Antecedents and Consequences of Flow Experience in Online Movie Information Sharing Behavior: An Empirical Study of Young Chinese Moviegoers Living in Korea

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Abstract

This study aims to understand the antecedents and consequences of flow experience in online movie information sharing behavior of young Chinese moviegoers residing in Korea to explore a potential market. We followed the Stimulus-Organism-Response (S-O-R) theory and flow theory approaches for developing measures of constructs and investigated previous related studies. This study collected 186 data from Chinses students who attend Korean university. Statistical analysis revealed that information seeking behavior and telepresence are related to online flow experience. In addition, the online flow experience affected consumer satisfaction and information sharing behavior. Flow experience also has been predicted the mediation effect between stimulus information seeking behavior, telepresence and satisfaction and information sharing behavior. Our research findings offer insights for marketers in the movie distribution business who are interested in a better understanding of the behaviors of Chinese moviegoers residing in Korea

1. Introduction

In general, social networking services (SNS) have become mainstream in online communication for consumers and distributors. With the emergence of diverse SNS, users employ this as an effective channel to obtain or exchange information, build and maintain relationships, and interact with others [1]. In addition, SNS provides many opportunities for retailers such as fostering relationships and interaction with customers [2]. As a result, consumers tend to visit information sites more often, have greater purchase intention, and generate more positive word-of-mouth [3].

Movie industry distributors employ SNS as a marketing channel to influence positive consumer behavior such as purchase intention, electronic word-of-mouth, and reviews [4]. Korean movie distributors also make

extensive use of SNS as an effective marketing tool. CGV, Lotte Cinema, and Megabox, the three major multiplex cinemas in Korea, offer movie information to users via their official social networking sites. Through this interaction, effective advertising tends to maximize and enhance theaters' profits [2]. However, annual box office revenues have rarely increased and tend to decrease. In 2015, revenue growth rate fell from 7% to 3%, and to 2% in 2016. Thus, it is important to develop and expand a new consumer segment.

Considering these problems, movie distributors have begun to focus on young Chinese moviegoers who live in Korea and promote movie information to extend a new potential market. According to a 2018 report on immigration, Chinese residents represent almost half of the total foreign residents in Korea. In addition, watching movies is one of the most popular leisure activities in Korea. Drawing on previous research, entertainment product consumption can help foreigners adapt to local culture and help them have a sense of well-being in Korea [5].

Previous study also suggested that Chinese students' living in Korea motivation for SNS usage is information seeking, leisure activities, and connecting with others [6]. Focusing on consumer online behavior, online users always seek information from people who are close to them. Information shared by consumers can help others access movie information more easily and to make purchase decisions [7]. Thus, to explore a new potential market, it is important to understand Chinese SNS consumers' online behavior.

However, how can we understand consumers' online behavior more effectively? Flow theory can be used to understand consumers' online behavior such as satisfaction, information sharing, and electronic word-of-mouth [8]. SNS users always experience flow. Flow is an attention and enjoyment state of user's experience, when they interact via online activities [9, 10]. Previous studies have determined that online flow experience can have a positive impact on consumer behavior [11]. Chinese SNS consumers also present similar behavior when they experience flow [12].

Considering flow experience could create many opportunities, and it is important to identify the factors that can enhance consumer flow experience. Telepresence is an important stimulus defined as a realistic environment created by online information, which can affect consumer flow experience [13]. However, the online telepresence environment is not a single stimulus to encourage flow experience. Recent research suggest that this factor affects users' flow experience [14]. However, the research on this is scant and the relationship between individual motivation and the online environment needs to be demonstrated.

Information seeking behavior is also a critical stimulus factor, which is used to predict consumer flow experience. Drawing on previous studies, individual characteristics, information needs, and variety seeking behavior are important factors that affect consumer flow experience in the online environment and promote positive attitude and behavior [10, 15].

Based on the theoretical background of Stimulus-Organism-Response (S-O-R) theory, this research draws on multi-dimension stimulus factors of telepresence and information seeking behavior to build an integrated conceptual model and fill the research gap [16]. S-O-R theory has been widely used with flow experience [17], which includes telepresence, information seeking behavior, flow, flow response satisfaction, and information sharing behavior as stimulus factors. The study used a survey to empirically investigate Chinese consumers' online behavior to create a potential market for Korean movie distributors. Data are gathered from Chinese residents in Korea who have experience of searching for and sharing movie information through SNS.

This research aims to extend the basic theoretical model, focusing on young Chinese residents in Korea. This study expanded factors, drawing on information seeking behavior and telepresence as antecedents of flow experience. The study also examined consequences of flow experience response, not only in terms of satisfaction, but also consumer information sharing behavior. This research will also determine the mediation effect of flow experience. Finally, this research will present implications for movie distributors and outlines

some limitations that provide opportunities for further study.

2. Theoretical Background and Hypotheses Development

2.1 Theoretical Background
2.1.1 S-O-R Theory

This research conceptual model is developed using Stimulus-Organism-Response (S-O-R) theory [16]. The S-O-R framework comprises three components: stimulus, organism, and response.

Stimulus refers to factors that can influence an individual's internal state. The stimulus component of the S-O-R theory framework is always associated with environment and personal demand [17]. As technology develops, the online environment can offer more realistic information for users. A realistic environment can prompt the consumer's online flow experience. At the same time, the information demand would prompt consumer online flow experience while people are searching for information.

Organism is defined as internal processes and structures acting as a mediator between stimulus and an individual's final action, reaction, or responses. The organism component of the S-O-R theory framework is the consumer flow experience. Csikszentmihalyi (1990) argued that

"flow is the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it, even at great cost, for the sheer sake of doing it."

Response represents an individual's final outcomes such as intention and behavior [18]. The response component of the S-O-R theory framework focuses on consumer behavior. When people experience online flow, it stimulates positive behavior such as satisfaction, information sharing behavior, and site revisit [19].

Since the online marketing strategy is the development of a new market, S-O-R theory has extended into the online marketing research setting to improve the understanding of customers' reaction to, and subsequent behavior in online environments [17].

2.2 Hypotheses Development
2.2.1 Information seeking behavior and Flow

Information seeking behavior is a normal activity on websites. Most people use SNS to obtain information that they need. Previous study argued that online information seeking behavior can bring about a state of flow [9]. Several relevant studies support the proposed relationship between information seeking behavior and flow experience. Other determined that web interface features affect consumers' online purchase intentions. Their results suggested that information seeking behavior positively influences flow [20]. A theory-based study of the flow experience of web users demonstrated that when SNS users are in the process of information seeking, they are curiosity leads them to seek interesting information, which is critical to the flow [21]. Time distortion refers to the point at which customers are so involved in the information seeking activity that time elapses rapidly for them [22]. Other researches have also asserted that access to relevant, accurate product information helps consumer to concentrate better as the information is highly related to the consumer and helps them to solve problems effectively or make a final purchase decision, thereby leading to deeper immersion in the SNS [23].

We therefore formulate the following hypotheses:

Hypothesis 1: Information seeking behavior positively influences perceived enjoyment.

Hypothesis 2: Information seeking behavior positively influences perceived time distortion.

Hypothesis 3: Information seeking behavior positively influences attention focus.

2.2.2 Telepresence and Flow

Telepresence focused on actual feelings generated by online content [24]. According to these academics, telepresence could be defined as a realistic environment experience through a range of media contents. In the online marketing environment, telepresence is formed as consumers feel as if they are in a real environment as they consume. According to research, telepresence could affect users' positive attitude and behavior. Both flow and telepresence have gained increasing attention from researchers studying user behavior in computer mediated environments [25]. Previous research suggested that telepresence positively influences flow enjoyment [9]. Others verified the positive relationship between flow enjoyment and telepresence. Telepresence also has a strong relationship with time distortion [13,14]. If the available SNS information is highly realistic, SNS users will totally focus on the information and are not aware of time passing. Telepresence can also produce a sense of time distortion and forgetting about one's immediate surroundings [24].

We therefore formulate the following hypotheses:

Hypothesis 4: Telepresence positively influences perceived enjoyment.

Hypothesis 5: Telepresence positively influences time distortion.

Hypothesis 6: Telepresence positively influences attention focus.

2.2.3 Flow and Satisfaction

Satisfaction was defined as being comfortable with the SNS and having a positive attitude toward the information. Users' flow experience could enhance satisfaction with SNS activities. Previous research found that enjoyment increases user satisfaction [23, 26]. Attention focus is also an important component of flow. If users are in a flow state, they must first concentrate on their activities [23], which may lead them to feel more satisfied with these activities.

We therefore formulated the following hypotheses:

Hypothesis 8: Perceived enjoyment positively influences satisfaction.

Hypothesis 9: Time distortion positively influences satisfaction.

Hypothesis 10: Attention focus positively influences satisfaction.

2.2.4 Flow and Information Sharing Behavior

Previous research examined information sharing behavior on blogs in Taiwan; the effects of interactivities and gender differences have also verified that positive flow experience leads to information sharing behavior [19]. Other study also revealed the positive relationship between flow and information sharing behavior [27]. Therefore, we assume that information sharing behavior will be influenced by flow.

We therefore formulate the following hypotheses:

Hypothesis 11: Perceived enjoyment positively influences information sharing behavior.

Hypothesis 12: Time distortion positively influences information sharing behavior.

Hypothesis 13: Attention focus positively influences information sharing behavior.

2.2.5 Information Seeking Behavior, Telepresence and Satisfaction, Information Sharing Behavior

When seeking information, SNS users want to obtain diverse information about the product. The available information is positively related to satisfaction. If a user obtains enough information from the seeking behavior, they will be more satisfied. They would have positive attitude about the product. According to [28], beyond information seeking, consumers' online deliberation about the risks and benefits of red meat has also verified that information seeking behavior positively influences satisfaction. Information seeking behavior is an

antecedent of information sharing behavior. According to [29], information seeking, judgment, use, and sharing have verified the relationship between information seeking and sharing.

Other research investigated the positive relationship between telepresence and consumer attitude and behavior [30]. Other studies also confirmed the relationship between telepresence and consumers' satisfaction. The impact of telepresence on product beliefs, attitude toward brand, and attitude toward advertising has been investigated [31]. Previous studies have verified SNS flow experience as a mediator between antecedents such as personal goals, online environment, and positive consumer behavior. Previous studies have illustrated that the quality of information on websites positively affects personal information seeking behavior, leading to information sharing behavior and satisfaction through their SNS flow experience [11, 32].

We therefore formulate the following hypotheses:

Hypothesis 14: Information seeking behavior positively influences satisfaction.

Hypothesis 15: Telepresence positively influences satisfaction.

Hypothesis 16: Information seeking behavior positively influences information sharing behavior.

Hypothesis 17: Telepresence positively influences information sharing behavior.

Hypothesis 18: Flow has a mediating effect between information seeking and satisfaction.

Hypothesis 19: Flow has a mediating effect between information seeking and information sharing behavior

2.2.6 Proposed Conceptual Model

Our proposed research model is presented in Figure 1. This conceptual model includes information seeking behavior, telepresence, flow experience (i.e., perceived enjoyment, time distortion, and attention focus), satisfaction, and information sharing behavior. A total of nineteen research hypotheses relating to the relationships among these variables were formulated (H1–H19).
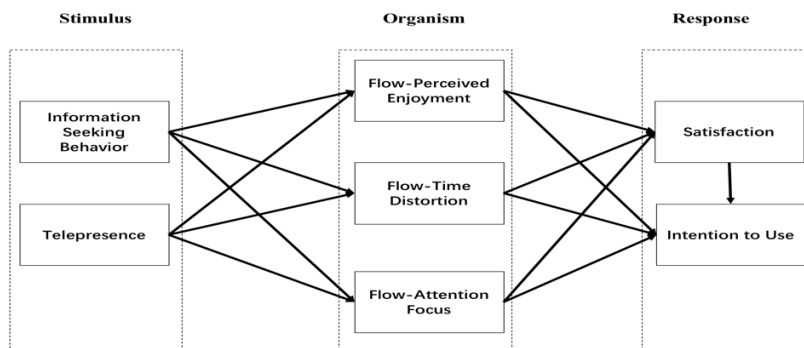

Figure 1. Proposed Model

3. Statistical Technique and Methodology

3.1 Statistical Technique

This research employed SmartPLS to verify these measurements and the theoretical model as the PLS (Partial Least Squares) algorithm is a component-based structural equation modeling technique, "allowing each indicator to vary in how much it contributes to the composite score of the latent variable," thus being "preferable to other techniques" [33]. Meanwhile, PLS is in essence exploratory [34] and is therefore appropriate for this research since we have a new relationship in the research model. The results obtained from SmartPLS are twofold. The following sub-section presents both convergent and discriminant validities. The second sub-section presents the results of the structural models in that it assesses each dependent variable's

relative importance.

3.2 Measurement Development

A self-administered questionnaire that included items on information seeking and sharing behavior, telepresence, perceived enjoyment, time distortion, attention focus, satisfaction, and demographic information was used to collect data. All measurement items are presented in Table 1. Information seeking behavior was measured with four items adapted from [19, 26]. Telepresence consisted of nine items adapted from [36]. Perceived enjoyment included four items, time distortion included three items, and attention focus consisted of four items adapted from [23, 37]. Satisfaction was measured using three items adapted from [37]. Information sharing behavior was measured using four items developed by [26].

Table 1. Measures and Standardized Loadings

Measures (Strongly disagree (1) – Strongly agree (5))	Loadings
Information seeking behavior [19, 26]	
I use SNS to find new movie information	.83
I use SNS to obtain useful movie information	.87
I use SNS to obtain helpful movie information	.83
I use SNS to find movie information, which I am interested in.	.73
Telepresence [36]	
While browsing movie information, the information caught my attention and created a new world for me, which suddenly disappeared when the information finished.	.77
While browsing movie information, I felt I was in the movie world.	.75
I forget my immediate environment when I was browsing movie information.	.79
While browsing movie information, I felt like my body was in the room, bur my mind was inside the movie word.	.77
SNS movie information-generated world seems like "somewhere I visit" rather than "something I see."	.82
While browsing movie information, the word generated by the web-site is more real or present for me compared with the real word.	.74
While searching for movie information, I feel that I am in the world that the movie created.	.77
While browsing movie information, I momentarily forget where I am.	.81
While browsing movie information, it gives me a sense of reality.	74
Perceived Enjoyment [23, 37]	
Using SNS movie information is fun.	.84
Using SNS movie information is exciting.	.82
Using SNS movie information is enjoyable.	.85
Using SNS movie information is interesting.	.71
Time Distortion ([23, 37]	
Time appears to pass very quickly when using SNS for movie information	.90
Time flies when using SNS for movie information	.94
I often spend more time on SNS than I had intended	.88
Attention Focus [23, 37]	
Using SNS movie information, I was intensely absorbed in the activity	.83
Using SNS movie information, my attention was focus on the activity	.92
Using SNS movie information, I concentrated fully on the activity	.85
Using SNS movie information, I was deeply engrossed in the activity.	.89
Satisfaction [37]	

I was satisfied with the movie information.	.91
The movie information is better than I expected.	.94
I was satisfied with everything offered by SNS.	.93
Information Sharing behavior [26]	
I expected to share movie reviews contributed by other users on SNS.	.73
I intend to share movie information on SNS in the future.	.87
I plan to share movie reviews regularly on SNS.	.87
I will share movie information on SNS in the future.	.88

Note: All standardized factor loadings were significant (p <.01).

3.3 Data collection and sample characteristics

The online surveys were administered to young Chinese SNS users in Korea. This research intended to understand foreigner SNS usage behavior in Korea. Chinese people account for almost half of all foreigners in Korea. Chinese online users affect and are affected by other users. In addition, the multiplex group CGV has been exporting into Mainland China. As first consumers, the response of Chinese residents living in Korea to a movie would help distributors judge and predict whether the movie would be a success in China.

The online questionnaire was first developed in English and translated into Chinese by a researcher who is fluent in both languages. The Chinese version of the survey was then back-translated by a native Chinese professor who is also fluent in both languages to ensure translation equivalence. A pre-test was conducted to increase the content validity of the measurement. A sample of 30 Chinese users were asked to complete the survey and examine the questionnaire for meaningfulness, relevance, and clarity.

Personal interviews were undertaken with Chinese students attending three universities in Seoul, Korea: Chu-Ang University, Kon-kuk University, and Kyung-Hee University, which are the most representative universities and have many Chinese students. Because the purpose of this study is to investigate interrelationships among SNSs information seeking behavior, telepresence, flow, satisfaction, and information sharing behavior in movie retail domains, only responses from those who were current SNS users and had sought and/or shared movie information by SNS in the past six months were considered for analysis. To confirm that the respondents had sought and shared movie information, the survey started with a clear question that asked whether they have done so in the last six months. If they indicated no, the survey closed automatically. A total of 212 responses were collected, of which 186 were valid responses.

Among the survey respondents, 48.4% were male and 51.6% were female. The mean age was 24.8, ranging from 18 to 36 years of age. Regarding length of time resident in Korea, 28% of the respondents indicated they had lived in Korea for less than one year, 37.6% between one to two years, 16.1% for more than two years, and 18.3% for more than three years. At total of 43.0% were in graduate school, 36.0% in undergraduate school, and 21.0% on language courses. More than half (51.6%) of the respondents use SNS for more than two hours per day. However, 52.7% of respondents indicated they use Chinese SNS for more than two hours per day, and 64.5% use Korean SNS for less than one hour per day.

4. Statistical Technique and Methodology

4.1 Measurement Model

The measurement model was generated by conducting a confirmatory factor analysis using Smart PLS. As shown in Table 1, all standardized factor loadings were significant at the .01 level. *Composite reliability (CR), the Average Variance Extracted (AVE), Cronbach's Alpha (α), Rho-A* of the measures were calculated. The *CR* values ranged from .88 to .95, exceeding the minimum criterion of .80 (see Table 2). The *Cronbach's*

Alpha (α) of the measures were greater than .82. The *Rho-A* values were between .84 and .92. Based on *CR, Cronbach's Alpha (α), and Rho-A,* the measures suggest a high degree of reliability. Thus, the internal consistency of the measures for each construct was evident [38]. The construct validity was also assessed. When evaluating convergent validity, PLS suggest a cutoff point of .50. As presented in Table 2, for factor loadings within constructs, *AVE* values were greater than .50, well above PLS suggested cutoff. Thus, the reflective measures presented a high degree of convergent validity (See Table 2). Following [39] approach to discriminant validity, in which the squared correlation between two constructs must be lower than the *AVE* of each individual construct, discriminant validity was fully established (squared correlations were consistently smaller than *AVE* values). Details of the measurement model results are shown in Table 3.

Table 2. Results of the Reliability, Convergent Validity

	AVE	CR	Cronbach's Alpha	Rh0-A
IS	.66	.89	.83	.84
TELE	.60	.93	.92	.92
PE	.65	.88	.82	.84
TM	.76	.93	.90	.90
AF	.82	.93	.89	.91
SAS	.86	.95	.92	.92
ISB	.70	.90	.86	.86

Note: IS = Information Seeking Behavior, TELE = Telepresence, PE = Perceived Enjoyment, TM = Time Distortion, AF = Attention Focus, SAS = Satisfaction, ISB = Information Sharing Behavior, CR = Composite Reliability, AVE = Average Variance Extracted

Table 3. Results of Discriminant Validity, Correlation

	AF	IS	ISB	PE	SAS	TELE	TM
AF	.87						
IS	.28	.82					
ISB	.25	.44	.84				
PE	.35	.44	.24	.81			
SAS	.34	.28	.37	.24	.92		
TELE	48	.28	.30	.49	.30	.77	
TM	.56	.43	.13	.46	.18	.44	.91

Square Root of the AVE on the Diagonal

4.2 Structural Model

In this research, the structural model path coefficients and level of significance were used to test the proposed hypothesis. T-statistic values were calculated to examine the statistical significance of the path coefficients.

The results of the path coefficient analysis and hypothesis testing are presented in Table 4 and Figures 2 and 3. The hypothesized effect of information seeking behavior as a stimulus factor on three flow dimensions was assessed. Findings indicated that information seeking behavior is significantly related to perceived enjoyment *(β=.33, P<.001),* time distortion *(β=.33, P<.001),* and attention focus *(β=.17, P<.01).* Thus, hypotheses 1, 2, and 3 were supported. In addition, the impact of telepresence on flow was also assessed. The results revealed that telepresence impacted perceived enjoyment *(β=.40, P<.001),* time distortion *(β=.35, P<.001),* and attention focus *(β=.43, P<.001)*; hypotheses 4, 5, and 6 were also supported.

The proposed impact of flow dimensions on satisfaction and information sharing behavior was tested. The results revealed the impact of perceived enjoyment on satisfaction *(β=.12, P<.05)* and information sharing behavior *(β=.20, P<.001)*, time distortion on satisfaction *(β=.14, P<.05)* and information sharing behavior

(β=.20, P<.001), and attention focus on satisfaction *(β=.27, P<.001)* and information sharing behavior *(β=.11, P>.05)*. Thus, while hypotheses 7, 8, 9, 10, and 11 were supported, hypothesis 12 was not supported.

The hypothesized relationship between information seeking behavior and satisfaction was evaluated. As expected, the results revealed that information seeking behavior was a significant function of satisfaction *(β=.20, P<.001)* and information sharing behavior *(β=.39, P<.001)*; hypotheses 13 and 15 were supported. Subsequently, the impact of telepresence on satisfaction and information sharing behavior was evaluated. The results revealed that telepresence had a significant influence on satisfaction *(β=.14, P<.05)* and information sharing behavior *(β=.17, P<.05)*. Finally, the relationship between satisfaction and information sharing was assessed. The results indicated that satisfaction significantly impacts information sharing *(β=.21, P<.05)*. Thus, hypotheses 13, 14, 15, 16, and 17 were supported.

Table 4. Results of the structural equation modeling

Hypotheses	Links	Coefficients	t-values
Hypothesis 1	IS → PE	.33***	6.455
Hypothesis 2	IS → TM	.33***	6.135
Hypothesis 3	IS → AF	.17**	3.032
Hypothesis 4	TELE → PE	.40***	6.520
Hypothesis 5	TELE → TM	.35***	8.000
Hypothesis 6	TELE → AF	.43***	7.647
Hypothesis 7	PE → SAS	.12*	2.086
Hypothesis 8	TM → SAS	.14*	1.976
Hypothesis 9	AF → SAS	.27*	3.628
Hypothesis 10	PE → ISB	.20***	3.756
Hypothesis 11	TM → ISB	.20***	3.362
Hypothesis 12	AF → ISB	.11	1.300
Hypothesis 13	IS → SAS	.20***	3.808
Hypothesis 14	TELE → SAS	.14*	2.251
Hypothesis 15	IS → ISB	.39***	6.395
Hypothesis 16	TELE → ISB	.17*	2.135
Hypothesis 17	SAS → ISB	.21*	2.972

	Total effect:	Special Indirect effect:
	β IS→SAS =.22***	β IS → PE → SAS=.02
R² = 33.1% PE		β IS → TM → SAS =.03
R²= 28.7% TM		β IS → AF → SAS =.02*
R²= 24.6% AF	β TELE→SAS =.23***	β TELE → PE → SAS =.02
R²= 16.2% SAT		β TELE→ TM → SAS=.03
R²= 27.8% ISB		β TELE→ AF → SAS =.03***
	β IS→ISB =.38***	β IS → PE → ISB =.03
		β IS → TM→ ISB =.02
	β TELE→ISB =.19**	β TELE → PE → ISB=.03
		β TELE → TM → ISB=. 02***
	β IS→SAS→ISB=.38***	β IS →SAS→ISB=.02*
	β TELE→SAS→ISB=.19**	β TELE →SAS → ISB=.02
		β IS →AF →SAS → ISB=.01
		β TELE → AF →SAS → ISB=.01*
	*p <.05, **p <.01 ***p<. 001	

4.3 Mediation Analysis

This study implies that customer online flow experience mediates the effects of information seeking

behavior and telepresence on customer satisfaction and information sharing behavior. This research conducted PLS analysis of the mediating effect of consumer online flow experience in the relationship between both information seeking behavior and telepresence.

Following [40], we first determine whether the direct path coefficient is significant. If the direct path coefficient is not significant, there is no mediating effect. Second, we test whether the total and indirect effects of path coefficients are significant. This study used specific indirect effect p-values to determine whether the mediating effect is significant. See Table 4.
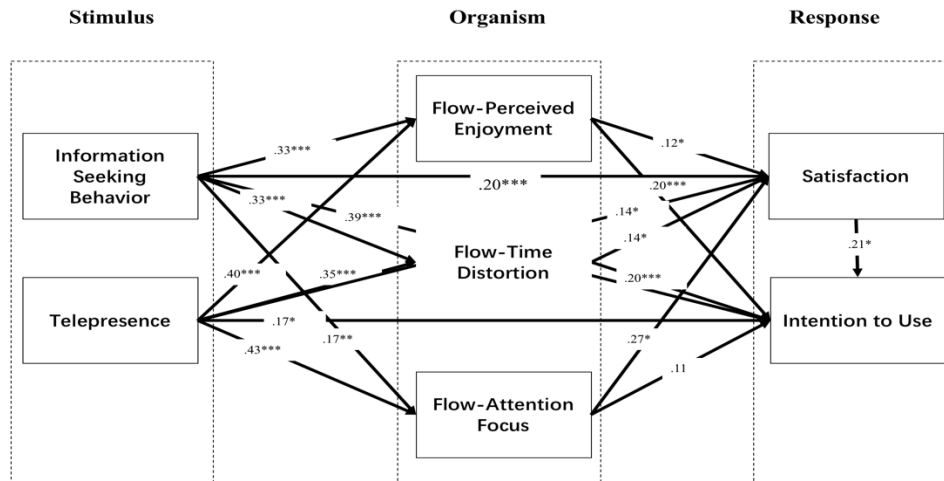

Figure 2. Results of the Proposed Model

5. Conclusion

SNS have been widely used by young Chinese people to obtain information, interact with others, and build relationships. Using a research model built using S-O-R theory, this study attempted to determine more complex relationships. Previous research has also revealed that personal information seeking behavior and telepresence are significant factor of consumer online flow behavior as the result of study [22,13,14]. Flow experience positively influences users' positive attitude and behavior. Many previous studies also predicted the relationship between flow experience and positive consumer behavior [11]. Compared with previous studies, this study extended a more complex model to indicate the factors that can stimulate users' flow experience. This research has also expanded the investigation of flow response. And attention focus has a mediating effect between information seeking, telepresence, and satisfaction. Based on these results, movie distributors should update movie information for Chinese users and provide easy, realist information which can help them experience flow and display positive attitudes and behaviors. As the previous research argued that image information could help consumer experience, which enhance consumer purchase decision and information diffusion behavior [41]. Moreover, if consumers find the presented information is trustworthy or credible, it will help distributors build and foster relationships with consumers. This study has the following limitations. This study had not considered the moderation effect, future study should add the moderator to test more complex model.

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