

## SMARTPHONE ADDICTION IS DRIVING VARIABLE IN IMPULSIVE BUYING BEHAVIOUR

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### ABSTRACT

The research study delves into the underlying reasons that trigger impulsive buying behaviour among the younger generation. The study has identified several factors that lead to impulsive buying. These factors include smartphone addiction, virtual reality, availability of credit facilities, seeking irrational happiness, materialistic values, consumer mood, social media influencers, panic buying, electronic word of mouth and promotion tactics. To understand the complex interrelationships that exist between the different variables, the research used the Interpretive Structural Modelling (ISM) technique combined with the SmartISM software. The study has found that mobile addiction is the independent variable in the model, which plays a pivotal role in driving the other variables. The concept of virtual reality plays a crucial role in the model as it acts as a linkage variable. It helps in establishing a relationship between the independent variables and the dependent variables. In other words, virtual reality serves as a mediator in the model, which facilitates the understanding of how the independent variables impact the dependent variables. Moreover, virtual reality also provides a simulated environment that allows researchers to manipulate and measure different variables in a controlled setting, which can be beneficial for conducting experiments or studies related to human behavior or cognition. The study indicates that mobile addiction has emerged as a major cause of impulsive buying among consumers in the current market scenario. The research findings offer a greater understanding of the complex phenomenon of impulsive buying and offer significant insights into the root causes and mechanisms that spur such behavior among the younger demographic.

**Keywords:** *Mobile Addition; Consumer Mood; Credit Facility; Promotion Tactics; Social Media Influencers*

**JEL Classification:** *O31; O32; O33 and M31*

### 1. Introduction

Mobile addiction is a widespread and concerning issue that affects a significant number of young consumers. The excessive use of smartphones and other mobile devices has been shown to have a profound impact on their impulsive buying behavior. This is particularly true when it comes to online shopping, where the ease and convenience of making purchases with just a few taps on a screen can lead to impulsive buying decisions. The constant bombardment of targeted ads and notifications on social media platforms and other apps can also contribute to this phenomenon. This addiction is fuelled by the widespread use of mobile devices in contemporary society, which keeps individuals constantly connected to a stream of marketing messages tailored to their preferences and behaviours (Liu et al., 2023). Mobile addiction has become increasingly prevalent in today's society, with social media platforms being a significant contributor to this phenomenon. These platforms have a profound impact on shaping the behavior of young consumers who spend a significant amount of time on them. The constant exposure to peer recommendations, influencer endorsements, and targeted advertisements can influence impulsive buying decisions among the youth. The immediacy of social media and the need for instant gratification that characterizes mobile addiction can prompt young consumers to make spontaneous purchases. These purchases are often driven by their immediate desires, rather than rational decision-making, leading to a cycle of addictive and compulsive buying behavior. In-app purchases and gamification within mobile applications further amplify the tendency towards impulsive buying. The seamless integration of these elements within the mobile environment makes it effortless for young consumers to succumb to impulsive buying behaviours within the confines of their favourite apps. Notifications and alerts, characteristic of mobile addiction, serve as constant reminders of ongoing promotions, further nudging users towards impulsive

purchases by creating a sense of urgency (James, 2012). The accessibility of online shopping platforms is another hallmark of mobile addiction, providing users with the ability to shop anytime and anywhere. The ease with which individuals can navigate through various online marketplaces using their mobile devices facilitates impulsive buying decisions. With just a few taps on their screens, users can explore products, read reviews, and make purchases, contributing to the spontaneity of their buying behaviour. Marketers often exploit the psychological triggers associated with mobile addiction, such as heightened emotional states or the need for distraction, to prompt impulsive buying as a means of fulfilling emotional needs. Targeted advertisements are designed to evoke emotions and prompt impulsive buying, further deepening the connection between mobile addiction and impulsive consumer behaviour. Furthermore, the youth's constant exposure to comparison shopping tools on mobile devices influences their decision-making process. Users are often motivated to act quickly when they can easily compare prices, read reviews, and access detailed product information. This is because they feel a sense of urgency and want to take advantage of perceived favourable deals. The competitive nature of online marketplaces, exacerbated by mobile addiction, encourages impulsive purchases driven by a fear of missing out on perceived advantages (Rodrigues et al., 2021). Encouraging responsible online behaviour and promoting digital literacy is crucial to alleviate the negative impact of mobile addiction on impulsive purchasing patterns among young consumers. Education about the psychological tactics employed in digital marketing can empower individuals to recognise and resist impulsive triggers. Moreover, cultivating mindfulness in online activities encourages users to engage with their mobile devices more intentionally, promoting informed and deliberate purchasing decisions. Social media influencers wield considerable influence over impulsive buying behaviour, particularly among the youth who are avid consumers of online content. As digital tastemakers, influencers shape perceptions, trends, and purchasing decisions through their curated online personas. Impulsive buying has a complex effect, which is influenced by multiple factors such as relatability, authenticity, and the seamless integration of products into their content. One of the key drivers is the sense of relatability that influencers cultivate. By sharing aspects of their personal lives, interests, and experiences, influencers create a connection with their audience. This relatability fosters trust, making their followers more susceptible to impulsive buying when influencers showcase products. When influencers present a lifestyle that resonates with their audience, the desire to emulate that lifestyle can trigger impulsive purchases as followers seek to align themselves with the influencer's image.

## 2. Literature Review

Consumer behaviour refers to the actions and decision-making processes involved in obtaining products or services (Rodrigues et al., 2021). This includes the psychological influence of advertising messages, which can motivate individuals to desire and purchase a specific product or service (Jiang and Shi, 2016). Mobile phone overuse is a frequent form of consumer consumption that can have unfavorable social and financial outcomes for numerous individuals (James, 2012). Many consumers engage in online impulsive buying behaviour, which has become increasingly frequent in the digital era (Zhao et al., 2022). This has raised concerns about the adverse effects of impulsive buying on consumer well-being, as well as the sustainability of our society and environment (Wang et al., 2022). The significance of comprehending the fluctuating impact of perceived ambiguity on impulsive purchasing conduct has been brought to light by the ongoing COVID-19 pandemic (Gulfranz et al., 2022; Xiao et al., 2022). Studies suggest that the manner in which customers shop online can significantly impact their tendency to make impulsive purchases (Ahn and Kwon, 2022; Liu et al., 2022). The impact of the OCSE on impulsive buying habits is not yet fully comprehended with regards to the attitude-based loyalty and self-restraint of customers. It is crucial to understand impulsive buying habits because they present a chance to increase profits (Badgaiyan et al., 2016). There has been insufficient research conducted to comprehend customers' impulsive purchasing behaviour despite its impact in the service environment (Chen et al., 2022). This study focuses on exploring the correlation between the personality traits, emotions, and impulsive buying behavior of individuals, considering the distinct characteristics of the cruise experience. In order to comprehend the impulsive buying behavior, it is necessary to analyze the impulsive buying tendency that drives such behavior (Hilmi and Pratika, 2021). It is important to recognize that consumer behavior can vary between different cultures. As such, it is crucial to incorporate a perspective that is specific to the culture in question in order to gain a comprehensive understanding of the behavior and accurately measure it (Ek Styvén et al., 2017; Shahjehan and Qureshi, 2019). Research has been carried out to create an Indian measure for evaluating impulsive purchasing inclinations and to authenticate it by investigating its correlation with other related factors (Klein and Sharma, 2018). E-commerce growth and the rise of digital payment have led to the proliferation of payment features that aim to attract consumers (YANGYOON and Park, Min-ji, 2014). The Pay later feature is a relatively new development in Indonesia. Similar to credit cards, Pay later enables customers to make purchases on credit up to a certain limit. Prior studies have demonstrated that credit cards can result in impulsive buying behavior, where consumers feel compelled to buy immediately without considering the practical value of the product they are buying.

It is believed that pay later can have a similar impact. (Shapiro, 2015; Vohs and Faber, 2007). Personality characteristics can account for why an individual may exhibit impulsive purchasing tendencies. Yet, causality dictates that such tendencies would not exist absent the presence of the requisite personality traits. It is essential to comprehend the situational and socio-demographic factors that distinguish high-IBT consumers from low-IBT consumers in order to gain insight into impulsive buying behavior (Hausman, 2000). This study aimed to explore the relationship between impulse buying and the depletion of a shared resource that controls self-control. In three separate investigations, participants were either depleted or not depleted of their self-regulatory resources, and then their impulsive spending responses were measured (Hausman et al., 2003, 1988; Hultén et al., 2011). Participants whose resources were depleted exhibited more impulsive spending behaviours Bolton et al., 2018; Choudhary, 2014).

### 3. Objectives

1. To examine how the impulsive buying behaviour of young individuals is related to their addiction to mobile devices.
2. The aim is to use interpretive structural modelling to determine the crucial variables that contribute to impulsive purchasing behaviour among young consumers.

### 4. Research Methodology

#### 4.1 Statistical Tool

Interpretive Structural Modelling (ISM) is a useful tool to help understand complex systems. It breaks down these systems into smaller parts and looks at how they all interact with each other. This helps decision-makers to better understand the system and its components. To use ISM, we first identify the problem we want to solve, and then define the system we are working with. We create a diagram, called the reachability digraph, which shows the different parts of the system and how they relate to each other. We then identify the most important parts of the system, called the drivers and dependents. These parts have a big impact on other parts of the system and are also impacted by other parts. Finally, we look at how each part of the system affects the others. All of this helps us create a structural model, which shows how the different parts of the system are connected. By understanding these connections, we can make better decisions and communicate more effectively with others about the system.

#### 4.2 Data collection

For a thorough and detailed analysis, ten factors were meticulously selected for evaluation. These factors were chosen based on their significance to the research query and their probable effect on the research findings. The list of these factors is provided below for your reference. The research project involved the acquisition of qualitative data through various sources. A detailed literature study was conducted to gather relevant information. Additionally, current trends and patterns implemented by the organisation in the present situation or in accordance with the current market scenario were also considered. To ensure a thorough analysis, ten specific factors were chosen for examination.

- i.Smartphone Addiction
- ii.Virtual Reality
- iii.Availability of Credit
- iv.Seeking Irrational Happiness
- v.Materialistic Values
- vi.Consumer Mood
- vii.Social Media Influencers
- viii.Panic Buying
- ix.Electronic Word of Mouth
- x.Promotion Tactics

### 5. Results, Analysis and Discussions

#### 5.1 Structural self-interaction matrix (SSIM)

After identifying the variables that are relevant to the issue at hand, the SSIM is created. This can be observed in figure 1. The variables identified for the study pertain to the association between impulsive buying and the underlying variables identified through a literature review. These variables are: smartphone addiction, virtual reality, availability of credit, seeking irrational happiness, materialistic values, consumer mood, social media influencers, panic buying, electronic word of mouth, and promotion tactics. There exist four potential relationships among the factors, which have been assigned the following codes:

If “row” variable is leading to “column” variable = V

If “column” variable is leading to “row” variable = A

If both the “row” and “column” variable leading to each other = X

If there is no relationship between the “row” and “column” variables = O

Variables	1	2	3	4	5	6	7	8	9	10
Smartphone Addiction		O	V	V	V	V	V	V	V	V
Availability of Credit			V	V	X	V	V	V	O	V
Seeking Irrational Happiness				A	V	A	V	V	V	V
Materialistic Values					A	V	V	V	O	V
Consumer Mood						V	V	O	O	V
Social Media Influencers							V	V	V	V
Panic Buying								A	V	A
Electronic Mouth of Word									A	A
Promotion Tactics										A
Virtual Reality										

*Figure 1: Structural Self-Interaction Matrix*

## 5.2 Reachability Matrix

The obtained RM is evaluated for its transitivity, which can be seen in figure 2. Transitivity, as a mathematical concept, asserts that a given matrix's rows and columns represent subnets, with each cell indicating the ability of the row's subnet to access the column's subnet.

Variables	1	2	3	4	5	6	7	8	9	10	Driving Power
Smartphone Addiction	1	0	1	1	1	1	1	1	1	1	9
Availability of Credit	0	1	1	1	1	1	1	1	0	1	8
Seeking Irrational Happiness	0	0	1	0	1	0	1	1	1	1	6
Materialistic Values	0	0	1	1	0	1	1	1	0	1	6
Consumer Mood	0	1	0	1	1	1	1	0	0	1	6
Social Media Influencers	0	0	1	0	0	1	1	1	1	1	6
Panic Buying	0	0	0	0	0	0	1	0	1	0	2
Electronic Mouth of Word	0	0	0	0	0	0	1	1	0	0	2
Promotion Tactics	0	0	0	0	0	0	0	1	1	0	2
Virtual Reality	0	0	0	0	0	0	1	1	1	1	4
Dependence Power	1	2	5	4	4	5	9	8	6	7	

*Figure 2: Reachability Matrix*

## 5.3 Final Reachability Matrix

The Final Reachability Matrix assesses the influence and interdependence of variables and impulsive buying, which can be seen in figure 3. The concept of driving power in a variable refers to the aggregate count of variables that can be enabled to attain a particular objective, encompassing the variable in question. The concept of dependence for a given variable denotes the aggregate count of variables that contribute to its attainment, inclusive of the variable in question. As an illustration, assuming a driving power of "10," variable 1, namely smartphone addiction, has the potential to facilitate the attainment of all variables, including its own.

Variables	1	2	3	4	5	6	7	8	9	10	Driving Power
Smartphone Addiction	1	1*	1	1	1	1	1	1	1	1	10
Availability of Credit	0	1	1	1	1	1	1	1	1*	1	9
Seeking Irrational Happiness	0	1*	1	1*	1	1*	1	1	1	1	9
Materialistic Values	0	1*	1	1	1*	1	1	1	1*	1	9
Consumer Mood	0	1	1*	1	1	1	1	1*	1*	1	9
Social Media Influencers	0	1*	1	1*	1*	1	1	1	1	1	9
Panic Buying	0	0	0	0	0	0	1	1*	1	0	3
Electronic Mouth of Word	0	0	0	0	0	0	1	1	1*	0	3
Promotion Tactics	0	0	0	0	0	0	1*	1	1	0	3
Virtual Reality	0	0	0	0	0	0	1	1	1	1	4
Dependence Power	1	6	6	6	6	6	10	10	10	7	

Figure 3: Final Reachability Matrix

#### 5.4 Level Partitioning

The LP and conical matrix show that the variables Panic Buying, Electronic Mouth of Word, and Promotion Tactics are placed at the first level, Virtual Reality is placed at the second level, Availability of Credit Seeking, Irrational Happiness, Materialistic Value, Consumer Mood, and Social Media Influencer are placed at the third level, and Mobile Addiction is placed at the topmost level, which can be seen in figure 4.

Elements(Mi)	Reachability Set R(Mi)	Antecedent Set A(Ni)	Intersection Set R(Mi)∩A(Ni)	Level
1	1,	1,	1,	4
2	2, 3, 4, 5, 6,	1, 2, 3, 4, 5, 6,	2, 3, 4, 5, 6,	3
3	2, 3, 4, 5, 6,	1, 2, 3, 4, 5, 6,	2, 3, 4, 5, 6,	3
4	2, 3, 4, 5, 6,	1, 2, 3, 4, 5, 6,	2, 3, 4, 5, 6,	3
5	2, 3, 4, 5, 6,	1, 2, 3, 4, 5, 6,	2, 3, 4, 5, 6,	3
6	2, 3, 4, 5, 6,	1, 2, 3, 4, 5, 6,	2, 3, 4, 5, 6,	3
7	7, 8, 9,	1, 2, 3, 4, 5, 6, 7, 8, 9, 10,	7, 8, 9,	1
8	7, 8, 9,	1, 2, 3, 4, 5, 6, 7, 8, 9, 10,	7, 8, 9,	1
9	7, 8, 9,	1, 2, 3, 4, 5, 6, 7, 8, 9, 10,	7, 8, 9,	1
10	10,	1, 2, 3, 4, 5, 6, 10,	10,	2

Variables	7	8	9	10	2	3	4	5	6	1	Driving Power	Level
7	1	1*	1	0	0	0	0	0	0	0	3	1
8	1	1	1*	0	0	0	0	0	0	0	3	1
9	1*	1	1	0	0	0	0	0	0	0	3	1
10	1	1	1	1	0	0	0	0	0	0	4	2
2	1	1	1*	1	1	1	1	1	0	9	3	3
3	1	1	1	1	1*	1	1*	1	1*	0	9	3
4	1	1	1*	1	1*	1	1	1*	1	0	9	3
5	1	1*	1*	1	1	1*	1	1	1	0	9	3
6	1	1	1	1	1*	1	1*	1*	1	0	9	3
1	1	1	1	1	1*	1	1	1	1	10	4	4
Dependence Power	10	10	10	7	6	6	6	6	6	1		
Level	1	1	1	2	3	3	3	3	3	4		

Elements(Mi)	Reachability Set R(Mi)	Antecedent Set A(Ni)	Intersection Set R(Mi)∩A(Ni)	Level
1	1, 2, 3, 4, 5, 6, 7, 8, 9, 10,	1,	1,	
2	2, 3, 4, 5, 6, 7, 8, 9, 10,	1, 2, 3, 4, 5, 6,	2, 3, 4, 5, 6,	
3	2, 3, 4, 5, 6, 7, 8, 9, 10,	1, 2, 3, 4, 5, 6,	2, 3, 4, 5, 6,	
4	2, 3, 4, 5, 6, 7, 8, 9, 10,	1, 2, 3, 4, 5, 6,	2, 3, 4, 5, 6,	
5	2, 3, 4, 5, 6, 7, 8, 9, 10,	1, 2, 3, 4, 5, 6,	2, 3, 4, 5, 6,	
6	2, 3, 4, 5, 6, 7, 8, 9, 10,	1, 2, 3, 4, 5, 6,	2, 3, 4, 5, 6,	
7	7, 8, 9,	1, 2, 3, 4, 5, 6, 7, 8, 9, 10,	7, 8, 9,	1
8	7, 8, 9,	1, 2, 3, 4, 5, 6, 7, 8, 9, 10,	7, 8, 9,	1
9	7, 8, 9,	1, 2, 3, 4, 5, 6, 7, 8, 9, 10,	7, 8, 9,	1
10	7, 8, 9, 10,	1, 2, 3, 4, 5, 6, 10,	10,	
1 2 3 4				

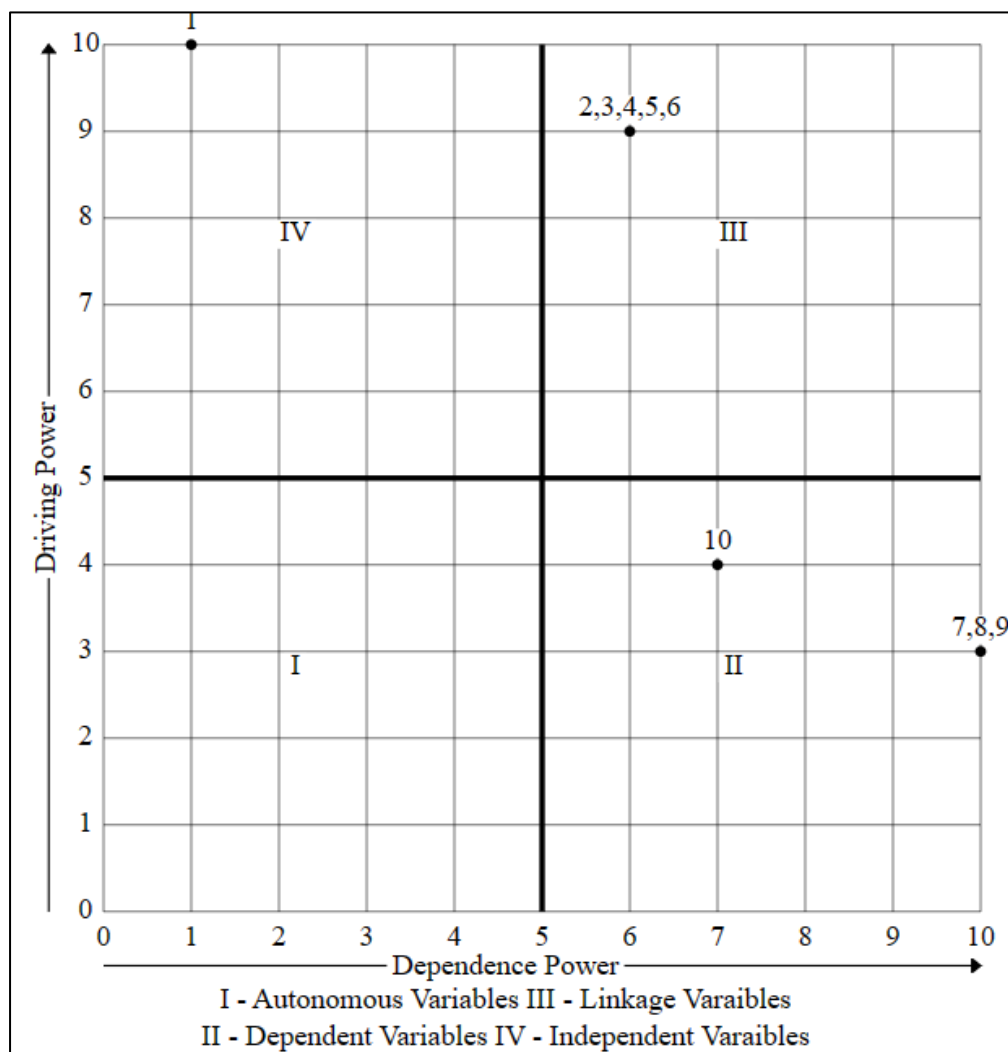
Variables	7	8	9	10	2	3	4	5	6	1	Driving Power	Level
Panic Buying	1	1*	1	0	0	0	0	0	0	0	3	1
Electronic Mouth of Word	1	1	1*	0	0	0	0	0	0	0	3	1
Promotion Tactics	1*	1	1	0	0	0	0	0	0	0	3	1
Virtual Reality	1	1	1	1	0	0	0	0	0	0	4	2
Availability of Credit	0	0	0	1	1	1	1	1	0	9	3	3
Seeking Irrational Happiness	0	0	0	1	1*	1	1*	1	1*	0	9	3
Materialistic Values	0	0	0	1	1*	1	1	1*	1	0	9	3
Consumer Mood	0	0	0	1	1	1*	1	1	1	0	9	3
Social Media Influencers	0	0	0	1	1*	1	1*	1*	1	0	9	3
Smartphone Addiction	0	0	0	0	1*	1	1	1	1	10	4	4
Dependence Power	10	10	10	7	6	6	6	6	6	1		
Level	1	1	1	2	3	3	3	3	3	4		

Figure 4: Level Partitioning and Conical Matrix

#### 5.5 MICMAC Analysis

The impulsive buying behaviours of the youth generation are categorised according to their impetus and dependence and subsequently segregated into four quadrants, namely: Autonomous variables exhibit a relatively low degree of driving power and dependability. The elements in question are effectively entirely detached from the structure. Dependent variables exhibit a low level of causative influence yet are characterised by a significant degree of dependence on other variables. They do not facilitate the achievement of other constituents. An exceptional level of interdependence and substantial influence characterise linkage variables. Their impact is reactive. They influence the variables in the system. The fourth quadrant of the study comprises independent variables that exhibit minimal interdependence and significant driving forces. The variables mentioned above hold the utmost significance. As an illustration, variable 1, namely mobile addiction, exhibits dual dependence and impetus potency. The third quadrant has been assigned variables 2 (Availability of Credit), 3 (Seeking Irrational Happiness), 4 (Materialistic Value), 5

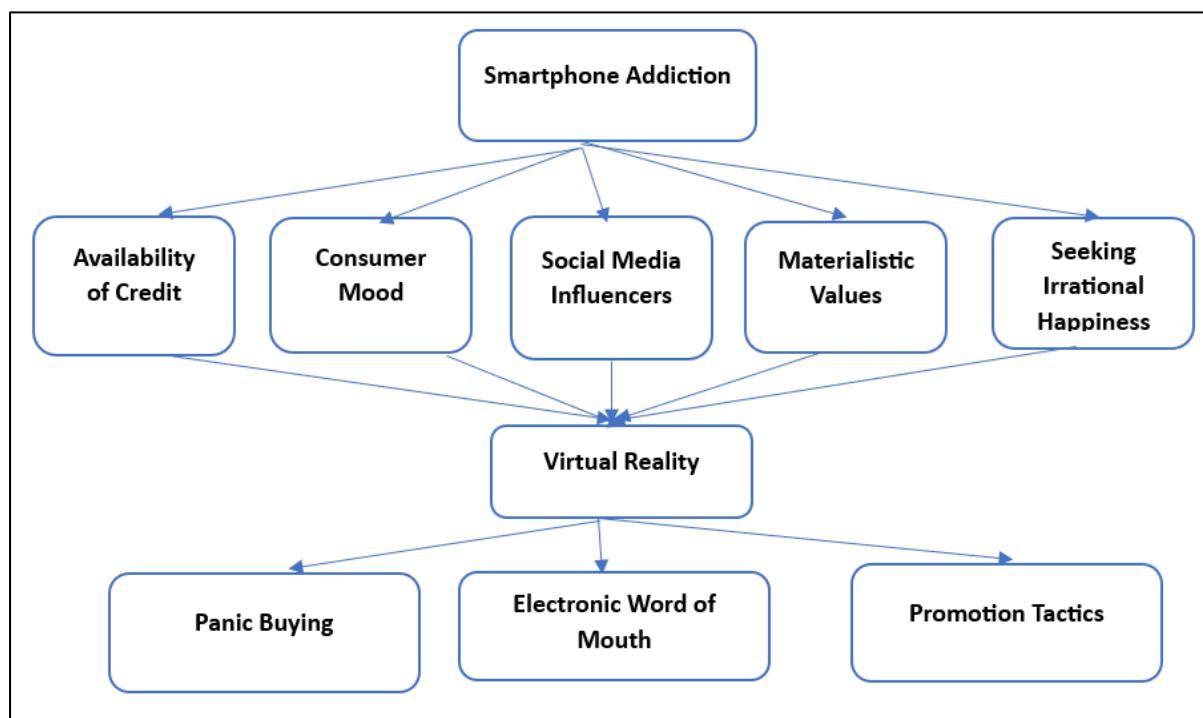
(Consumer Mood), and 6 (Social Media Influencer) based on their respective values. These variables work as a linkage variable. The investigation has identified Variable 1, namely mobile addiction, as a crucial factor. The study incorporates three dependent variables, namely panic buying, electronic word of mouth, and promotion tactics, which can be seen in figure 5.



*Figure 5: MICMAC Analysis*

## 5.6 Final Model

The final model of the study has identified smartphone addiction as a crucial variable at the top-level model, as depicted in Figure 6. The study has further revealed that smartphone addiction is a standalone factor that can affect other variables being examined. In other words, the findings suggest that excessive use of smartphones can have a considerable impact on various aspects of one's life, such as social interactions, work productivity, mental and physical health, and overall well-being. Therefore, it is crucial to be aware of our smartphone usage patterns and take necessary steps to avoid becoming addicted to them. India is a developing economy that is currently experiencing high demand, and multinational corporations are striving to capitalise on this opportunity by making every possible effort to increase their market share. However, the rapid growth of technology has led to impulsive buying among the younger generation, as several underlying variables were examined in this study. The variables at the bottom of the model, including panic buying, electronic word of mouth, and promotion tactics, are classified as dependent variables, implying that they do not possess driving power. These variables are influenced by other factors, such as smartphone addiction, that play a more significant role in determining their behaviour.



*Figure 6: Final Model*

## 6. Conclusion & Suggestions

### 6.1 Conclusion

The issue of mobile addiction has been identified as a significant factor affecting various other variables that are currently under study in the context of achieving the goals set out in this research. India, which is a developing nation, has witnessed remarkable growth in its economy in recent years, with the government making noteworthy progress in the fields of technology and automation. The rapid advancement of technology has completely transformed the market, and sellers are now adopting various strategies to expand their market, such as user-generated content, to target their consumers. However, consumers must be aware of the drawbacks of impulsive buying, which has become a significant concern in today's market. This study suggests that the increasing focus on mobile addiction is the primary cause of impulsive buying, which has become a crucial issue in today's market. The variables mentioned, including the availability of credit, consumer mood, social media influencers, materialistic values, and the pursuit of irrational happiness, work as linking factors in the impulsive buying pattern of consumers. Consumers must recognize the role of these factors and adopt mindful consumption to avoid falling prey to impulsive buying. Impulsive buying can lead to high levels of debt and financial anxiety, and as we focus more on sustainability, it is crucial to curb impulsive buying and use products more sensibly to meet our needs while minimizing our impact on the environment.

### 6.2 Limitations

The limitations of the study should be considered. The research has only analysed 10 variables while neglecting other possible factors that may have an influence on the subject. This limited scope may limit the comprehensiveness of the findings since the exclusion of certain variables may cause a gap in the research. The research methodology employed for this study was interpretive structural modelling, which prioritizes the exploration of relationships between the selected variables. However, it is important to acknowledge that alternative research techniques exist that emphasize model building and the significance of models. By using interpretive structural modelling, the researchers prioritized understanding the complex interconnections among the selected variables. Although this approach provides valuable insights into the relationships within the defined set of variables, researchers using different methodologies may reveal additional dimensions or subtleties in the studied phenomenon. To fully understand the subject, it is essential to acknowledge the methodological choices and limitations of the study. This will enable us to interpret the outcomes with a nuanced approach. We should encourage future research to take into account a broader range of variables and methodologies. This will help us gain a more comprehensive understanding of the subject matter.



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