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EXPLORATION OF INNOVATION ATTRIBUTES ON INTENTION AND ADOPTION OF VIRTUAL REALITY (VR) IN ENTERTAINMENT

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ABSTRACT

Virtual Reality (VR) is an immersive technology that enables a user to experience a real world in a virtually created environment. With this progressive technology, the experience of a user is enhanced in terms of entertainment. The paper explores the perception-based study of VR Technology, especially in Entertainment, based on innovation attributes from Roger's Diffusion Model of Innovation Theory along with cost as an additional attribute that will influence the behavioural intention and adoption of the consumer. The five attributes utilized were complexity, compatibility, relative advantage, observability, and trialability along with cost from which the hypotheses were made. The analysis was done using the reliability tests, and regression by computing the constructs based on the responses. The attributes were studied against behavioural intention whereas cost and behavioural intention were studied against adoption. Except complexity, all other attributes showcased significant relationships with behavioural intention. Also, behavioural intention and cost showcased a significant relationship with the adoption. Although, further studies can be done using more innovation attributes by incorporating individual aspects (features, benefits, applications, and concerns) in the context of VR in entertainment.

1. Introduction

Virtual Reality is considered as a technology that signifies a kind of reality emulation in a specific way. As per the Oxford Dictionary, VR is generalized as a simulation of a 3-D image/environment that interacts with the user incorporating specially designed VR devices.

There are four elements necessary to experience this engaging technology (Sherman & Craig, 2003). Firstly, the virtual (real-like) environment where the user will have the 3-D experience of the virtual world by using specialized devices spatially. Secondly, the immersive feeling that user is in the actual (real-like) world. Third, interactions to an extent where a user becomes responsive to the virtual world and its offerings and fourth, the feedback provided to the user on the basis of senses in response to the input given by the user. A key feature of VR is making 'presence' felt.

Thus, we need to analyze how this technology is being perceived in entertainment. The sole motto of this paper is to explore VR in the field of entertainment by studying the adoption intention based on Roger's model of Diffusion.

2. Literature Review

Virtual Reality (VR) is considered as a technology that offers a simulated experience to the user by creating an artificial (virtual) environment as if the user is experiencing it in the real world (Van Dam et al., 2000). The artificial environment is sensed through the sensory stimuli (sound, sight, taste, and touch).

VR is not like the traditional interfaces that users have experienced. VR, in turn, puts users into an environment and makes them interact with a three-dimensional world that appears to them as real(Bishop & Fuchs, 1992). VR has a dependency on resources such as head-mounted displays, stereoscopic, binaural sound, haptic and vibratory devices(Kim et al., 2013).

VR can be of many types such as non-immersive, fully immersive(Carrozzino & Bergamasco, 2010), web-based, collaborative, or augmented. Fully immersive VR includes a rich virtual experience where the experience can be adjusted as per our will (moving or altering speed) in real-time(Mandal, 2013). Non-immersive VR is an alternative for those who don't want to experience VR fully but want to explore and make decisions by analyzing only in the three-dimensional way where it is okay to go immersive with animations and models without sound and there is no output(Mandal, 2013). Collaborative VR is a kind of sharing of VR experience with others in the virtual environment in real-time. Web-Based VR corresponds to the creation of a virtual environment over the Web using "virtual reality markup language" (VRML), "eXtensible Markup Language" (XML) and "extensible three dimensional" (X3D) concept (Brutzman, 2016). Another feature of VR is their related technologies like augmented reality(AR) and mixed reality(MR) (Yu, 2011).The former one overlays information digitally into the real world whereas the latter one does the merging of 3-D content in real-time that too with the real world.

VR is implemented using the latest computer technologies along with various resources such as gloves, headsets, mounted displays, electrodes so that senses can be simulated properly to create a virtual world(Kim et al., 2013).

There are various domains like education, healthcare, military, entertainment, engineering, marketing, robotics, architecture, and social science, and so on where VR technology is being implemented(Kim et al., 2013). With VR in entertainment, traditional entertainment can take a new birth overall. There are many applications of VR in Entertainment that are covered under this paper.

3. Applications

3.1.1 Virtual World

The virtual (real-like) world allows collaborative VR form where people unite and explore together by sharing stories and vivid experiences. Communication amongst each other happens in the same way as real-world with endless offerings so that people can have interaction in a way they want it to happen (Freiknecht & Effelsberg, 2017).

3.1.2.Theater

Theater is considered as the most traditional yet talented form of entertainment. Collaborative VR leads to the creation of an interactive theater where there is action, showcase of talent and dramatic experience without the traditional stage for the audience. VR theaters can prove to be a good source of income if a model is designed efficiently.

3.1.3.Cinema

With VR in Cinema, entertainment can reach to higher heights. With the selection of efficient hardware and exquisite content, user engagement will be more and experience will be more immersive (Bates, 1991). Users are keener to experience storytelling and action scenes in multidimensional cinemas like IMAX where they can feel immersive and engaged.

3.1.4.Museum

The museum preserves the heritage and archaeological resources of one's country and history. More engagement can be offered to the audience if VR technology comes into play for offering an immersive experience to the user (Carrozzino & Bergamasco, 2010). Specific VR based apps can be designed as per the geographic location of the museum. Thus virtual museum will cater to rich content reflecting all the characteristics possessed by the actual museum.

3.1.5.Amusement Park

One of the most competitive applications of VR in Entertainment includes amusement & theme park. With virtual rides and virtual environment set up, people experience something unusual and unique. With the usage of VR resources, a sense of presence adds flavors to their excitement and experience.. The VR amusement can also come into play for specific purposes like festivals, snow world, rides, and much more.

3.1.6.Gallery

Creating a gallery and let it explore by others is a collaborative form of entertainment where artworks and masterpieces are shared by artists and experts. The enthusiasts will be delighted to relate with the artworks in a connected way by the virtual gallery creation.

3.1.7.Live Music Concerts

With the rise in competition and audience demand for exploring different tastes in music, the virtual concerts happen in a similar way as live concerts providing rich content and amazing experience. VR music studios provide the same immersive experience where recordings can be done and enjoyed by using VR devices.

3.1.8.Hobby Lessons

VR technology brings out a great learning and entertainment experience. Various hobby lessons such as gardening, painting, dancing can be part of 360-degree immersive video content where users can interact using VR devices.

3.1.9.Live Sports Games

VR has extended tremendous opportunities for sports enthusiasts where the 360-degree immersive cameras are being used for virtual sports experience such that every angle is covered and the user is completely engrossed in the (real-like) virtual experience by using a VR headset. In adventure sports, one can experience scuba diving, sky diving, and paragliding with VR

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3.1.10.Games

VR in **gaming** works on feedbacks that may thermal, kinesthetic, tactile, vibrotactile or haptic feedback(Mandal, 2013). Thus the whole story revolves around the sensory information that an individual perceives by his senses as gaming purposes for the same enthusiasm and thrill.

4. Diffusion of Innovation

To understand and analyze the adoption intention in the context of VR in Entertainment, our detailed study utilizes Rogers' attributes of innovation along with one more attribute, cost, to realize the adoption and intention of an innovation.

The DOI Theory ("Diffusion of Innovation") has been developed by Rogers in 1962 to realize how a new idea/technology, basically an "innovation" came into the picture, and with time it spreads throughout a system/groups by modes of specific medium/channels, basically "diffusion", and then an individual being part of a certain group/population accepts a new technology/idea, basically "adoption"(Rogers, 1962).(Rogers, 2003) also describes that the diffusion process caters to the innovations as technological, thus the terms innovation and technology both are synonyms in his views.

It was observed by (Roger, 1971) that the 5 attributes of adoption-compatibility, trialability, complexity, observability, and relative advantage

have a huge impact on adopting an innovation. The above-mentioned attributes will be discussed in detail in the next section.

4.1 Conceptual Model Development & Theory Associated with the Model

To elevate the speed of the diffusion process of a particular innovation(Rogers, 2003), this study looks at Rogers' model of innovation and diffusion theory is considered ; defined five innovation attributes namely, Compatibility, Relative Advantage, Complexity, Trialability, and Observability.

There have been many studies done over the years that have utilized the above mentioned five attributes of innovation (Greenhalgh et al., 2004; Hester & Scott, 2008; Légaré et al., 2008; Tornatzky & Klein, 1982). TRA ("Theory of Reasoned Action") has also studied the intention but only with respect to adoption (I Ajzen & Fishbein, 1980).

TPB ("Theory of Planned Behavior") has also looked upon the impact of actual behaviour and intention or purpose on adoption (Icek Ajzen, 2006). The intention or purpose and the way adoption is perceived in a behavioural front was studied by the TPB (Taylor & Todd, 1995). Another study done on adoption by TAM by only considering behavioural intention (Davis et al., 1989).

VR devices and experiences come with a cost. It has been pointed out already by the researchers that costs become a barrier to adoption when it was charged like a transaction fee (Dahlberg et al., 2008). Thus, the cost has been taken as one of the factors impacting adoption. As per (Hung et al., 2003; Wu & Wang, 2005), there are certain hidden charges that a consumer is charged along with apparent cost thus, impacting the decision to adopt an innovation.

Thus, the following attributes – relative advantages, complexity, compatibility, observability, trialability, and cost will be looked upon to study and analyze the behavioural intention and the acceptance or actual adoption of VR in the field of entertainment (Figure1).

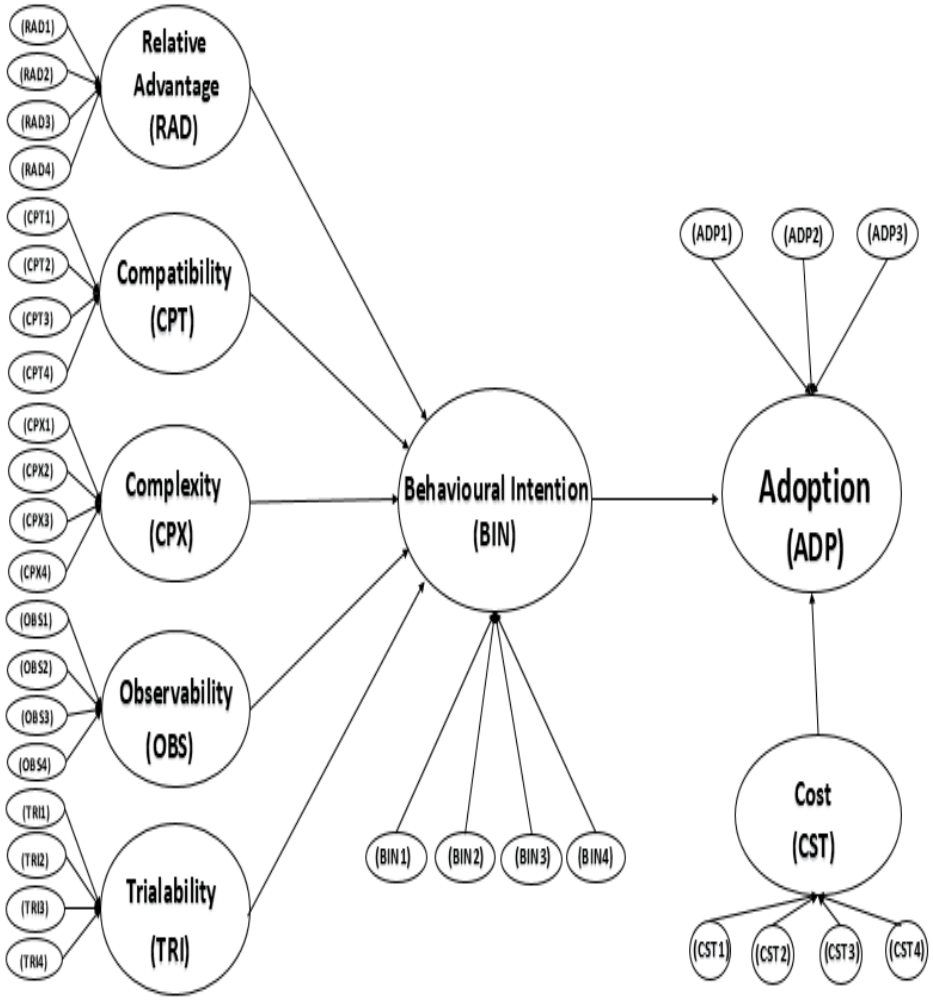

Figure 1 The conceptual model created to study intention and adoption of VR in Entertainment

(Adapted from (Kapoor et al., 2013) and utilized by the Author for VR in Entertainment)

4.1.1.Relative Advantage

As per (Rogers, 2003), an extent to which an innovation/technology is superior to the technology/idea it is replacing or competing with corresponds to the relative advantage. Many studies have been done on online portals (H.-P. Shih, 2008) and the internet on mobile (Hsu et al., 2007) to understand this. Higher advantages offered will definitely correspond to a higher intention of acceptance.

H1: The attribute relative advantage will significantly impact the behavioural intentions of a consumer.

4.1.2 Compatibility

As per (Rogers, 2003), an extent to which an innovation/technology is working at par with the present values and needs of the adopter corresponds to compatibility. as a potential contributor in impacting the behavioural intention of the consumer (Mallat et al., 2008).

H2: The attribute compatibility will positively impact the behavioural intentions of a consumer.

4.1.3.Complexity

As per (Rogers, 2003), an extent to which an innovation/technology is hard or troublesome to deal with, and manage corresponds to complexity. The more perceived complexity of VR in entertainment, the less likely VR in entertainment will be adopted.

H3: The attribute complexity will negatively impact the behavioural intentions of a consumer.

4.1.4 Trialability

As per (Rogers, 2003), an extent to which an innovation/technology is made available to experience and explore for a considerable period before adopting or rejecting it. According to (Arts et al., 2011), trialability leads to the enhancement of readiness of consumers making him behave strongly inclined to innovation but negatively inclined to adoption.

H4: The attribute trialability will significantly impact the behavioural intentions of a consumer.

4.1.5 Observability

As per (Rogers, 2003), an extent to which an innovation/technology is noticeable or visible in front of others. A study of technological products mentioned that the attribute observability impacts the intention (Vishwanath & Goldhaber, 2003).

H5: The attribute observability will significantly impact the behavioural intentions of a consumer.

4.1.6 Cost

The attribute cost is associated with the adoption intention in a negative sense as mentioned by (Tornatzky & Klein, 1982). According to them, more the cost, lesser will be the adoption probability. A lot many studies have been done to realize the impact and impression of cost on the intention to adopt.

H6: The attribute cost when low, will positively impact the adoption intentions of a consumer.

4.1.7 Behavioural Intention

As cited by (Gumussoy & Calisir, 2009), (Icek. Ajzen & Fishbein, 1980) have defined the term behavioural intention as an extent to which a consumer is inclined to a particular technology/innovation and reflects a particular behaviour towards it. (Icek Ajzen, 1991) also advised to consider behavioural intention as the most deciding factor to determine the adoption intention.

H7: The factor behavioural intention will impact the adoption intention of VR in entertainment in a positive manner.

4.2 The primary objectives of this paper are:

1) To provide a brief overview of VR technology with its type and forms.
2) To study the present applications of VR technology in entertainment.
3) To study the diffusion and adoption of VR technology in entertainment.
4) To assess the behavioural intention and adoption of VR technology in entertainment.

5. Research Methodology

The methodology for research has been adapted from (Kapoor et al., 2013) and has been utilized for studying VR technology in entertainment.

5.1 Survey Instrument Used

The survey instrument/measure utilized is a questionnaire (short survey) that comprised of 36 questions where 5 questions are focused on demographics and usage frequency. A Likert (5-pointer) scale has been utilized for the remaining 31 questions that covered all the constructs (attributes) stated in section 2 (Table1).

Table 1 Constructs & Mapping of Questions (Adapted from (Kapoor et al., 2013) for studying Virtual Reality (VR) Technology in Entertainment)

CONSTRUCT	NAME OF CONSTRUCT	QUESTION	SOURCE
BEHAVIOURAL INTENTION	BIN1	You feel inclined towards (VR) Technology in Entertainment.	(Karahanna et al., 1999; Y.-Y. Shih & Fang, 2004; Teo & Pok, 2003)
	BIN2	Willingness to experience VR Technology is an important factor to consider for (VR) Technology in Entertainment.	
	BIN3	You will encourage your peers to experience (VR) Technology in Entertainment.	
	BIN4	Moving forward more people will use/continue to use (VR) Technology in Entertainment.	
TRIALABILITY	TRI1	What type of content as a user you want to try in (VR) Technology in Entertainment?	(Moore & Benbasat, 1991)
	TRI2	Trying (VR) Technology in Entertainment is must if you get a chance to experience it somewhere.	
	TRI3	Trying the (VR) Technology in Entertainment requires efforts.	
	TRI4	First experience with (VR) Technology in Entertainment proves to be impressive.	
RELATIVE ADVANTAGE	RAD1	What are the major benefits of using (VR) Technology in Entertainment?	(Moore & Benbasat, 1991)
	RAD2	(VR) Technology in Entertainment will drive the new content from the entertainment industry.	
	RAD3	(VR) Technology will engage more with the audience in terms of entertainment.	

	RAD4	Where according to you (VR) Technology in Entertainment be more entertaining?	
COMPATIBILITY	CPT1	(VR) Technology in Entertainment is compatible with all the kinds of entertainment you want to have.	(Moore & Benbasat, 1991)
	CPT2	The resources compatible to experience (VR) Technology in Entertainment (e.g. smartphone) are necessary to own.	
	CPT3	(VR) Technology in Entertainment will enhance your experience more than the present experience.	
	CPT4	Experiencing (VR) Technology in Entertainment will not impact your lifestyle/health.	
COMPLEXITY	CPX1	What are your top concerns regarding the usage of (VR) Technology in Entertainment? (Please select all that apply)	(Moore & Benbasat, 1991; Richardson, 2011; Y.-Y. Shih & Fang, 2004; Yang et al., 2006)
	CPX2	(VR) Technology in Entertainment is easy to use.	
	CPX3	Interaction with (VR) Technology in Entertainment will be clear and understandable.	
	CPX4	Experiencing (VR) Technology in Entertainment is challenging and frustrating.	
COST	CST1	(VR) Technology in Entertainment is a costly affair.	(Koenig-Lewis et al., 2010; Mallat et al., 2008)
	CST2	Resources compatible with (VR) Technology in Entertainment are expensive.	
	CST3	(VR) resources will be purchased for entertainment purposes moving forward in future.	
	CST4	Experiencing (VR) Technology in Entertainment just for once will be expensive.	
OBSERVABILITY	OBS1	What according to you will make you feel more entertained with great experience while using (VR) Technology in Entertainment?	(M. L. Meuter et al., 2005; Richardson, 2011)
	OBS2	The concept of (VR) Technology in Entertainment is familiar.	
	OBS3	(VR) in Entertainment is easily observable these days.	
	OBS4	(VR) Technology is appealing & exciting when it comes to entertainment.	
ADOPTION	ADP1	(VR) Technology will bring transformation in Entertainment.	(Koenig-Lewis et al., 2010; Mallat et al., 2008)
	ADP2	More people will adopt (VR) Technology in Entertainment.	
	ADP3	(VR) Technology in Entertainment will be going to have a positive impact.	

5.2Data Collection

There are 414 respondents who contributed in the survey from all over the world – Asia Pacific, Latin America, Middle East, Europe, North America, and Africa, using SPSSver22.0

6. Findings from the Dataset

6.1. Demographic Characteristics

The table 2 shows demographics - age group 25-35 years (48.3%); gender male (52.4%); Master's degree (51.7%), ;for Asia Pacific (86.7%) contributed the maximum for VR in entertainment.

Table 2 Demographic Characteristics

Variable	Group	Frequency	Percent
Gender of Respondent	Male	217	52.4
	Female	195	47.1
	Prefer Not to Say	2	0.5
	Total	414	100
Age of Respondent	15-25 years	196	47.3
	25-35 years	200	48.3
	35-45 years	14	3.4
	45-55 years	3	0.7
	55-65 years	1	0.2
	Total	414	100
Education of Respondent	Higher Secondary School	6	1.4
	Bachelor's degree	187	45.2
	Master's degree	214	51.7
	Research	7	1.7
	Total	414	100
Region of Respondent	North America	35	8.5
	Latin America	2	0.5
	Europe, Middle East, Africa	18	4.3
	Asia Pacific	359	86.7
	Total	414	100

Table 3 discloses the usage frequency of VR in the field of entertainment where out of 414 respondents, 65.5% of the respondents have used VR in entertainment for few times.

Table 3 Usage Specific Demographic Characteristics

Variable	Group	Frequency	Percent
Usage Frequency	Once	57	13.8
	A few times	271	65.5
	Regularly	20	4.8
	Never	66	15.9
	Total	414	100.0

6.2 Descriptive Statistics of Constructs

The Table 4 shows the descriptive statistics of seven constructs under analysis. Please note that the results are sorted in ascending order.

Table 4 Descriptive Statistics of Constructs

	N	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Behavioural_Intention	414	2.2144	.92554	.760	.120	.127	.239
Cost	414	2.3225	.84275	.854	.120	.706	.239
Trialability	414	2.4595	.70305	.495	.120	.227	.239
Observability	414	2.6624	.73236	.352	.120	-.298	.239
Compatibility	414	2.6739	.75649	.347	.120	.244	.239
Relative_Advantage	414	2.7850	.80139	.117	.120	-.489	.239
Complexity	414	3.1238	.47541	.138	.120	.780	.239
Valid N (listwise)	414						

6.3.Reliability Test

This to represent reliability between the constructs, the Cronbach's alpha is very helpful in predicting how reliable our research instrument is that can be realized across 4 different types of reliability,

For 'value' ≥ 0.90 is 'excellent'; between 0.70 to 0.90 is 'high'; between 0.50 to 0.70 is 'moderate'; 'value' ≤ 0.50 is 'low'.

Utilizing the same, the reliability test was performed and it was observed that the Cronbach's Alpha resultant value came out as 0.92 or 92.4%. Ref (Table5)(Hinton et al., 2004)

Table 5 Reliability Statistics of All the Constructs

Cronbach's Alpha	N of Items
.924	31

The resultant values/figures of Cronbach's alpha have been mentioned for every construct (Table6). The construct complexity will not be considered moving ahead as the value came out as "-0.045", resulting in low reliability. All other resultant values are comparatively greater/larger than or equal to ≤ 0.50, so they will be a part of the analysis ahead.

Table 6 Reliability Test of Individual Constructs

Constructs/Attributes	Name of Construct	Value of Cronbach's Alpha
Behavioural Intention	BIN1	0.863
	BIN2	
	BIN3	
	BIN4	
Trialability	TRI1	0.528
	TRI2	
	TRI3	
	TRI4	
Relative Advantage	RAD1	0.668
	RAD2	
	RAD3	
	RAD4	
Compatibility	CPT1	0.607
	CPT2	
	CPT3	
	CPT4	
Complexity	CPX1	-0.045
	CPX2	
	CPX3	
	CPX4	
Cost	CST1	0.769
	CST2	
	CST3	
	CST4	
Observability	OBS1	0.59
	OBS2	
	OBS3	
	OBS4	
Adoption	ADP1	0.846
	ADP2	
	ADP3	

6.4. Regression

Regression is a kind of statistical analysis technique and here linear regression has been performed to validate the hypotheses.

6.4.1 Linear Regression

Linear regression establishing the dependent against the independent variable is illustrated(Worster et al., 2007) with Behavioral Intention as a dependent/relying variable, and the four constructs finalized above as independent variables.

The R and R^2 values 0.778 and 60.1% respectively show a high degree/level of correlation and extent of the total variation. The reflected sig value 0.000 is lesser than 0.05(p-value), signifying the model being significant (Table7).

Table 7 Coefficients[a]

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**Collinearity Statistics**	
		B	**Std. Error**	**Beta**			**Tolerance**	VIF
1	(Constant)	-.794	.126		-6.313	.000		
	Observability	.235	.054	.186	4.386	.000	.537	1.861
	Trialability	.431	.063	.327	6.868	.000	.425	2.351
	Relative_Advantage	.250	.054	.217	4.668	.000	.448	2.231
	Compatibility	.234	.050	.191	4.716	.000	.588	1.702

a. Dependent Variable: Behavioural_Intention

b. Predictors: (Constant), Compatibility, Observability, Relative_Advantage, Trialability

Other Details:

R Value = .778[a] Adjusted R Square = 0.601 F = 156.507 Sig. = .000[b]

Figure2 shows the relationship analyzed amongst adoption, behavioural intention, and cost.

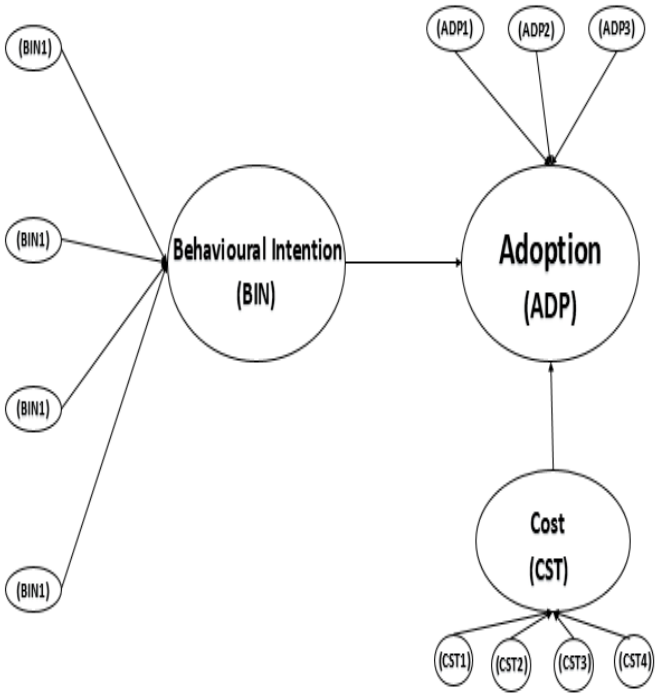

Figure 2 The conceptual model for studying adoption of VR in Entertainment (Developed by the Author)

The R and R^2 values of 0.758 and 57.3% respectively shows a high degree/level of correlation. The reflected sig value 0.000 is lesser than 0.05(p-value), signifies the model being significant (Table8).
Table 8 Coefficients[a]

6.4.2 Multicollinearity Test

The multicollinearity being the situation that arises when a high value of the correlation between two or more predictor variables leads to issues in concluding the contribution made by each one of the predictor variables (Brace et al., 2003). The obtained VIF values vary between 1.702 and 2.351 in Table7 and 1.586 for Table8. The maximum expected VIF value is 10(Irani et al., 2009). The obtained VIF values are much lower than 10 highlighting the fact that the results will be close to the actual situations.

6.5 Validated Conceptual Model

The conceptually created model defined earlier (Figure1) will be validated in this section as the constructs defined in the model have been regressed. All the constructs (compatibility, relative advantage, observability, trialability, cost, and behavioural intention) have been represented by solid lines to illustrate that the relationships are significant ($p < 0.05$).

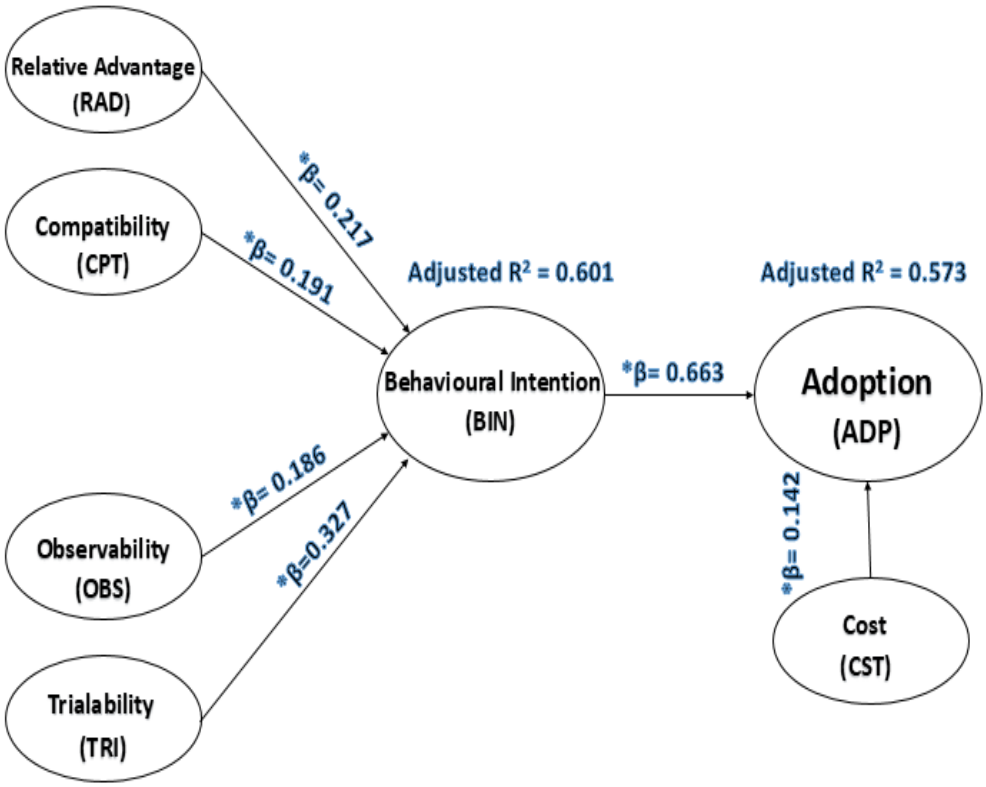

Figure 3 Validated model for examining intention and adoption of VR in Entertainment (Developed by the Author)

6.6 Hypotheses Testing

To study the impact of independent variables (Compatibility, Relative Advantage, Observability, Cost, and Trialability) on dependent variables (here, Behavioural Intention and Adoption), six hypotheses (H1, H2, H4, H5, H6, and H7) were found to support strongly by the dataset showcasing significant relationship and good R^2 values (Table9). As per (Chen et al., 2002),compatibility evolved as a strong construct in determining the intentions of a consumer when the concept of IDT was applied to understand the attitude of the consumers for virtual stores. As per (Hsu et al., 2007), compatibility and relative advantage influence the intentions of a consumer when the studies were done using IDT concept for MMS adoption. As per (Lee & Kozar, 2008), compatibility as well as relative advantage impact the adoption intentions of a consumer when the combined studies were done using IT ethics, TPB, IDT concepts for anti-spyware software. As per (M. Meuter et al., 2005). A study by (Jung et al., 2012) on an e-book reader also concluded that observability reflects a significant and positive connection with the consumers as an e-reader is a visible instrument, observed very easily. As per the analysis done, it has been confirmed adoption is impacted and influenced by both behavioural intention and cost. (Tornatzky & Klein, 1982) also justifies the fact that for adoption/acceptance of any innovation/technology, cost acts as an inhibitor.

Thus, cost will impact the acceptance of the technology in the first go but as more consumers will intend to use it, relative advantages thus will drive the technology ahead. The studies done by (Taylor & Todd, 1995) has impacted the intention of a consumer in analyzing the compositing behaviour of a consumer. (Shin, 2010) concluded the same while analyzing the implications for adoption process of a virtual network of mobile. As per (Sheppard et al., 1988) and (Icek Ajzen, 1991), there exists a strong bond between the actual behavior & behavioural intention also observed in VR here..

Table 9 Hypotheses Testing

Hypotheses	Relation	Beta (β)	T	Sig.	Verdict
H1	Relative_Advantage→ Behavioural Intention	.217	4.668	.000	H1: Supported
H2	Compatibility→ Behavioural Intention	.191	4.716	.000	H2: Supported
H4	Trialability→ Behavioural Intention	.327	6.868	.000	H4: Supported
H5	Observability→ Behavioural Intention	.186	4.386	.000	H5: Supported
H6	Cost→ Adoption	.142	3.514	.000	H6: Supported
H7	Behavioural Intention→ Adoption	.663	16.368	.000	H7: Supported

7. Conclusion

A thorough study has been done by utilizing the established model of Rogers' in the context of VR in entertainment showing intentions of consumers can impact the adoption of technology. The conceptual model, when validated confirmed.

The result also showed cost being a considering factor when analyzing adoption intention and acceptance of a consumer.

The attributes such as trialability, observability, relative advantage, and compatibility proved to be significant whereas the complexity attribute as insignificant for determining the behavioural intention of the consumer in the context of VR in entertainment.

7.1 Scope of Further Research and Limitations

The research explored presently was on the perceptions based study of VR in entertainment where we utilized Rogers' diffusion model. The study tried to cover almost all the geographies but still, individual geography can be studied.

Also, the cultural, regional, and social differences in geography can be considered as the factor that may impact the adoption.

There are other attributes that can be look into while studying the adoption apart from five attributes specified by Roger's model. Many attributes almost 25, have already been studied and listed by (Tornatzky & Klein, 1982). Researchers may focus on measuring individual perceptions of a consumer by utilizing the tool designed by (Moore & Benbasat, 1991) where eight attributes have been utilized to measure perceptions.

The future researchers may explore the direct impact of Rogers' five attributes on adoption or acceptance intention. Various forms and types of VR (MR, AR) may be studied in detail for adoption individually. The adopters or acceptors as per different levels of acceptance. As stated by (Rogers, 2003), the process of diffusion is carried out to analyze innovation by utilizing different channels from time to time. As VR in entertainment is diffusing, yet to mature, for its potential to be fully captured

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