innovativeness. Agarwal and Prasad [1] define personal innovativeness as a willingness to try any new information technology.

Several authors agree that an individuals’ innovativeness influences their cognitive and decision-making processes [47]. Agarwal and Prasad [1] indicate that innovativeness in the realm of information technology acts as a moderator on the antecedents and consequences of perceptions with regard to a particular system. Therefore, consistent with the Innovation Diffusion Theory [47], the tendency of individuals to innovate determines the sources of information they consider in making adoption decisions.

In the same vein, San Martin and Herrero [49] note that the more innovative individuals are, the less influenced they are by the opinions of other members of the social system with respect to the consequences of adopting a technology. Therefore, the higher one’s personal innovativeness, the weaker the influence of others’ adoption decisions on the potential adopter’s decision to imitate them. Moreover, innovativeness has been linked with a higher individual acceptance of risk [23]. Therefore, perceptions regarding existing facilitating conditions are less influential in the adoption decision when individuals have a high level of personal innovativeness [49]. In other words, as innovative individuals are willing to take a higher level of risk, the presence or absence of the observation of prior adoptions and the level of the uncertainty of adoption, ends up being less important for the development of the imitation behavior.

Personal innovativeness as a psychological trait of the potential adopter, although having been asserted to significantly and positively influence individual’s adoption of new technologies [33], remains neglected in the investigation of herding behavior [55]. As each person has his/her own level of personal innovativeness, I argue that the presence of this factor will reduce the tendency to adopt herd-like behavior, resulting in different adoption outcomes. Therefore, I hypothesize that:

H4a: Personal innovativeness will influence negatively the relationship between observation of prior adoption and information cascades.
Today’s information-rich environments, the amount of mindful attention that decision makers allocate to making the information meaningful is a valuable individual trait. Langer [30] defines mindfulness as a state of alertness that entails active information processing, and creation and refinement of distinctions, while recognizing multiple perspectives. By remaining alert to potential shifts, mindful individuals are more adaptively receptive to changes in their environment [19]. This helps mindful individuals to cope successfully with uncertainty [30]. Fiol et al. [19] found that people will resist the adoption and use of appropriate decision structures if mindlessness is the norm. Therefore, I argue that mindfulness allows individuals to resist herding pressures and helps them to follow their own uniquely successful strategy. Mindful individuals will search for additional relevant information leading to discriminating decision making. Thus,

**H5a: Mindfulness will negatively influence the relationship between observation of prior adoption and information cascades.**

**H5b: Mindfulness will negatively influence the relationship between uncertainty of adoption and information cascades.**

### 3.1.2. Technology characteristics

A large body of research has revealed that various characteristics of the technology as experienced by decision makers can potentially influence their adoption behaviors [61, 47, 58]. As the TTF model [20] suggests, technology characteristics will influence the decision of an adopter in evaluating whether to join the herd and employ the technology to address his/her needs, or reject it. According to TTF, an individual will accept technology only if its features fit the individual’s needs [20]. Research has proposed that a better fit will improve perceived performance [21, 39, 68], which I argue will influence the herd behavior of adopters. The characteristics of the technology under consideration have been found to have a significant moderating effect on the TAM relationships [52]. For instance, it seems likely that complexity will play a more important role in new and complex technologies [52].

To define the technology-demand fitness, I will adapt technology characteristics recognized by Innovation Diffusion Theory (IDT) [47]. IDT is a leading theory for analyzing technology characteristics in relation to technology adoption. IDT indicates that when faced with a new technology, an individual will try to reach an adoption/rejection decision through collecting relevant information using communication tactics [47]. By adapting Rogers’ [47] categorization of innovation, characteristics of technology can be defined based on five attributes (Table 1).

**Table1. Attributes of innovation [45]**

<table>
<thead>
<tr>
<th>Relative advantage</th>
<th>The degree to which a technology is perceived as being better than its predecessor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compatibility</td>
<td>The degree to which a technology is perceived as being consistent with adopters needs.</td>
</tr>
<tr>
<td>Complexity</td>
<td>The degree to which a technology is perceived as being difficult to use.</td>
</tr>
<tr>
<td>Observability</td>
<td>The degree to which the results of a technology are observable to others.</td>
</tr>
<tr>
<td>Trialability</td>
<td>The degree to which a technology may be experimented with before adoption.</td>
</tr>
</tbody>
</table>

Tornatzky and Klein’s [58] and Arts, Frambach, and Bijmolt’s [5] meta-analyses of research on innovation characteristics both found that not all characteristics, as proposed by Rogers’ [47] framework, were equally important in explaining innovation adoption. Specifically, only relative advantage, complexity, and compatibility were consistently related to adoption.

In the same vein, related literature suggests that among the five attributes of technology, relative advantage is one of the most frequently tested characteristics, and one of the most reliable predictors of adoption behavior [46, 66]. Moore and Benbasat [43] found that relative advantage of a technological device is positively associated with the rate of adoption. For instance, when a potential adopter perceives clear advantages offered by mobile banking, they are more likely to have a positive attitude toward adopting mobile banking [4].

Relative advantage of a particular technology can act as an encouragement of imitation in adoption by reducing the need to observe prior adopters’ identity and number. Likewise, relative advantage may decrease the effect of uncertainty of adoption on joining a herd, since it compensates for the risk of adopting a new technology. The following hypotheses are thus proposed:

**H6a: Relative advantage of a technology will negatively influence the relationship between observation of prior adoption and information cascades.**

**H6b: Relative advantage of a technology will negatively influence the relationship between uncertainty of adoption and information cascades.**

Art et al. (2011) also found that compatibility is a strong driver of technology adoption. Moreover, it is revealed to be one of the most frequently identified
factors for adoption and diffusion of Internet-based technologies [60]. Likewise, in the field of mobile technology adoption, Lu, Liu, Yu, and Yao [38] argue that facilitating conditions such as technology factors regarding compatibility might constrain usage and make adoption difficult. Koivist and Urbacowski [29] also found inconsistent quality of services perceived and delivered caused stress and discomfort when users interacted with Internet services. This discomfort can lead potential adopters to perceive higher uncertainty in adopting a technology, and also to more heavily weigh the influence of the identity and number of prior adopters. Thus, the following hypotheses are proposed:

**H7a**: Compatibility of a technology will negatively influence the relationship between observation of prior adoption and information cascades.

**H7b**: Compatibility of a technology will negatively influence the relationship between uncertainty of adoption and information cascades.

Complexity of a technology can also play a key role in technology adoption, and research reveals that it is a critical determinant of new technology adoption [50]. As an information technology becomes increasingly complex, an exact evaluation of its benefits usually requires a more profound and detailed knowledge, which most adopters lack [6, 18]. To reap the benefits of a new technology, most adopters need to invest time and energy, which causes adoption decisions to be more risky [63]. Therefore, when faced with sophisticated technologies, individuals are uncertain about what a new technology can do for them at the time it is adopted. Perceptions of the usefulness and ease of use of a technology have been addressed in the Technology Acceptance Model (TAM) [17]. TAM highlights the importance of technology characteristics in adoption decisions, and emphasizes, particularly, a technology’s complexity. Researchers found that the more an innovation is perceived as complex, the more learning costs to adopt new behaviors will be involved [25]. Therefore, a potential adopter’s perception of complexity of a technology will affect his/her herding behavior based on the level of observability of prior adopters’ identity and number, and also the uncertainty level of adoption of that particular technology. Thus, the following hypotheses are proposed:

**H8a**: Complexity of a technology will positively influence the relationship between observation of prior adoption and information cascades.

**H8b**: Complexity of a technology will positively influence the relationship between uncertainty of adoption and information cascades.

Herd literature suggests that information cascades have a significant influence on one’s own adoption decisions. Scharfstein and Stein [51] found that individuals tend to discount their private information and imitate others’ assessments in order to avoid reputational damage, such as being regarded incompetent in the case of making a decision different from others. As a defensive strategy, individuals usually opt for sharing the blame by imitating others’ decisions in order to avoid their own performance lagging behind. Such reputation-motivated strategies rarely help exploit projected IT investment payoffs [45]. In the same spirit, Trueman [59] investigated reputation-based herd behavior of stock market analysts, and found that analysts have incentives to make predictions biased toward the market’s previous expectation. Zwiebel [69] also stated that most individuals tend to herd in order to avoid competitive disadvantages resulting from refusing a particular technology. Similarly, in the technology adoption area, despite the involvement of uncertainty and risk, imitating others mitigates the probability of unsuccessful technology adoption through herding, since it is still better than the situation where a person becomes the only one making the wrong decision of rejecting an efficient technology and then suffering reputation damage [55]. Accordingly, I argue that most people may prefer to follow standard behaviors to reduce the risk of performing poorly in adopting an innovative technology, in order to avoid being regarded as an incapable person. Therefore, information cascades can increase an individual’s technology usage intentions and it is a genuine way to evade worst-case scenarios of lagging behind peers. Thus, I hypothesize that:

**H9**: Information cascades are positively associated with a person’s Intention to Use a new technology.

### 4. Method

#### 4.1. Research Design and Procedure

An online experiment will be conducted to test the research model. Snapchat, a social media application, will be used as the focal technology. Snapchat is a photo messaging application, which enables users to take photos and record videos, and send them to a controlled list of recipients. Users set a time limit for how long recipients can view their snaps after which they will be hidden from the recipient’s device and deleted from Snapchat’s servers [53].

I am currently in the process of seeking IRB approval to begin soliciting participants, with the goal of completing data collection in Fall 2014. Given the complexity of the research model, a fairly large sample size (n>400) will be necessary to achieve adequate statistical power. Respondents will be recruited in several ways. First, students at a large Midwestern

---

3597
public university will be invited by email to take part in the study. Participants will be automatically entered in a drawing for one of three $100 Amazon gift cards. If more respondents are necessary, I will solicit additional participants via Amazon’s Mechanical Turk, a useful crowdsourcing platform, which provides a large, stable, and diverse subject pool to conduct behavioral studies [41].

Table 2 summarizes the experimental design. The cross-sectional research design will include one survey conducted at the adoptive stage. At the beginning of the survey, a description of Snapchat including its function, major features, and customization options will be presented to the subjects. Subjects will then be asked to report an example of what Snapchat can do for them at work or in a study based on the description. By doing so, the experiment will situate subjects in the context of adopting Snapchat. Subjects then will answer questions about their perceived uncertainty regarding adoption. Only those subjects who have very little or no experience with Snapchat will be included in the experiment.

To manipulate the level of observation of previous adopters, subjects will receive treatment. Subjects will be randomly assigned to two groups, one control group and one treatment group. The treatment group will receive a message stating that a large number of users and a short list of some well-known adopters have adopted Snapchat.

After the treatment page, participants in both groups will be requested to answer the questions about information cascades and intention to use Snapchat. Two items for manipulation check will be included for the treatment group. These items will measure the subjects’ awareness of the number and identity of previous adopters, in response to the treatments.

<table>
<thead>
<tr>
<th>Table 2. Experimental design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Condition</td>
</tr>
<tr>
<td>0. Control Group</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>1. Treated Group</td>
</tr>
</tbody>
</table>

The survey instrument has been generated based on previously validated items for each construct as found in extant literature (a list of individual items and references for each construct have not been included here due to space limitations), and includes thirty-five questions rated on a seven-point Likert scale ranging from ‘strongly disagree’ to ‘strongly agree.’ Structural equation modeling (SEM) will be used to test both the measurement and structural models. Recognized techniques and thresholds will be used for determining the presence of acceptable construct reliability, convergent and discriminant validity, and absence of method bias. Accepted measures of overall model fit and results of path coefficient testing will be reported for each hypothesis in the model.

5. Contributions

Conceptually, this research has added two new dimensions, technology and adopter characteristics, to describe herd behavior in technology adoption. Both factors enrich our understanding of user technology adoption. Theoretically, I develop a research model of herd behavior in the adoption of technology and technology-mediated products/services, a phenomenon that has received little attention in IS research. I aim to contribute to existing herd behavior literature through highlighting the roles of individual factors and technology characteristics, which have not been studied to date [55]. Practically, for IT practitioners, my paper aims to show that herd behavior exerts a strong influence on adopters with certain individual characteristics, and therefore offering technological products/services with specific characteristics is more likely to create a herding effect, which in turn can boost the adoption of such products.

6. References

[43] Moore, G. C., and Benbasat, I., “Development of an instrument to measure the perceptions of adopting an