

# Linking Accessibility, Easiness and Satisfaction of Users for Public Service Deliveries Through ICTs: Do Amenities Make Things Better?

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## Abstract

This study explores the complex relationships between the accessibility of information and communication technologies (ICTs) in rural Haryana and user satisfaction with public services. The study explores how 'easiness' mediates the relationship between accessibility and satisfaction, putting forth a complex model of moderated mediation in which amenities play a key moderating role. Using a large dataset of 981 respondents, the study makes use of several advanced statistical techniques. The results show that there is a significant mediation impact of ease of use in the link between accessibility and satisfaction. Additionally, the study reveals that amenities have a moderating effect on this association, influencing its nature and degree of strength. Remarkably, the ease of use mediates the indirect effect of accessibility on satisfaction, which is strongest in areas with a lot of good or high-quality amenities. All things considered, this study makes a substantial contribution to our understanding of the complex interactions between accessibility, ease of use, conveniences and user satisfaction when it comes to ICT-based public service delivery in rural regions. The information gathered has important policy implications since it highlights how facilities and technology accessibility play a crucial role in increasing user satisfaction in rural development programs.

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**Keywords**

Accessibility, easiness, satisfaction, amenities, moderated-mediation

**Introduction**

New technology is constantly popping up everywhere, and people see all sorts of improvements as progress (Dua, 2023; Prakash et al., 2023). There are an increasing number of intriguing new things to look forward to (Sharma et al., 2023). These ongoing technical developments provide up new possibilities in the field of information and communication technology (ICT), such as improved connection, creative solutions and a fast-changing digital world. ICT has necessarily altered how people, businesses and governments operate now. In today's information society, the Internet has developed into an important medium for the spread of information, goods and services. In a variety of contexts, including learning, shopping, marketing, travel, trade etc., citizens desire to utilise the Internet as a transactional device. In G2C, G2E, G2G and G2B services, Carter and Belanger (2004) emphasised the use of ICT to increase competence and access for the general public. In addition, governments have recognised the value of the Internet and made crucial changes to employ it to distribute public services, ensuring that all citizens have access to them despite of where they are (Karim, 2003; Alam & Zafar, 2017; Bruske, 2013; Chigona & Ndlovu, 2014; Latif & Bashir, 2013).

According to Fang (2002) and Datta and Roy (2016), e-government is a way for governments to utilise the most cutting-edge ICT services, especially web-based Internet applications. These programmes can increase the quality of services, give residents more accessible access to government information and give democratic institutions and procedures more opportunities. e-government involves many issues out of which accessibility is the main challenge (Eslami & Asadi, 2018; Jaeger, 2003, Lee & Kwak, 2012). The study of Jaeger (2003) further dictates that accessibility of public service deliveries through ICTs by the government has an indirect impact on the satisfaction of the citizens. So, this study has tried to explore the relationship between accessibility and the e-satisfaction of citizens empirically.

The study of Alawneh et al. (2013) has portrayed that accessibility is not directly associated with employee satisfaction but mediated through easiness. Easiness of using e-government services plays a crucial role in the satisfaction of the general public (Alshira'H, 2020, Krishnan et al., 2004 and Jha & Sahoo, 2017). The study of Jaeger (2003) also indicated that accessibility to easiness creates a higher impact on the e-satisfaction of citizens, but so far as our knowledge is concerned no such empirical testing has taken place. So, this study has tried to bridge the gap by exploring the mediating effect of easiness in the relationship of accessibility and satisfaction.

Government jumped on this digital trend in order to better serve the general people. In a way, the government is attempting to resemble the private sector more. Why can't a government office respond to complaints and accept orders around the clock, seven days a week, if the private sector can? The answer to this question is the amenities provided to better access the schemes or services (Liao & Chen,

2015; Nair & Thomas, 2018; Okafor & Okoye, 2017; Parikh & Gupta, 2017; Rai & Sahay, 2005). Nowadays, the state government is trying to come up with various amenities so that citizens of rural areas can easily access the services (Raju & Rao, 2017; Saxena & Kumar, 2018; Singh & Kumar, 2017). Nevertheless, to the best of our understanding, no such empirical study has taken place that checked how strongly amenities create an impact on the relationship of accessibility and satisfaction via easiness. So, the existing gap has been covered in the current research.

When it comes to e-government schemes and services, there are very few studies that have taken place to explore the accessibility and its impact on the e-satisfaction of the general public, specifically in India. Also, to the best of our understanding, no study has checked the mediating effect of easiness and moderating effect of amenities in the aforesaid relationship. So, the primary aim of this study is to explore the mediating and moderating role of easiness and amenities in the relationship of accessibility and satisfaction in Haryana rural residents.

## **Review of Literature**

### *Effect of Accessibility on Satisfaction*

Citizens now have more and simpler access to other sources for obtaining public services. To continue using the web channel, however, the public must think that it provides greater options than the alternatives. According to Geyskens et al. (1999) and Geyskens and Steenkamp (2000), there are both economic and non-economic elements that influence customer pleasure. When customers find utilising government websites suitable, for instance, and money-saving, they are satisfied with the overall efficacy and competence of the electronic channel. Prior studies on technology adoption and e-government have revealed evidence that users' channel preference, or intention to continue using a service, is motivated by perceived utility, accessibility and happiness with the original service (Bhattacharjee, 2001; Devaraj et al., 2002; Ngulube, 2007; Fraser & Sudbury, 2014; and Furuholt & Sæbø, 2018). According to Devaraj et al. (2002), perceived utility, accessibility and perceived ease of use are the factors that contribute to perceived electronic channel consumer satisfaction. Additionally, if e-government websites are helpful, concerned and dependable throughout the access procedure and subsequent contacts with residents, users will find the experience rewarding. So, the following hypothesis was proposed:

$H_1$ : Accessibility has positive and significant impact on the satisfaction of users.

### *Mediating Effect of Easiness in the Relationship of Accessibility and Satisfaction*

The term easiness has been considered as a significant factor in the relationship between accessibility and e-satisfaction. However, there is a shortage of research available on e-government services; still, there are few researches that focus on

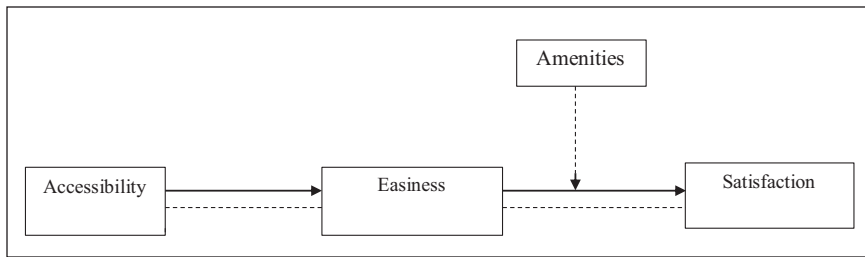
the importance of ease of use for the satisfaction of the users of e-government services (Gupta & Sharma, 2015; Hung & Chen, 2016; Kindel et al., 2014). There are studies other than e-government studies that indicated the noteworthy mediating role of easiness in the association of accessibility and satisfaction. According to one study by Kim et al. (2018), the association between accessibility and satisfaction in the context of online shopping was mediated by ease. In other words, customers were happier with their buying experience the easier it was for them to access and use an online business. Ease of use moderated the association between accessibility and satisfaction in the context of public transport, according to a different study by Liu et al. (2017). In other words, the more delighted passengers were with their travel experience, the simpler it was for them to use public transport. According to these studies, ease can be a key mediator in the relationship between accessibility and satisfaction. In other words, accessibility might not always increase satisfaction directly, but rather through the mediating role that easiness plays. So, the following hypothesis was proposed:

*H<sub>2</sub>*: Easiness positively and significantly mediates the association of accessibility and satisfaction.

### *Moderating Effect of Amenities*

A study by Biswas et al. (2020) in another context discovered that the connection between accessibility and satisfaction was positively moderated by the presence of amenities. In other words, even if the accessibility to attractions was not as good, travellers who had access to quality amenities were more likely to be pleased with their vacation. One more study, carried out by Assaker et al. (2015), discovered that the age of the visitor is affected by the moderating impact of amenities on the link between accessibility and satisfaction. The presence of amenities had a bigger moderating impact on younger tourists than it did on older ones. These studies imply that facilities, particularly when accessibility is not as strong, might be a significant factor in deciding visitor pleasure. However, other elements, such as the age of the visitor, may affect the moderating influence of facilities. This indicates that higher levels of facilities offered to users have a stronger link with accessibility and satisfaction than do lower levels of amenities.

This could be the case for several reasons. First off, amenities can facilitate users' access to and use of a good or service. For instance, it will be simpler for people to find what they are looking for if a website offers lots of helpful features, such a search bar and a FAQ area. Users may be more satisfied as a result because they will be less likely to feel annoyed or frustrated. Second, amenities can improve the usability of a good or service. Users are more likely to like visiting a website if it contains a lot of fascinating content, such as articles, videos and photographs. Users will be more likely to wish to use the website again in the future, which might boost satisfaction. Thirdly, facilities might let customers know that a good product or service is being offered. Users are more likely to think highly of a website if it includes several characteristics that are intended to make it simple



**Figure 1.** Hypothesised research model.

**Notes:** Easiness is used as mediator and amenities as moderator.

to use, such as a user–friendly interface and a responsive design. Users will be more likely to trust the website and be eager to promote it to others, which can boost user happiness (Huang et al., 2015). So, the following hypothesis was proposed:

$H_3$ : Amenities moderate the association between accessibility and satisfaction.

$H_4$ : The effect of accessibility on satisfaction via easiness is conditional on amenities. The relationship is stronger in the case of high level of amenities provided to users than providing lower level of amenities.

The figure given below depicts the whole hypothesised research model used in this research article (see Figure 1).

## Objectives of the Study

The following sub-objectives are set consecutively to accomplish the main objective: to check the effect of accessibility on satisfaction of the citizens, to check the mediating role of easiness in the association of accessibility and satisfaction and to check the moderating role of amenities in the association of accessibility and satisfaction via easiness.

## Research Methods

### *Description of Sample and Respondents' Profile*

To evaluate the hypothesis, primary data were collected from users of rural area of Haryana, India. The study's data were collected via questionnaires. But, first a pilot research was conducted via online with 182 respondents of Haryana to see if the scale was easily understandable. After the results of the pilot study were confirmed, questionnaires were handed out in person to 1100 citizens of rural area in Haryana in addition to the respondents in the pilot study. A sum of 995 responses was received out of which 14 responses were deemed incomplete

**Table 1.** Measurement variables with factor loadings, reliability and validity values.

Factors and Measured Items	EFA Loadings	Cronbach Alpha	Composite Reliability	Average Variance Extracted	Maximum Shared Variance	Average Shared Variance
<i>1. Accessibility</i>		0.711	0.879	0.533	0.046	0.022
There is a service link in state portal and national portal.	0.790					
I can avail the service in both English and local language.	0.701					
There is availability of multiple navigation routes for service and information.	0.899					
I can easily access total number of transactions done.	0.886					
<i>2. Easiness</i>		0.866	0.796	0.509	0.086	0.043
It is easy to use online platforms (e.g., Antyodaya, SARAL etc.)	0.764					
I found it easier and faster.	0.712					
It is easy to apply for schemes and services.	0.819					
It is easy to understand the whole process while using online platforms.	0.717					
<i>3. Amenities</i>		0.788	0.870	0.713	0.086	0.038
Application form can be easily downloaded online.	0.868					
It is easy to find website in top search engines.	0.736					

*(Table 1 continued)*

(Table 1 continued)

Factors and Measured Items	EFA Loadings	Cronbach Alpha	Composite Reliability	Average Variance Extracted	Maximum Shared Variance	Average Shared Variance
There is a user manual available to guide the user.	0.774					
4. Satisfaction		0.728	0.761	0.533	0.046	0.022
I feel comfortable in conducting government transactions.	0.810					
It ensures the confidentiality of my personal information.	0.905					
It never misuses my personal information	0.615					
It doesn't provide my personal information to others without my consent.	0.567					

and were therefore discarded. Finally, the study used 981 responses yielding an effective response rate of 89.18% (Alreck & Settle, 1995). The sample comprised of 153 respondents who were working in public sector and 828 from private sector. Survey included 639 male and 342 female respondents. Out of total, 873 respondents were into manufacturing and 108 were from service sector.

## Measures

On a Likert scale of 1 to 5, with 1 denoting strongly disagree and 5 denoting strongly agree, all scales were evaluated. According to Tavakol and Dennick (2011), Cronbach's alpha values varied from 0.711 to 0.866, demonstrating an adequate internal reliability. Please look up all the variables in Table 1.

### Accessibility (Independent Variable)

Accessibility scale was measured by self-structured questionnaire using three items including 'there is a service link in state portal and national portal', 'i can avail the service in both English and local language' and 'there is availability of multiple navigation routes for service and information'.

### *Satisfaction (Dependent Variable)*

Satisfaction was measured using four items of the self-structured questionnaire that is 'i feel comfortable in conducting government transactions', 'it ensures the confidentiality of my personal information', 'it never misuse my personal information' and 'it doesn't provide my personal information to others without my consent'.

### *Easiness (Mediating Variable)*

All four items were taken from self-structured questionnaire to measure easiness including 'it is easy to use online platforms (e.g., Antyodaya, SARAL etc.)', 'i found it easier and faster', 'it is easy to apply for schemes and services' and 'it is easy to understand the whole process while using online platforms'.

### *Amenities (Moderating Variable)*

Three items were used to measure amenities taken from self-administered questionnaire including sample items 'application form can be easily downloaded online', 'it is easy to find website in top search engines' and 'there is a user manual available to guide the user'.

### *Control Variables*

Nature and gender of the respondents were taken as control variables (Guerrero & Barraud-Didier, 2004).

## **Common Method Bias**

To lessen the likelihood of bias, steps were taken before data collection (Podsakoff et al, 2012). The action taken in this direction was to maintain respondents' anonymity so they could respond freely. Following data collection, the second phase involved applying the most used statistical method, Harman's Single Factor, to determine whether the data were biased (Podsakoff et al., 2012). The method can explain the bias in the data if one significant general factor accounts for the majority of the covariance between the measurements (Podsakoff et al., 2003). However, the results showed that the variance explained by the single component was only 28.43%, which is much less than the acceptable threshold of 50% (Tehseen et al., 2017). Therefore, there was no issue with biases.

## **Statistical Analyses and Hypothesis Testing**

### *Initial Analysis*

All 15 items were exported to factor analysis to evaluate the loadings of observed items on their underlying components. The results of performing varimax rotation disproved the idea that constructs are one-dimensional by revealing four components with eigen values larger than one. In Table 1, factor loadings for exploratory factor analysis (EFA) are displayed. After that, internal reliability was examined and determined to be adequate (Hair et al., 2010), with Cronbach's alpha values

**Table 2.** Means, standard deviations and correlations.

Variables	No. of Items	Mean	SD	1	2	3	4	5	6
1. Nature	–	1.89	0.313	–					
2. Gender	–	1.84	0.363	–0.151**	–	–			
3. Accessibility	4	3.96	0.325	0.239***	–0.158**	0.845	–		
4. Easiness	4	3.99	0.586	0.156***	–0.181**	0.792***	0.714	–	
5. Amenities	3	3.94	0.237	0.166***	–0.911**	0.555***	0.227***	0.844	–
6. Satisfaction	4	3.75	0.471	0.0187***	–0.215**	0.376**	0.379***	0.240***	0.730

**Notes:** \*\*\* $P \leq .001$ ; \*\* $P \leq .01$  SD, standard deviation.

ranging from 0.711 to 0.866. For the goal of analysing the convergent validity of the components, AMOS 21 was utilised to determine composite reliability (CR) and average variance extracted (AVE). According to Hair et al. (2010), values of CR ranged between 0.761 and 0.879, which is higher than the recommended value of 0.70. Values of AVE varied from 0.509 to 0.713, which were regarded as greater than the acceptable (Hair et al., 2010). The discriminant validity of the constructs was then determined using maximum shared variance (MSV) and average shared variance (ASV) (Hair et al., 2010). The calculated values of AVE were higher than both MSV and ASV.

### *Descriptive Statistics*

In Table 2, the findings for means, standard deviations, correlations and discriminant validity were displayed. Significant correlations between the variables were discovered, which provided guidance for the hypothesis. It was necessary to test for multicollinearity after detecting substantial correlations between independent variables. Variance inflation factor (VIF) and tolerance calculations were made in order to examine multicollinearity (Miles, 2014). According to Aminu and Shariff (2014), VIF values between 1.034 and 1.114 fell below the threshold value of three. The range of tolerance values, which were larger than the lowest limit of 0.20 proposed by Aminu and Shariff (2014), was determined to be between 0.904 and 0.918.

### *Hypotheses Testing*

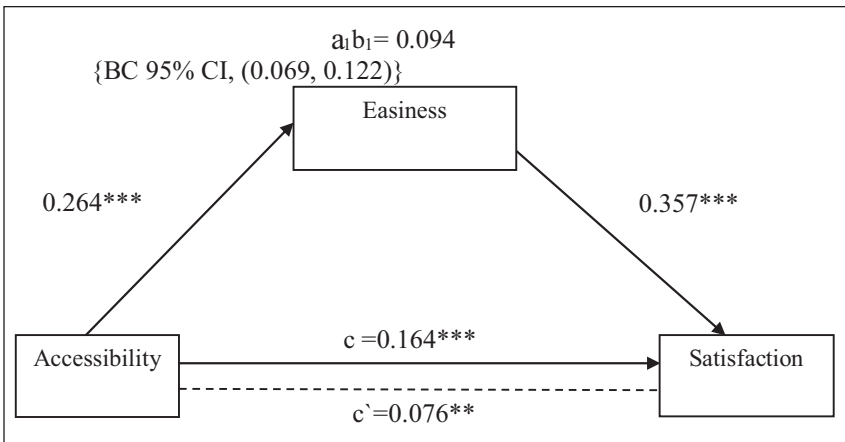
#### *Regression Analyses*

The direct links were examined using multiple regression analysis. Table 3 displays each relationship's outcomes. Model 2 which depicts the direct impact of accessibility on satisfaction was determined to be significant and favourable ( $\beta=0.268$ ,  $P \leq .001$ ). The outcomes so supported H1. However, the direct relationships between independent (accessibility) and mediator (easiness) and mediator and dependent (satisfaction) have also been assessed for understanding the significance of mediator in the relationship.

**Table 3.** Results of multiple regression for direct effects.

Independent Variables	Easiness	Satisfaction	
	Model 1	Model 2	Model 3
Constant	2.875***	3.499***	3.382***
Nature	0.067	-0.014	0.050
Gender	-0.303**	-0.579**	-0.462**
Accessibility	0.353***	0.268***	-
Amenities	-	-	0.225***
R <sup>2</sup>	0.134	0.360	0.361
F statistic	50.535***	83.511***	84.316***

**Notes:** \*\*\* $P \leq .001$ ; \*\* $P \leq .01$ .



**Figure 2.** The mediation model showing total, direct and indirect effects.

**Notes:** (a)  $c$  represents total effect of accessibility on satisfaction; (b)  $c'$  represents direct effect of accessibility on satisfaction; (c)  $a_1b_1$  represents indirect effect of accessibility on satisfaction through easiness; (d) the numbers in the above figure represent the path coefficients derived from the model using PROCESS; (e) \*\*\*  $P \leq .001$ ; \*\* $P \leq .01$ ; (f) BC refers to bias corrected; 5000 bootstrap samples were requested

Model 1 which depicts the direct relationship between accessibility and easiness was determined to be substantial and favourable ( $\beta=0.353, P \leq .001$ ). Model 3 demonstrates a significant and positive direct relationship between amenities and satisfactions of citizens ( $\beta=0.225, P \leq .001$ ). It dictates that study should go further to check the mediating effect of easiness in the relationship of accessibility and satisfaction.

**Table 4.** Results for total, direct and indirect effects.

	Total Effect			Direct Effect			Indirect Effect					
	$\beta$	SE	LLCI	ULCI	B	SE	LLCI	ULCI	$\beta$	SE	LLCI	ULCI
Ac→Ea→Sa	0.164***	0.031	0.104	0.224	0.076**	0.032	0.012	0.139	0.094***	0.014	0.069	0.122

**Notes:**  $\beta$  refers to standardised coefficient; Ac refers to Accessibility; Ea refers to Easiness; Sa refers to Satisfaction; SE refers to standard error; LLCI refers to lower limit confidence interval; ULCI refers to upper limit confidence interval; \*\*\* $P \leq .001$ , \*\* $P \leq .01$ .

**Table 5.** The moderating effect of amenities between the relationship of accessibility and easiness.

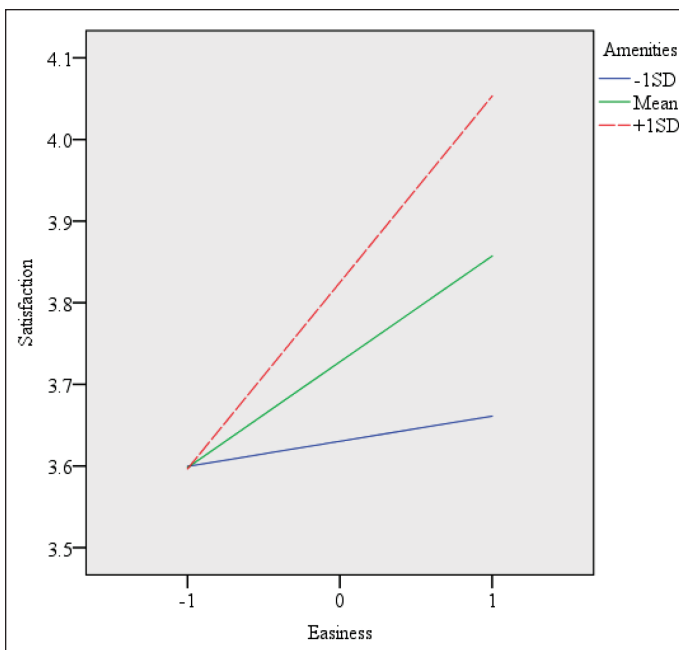
Variables	B	R <sup>2</sup>	R <sup>2</sup>	F-value
Step 1		0.203		59.155
Accessibility	0.056*			
Easiness	0.277***			
Step 2		0.033		51.923
Easiness	0.711***			
Amenities				

**Notes:** \*\*\* $P \leq .001$ ; \* $P \leq .05$

**Table 6.** MODMED index and conditional indirect effects of accessibility on satisfaction through easiness at different levels of amenities ( $\pm 1$  SD).

Mediator	Amenities	Conditional Indirect Effect	BootSE	Bootstrapping BC 95% CI	
				Lower	Upper
Easiness	-1 SD (0.237)	0.109	0.033	0.045	0.173
Easiness	Mean (0)	0.277	0.026	0.227	0.328
Easiness	+1SD (0.237)	0.446	0.037	0.374	0.518
Moderated mediation index					
Easiness		0.219	0.033	0.155	0.282

**Notes:** MODMED refers to moderated mediation; BootSE refers to bootstrapped standard error



**Figure 3.** Conditional indirect effects of accessibility on satisfaction through easiness at different levels of amenities ( $\pm 1$  SD).

### Mediation Analysis

The mediation was evaluated using bootstrapping through Model 4 of Hayes' (2013) PROCESS Macro in SPSS. The total, direct and indirect effects are displayed in Table 4. It is discovered that easiness mediates the relationship between accessibility and satisfaction (effect = 0.094, LLCI = 0.069 and ULCI = 0.122).

Significant indirect relationship is explained by absence of zero between upper and lower confidence ranges. Therefore, the results confirmed H2. The results also showed that the mediated direct effect of accessibility on satisfaction was significant, indicating a partial mediation of easiness.

#### *Moderated Mediation Analysis*

Process Macro Model 14 in SPSS was used to check the moderated mediation model (Hayes, 2013). The model produced several results about interaction and conditional indirect effects. The significant interaction between easiness and amenities was shown in Table 5 (0.711,  $P \leq .001$ ). Thus, H3 was supported. Figure 3 provides a visual representation of the moderating impact of amenities.

Model further exhibited conditional indirect effects (see Table 6). The table elucidated that the positive indirect effect of accessibility on satisfaction via easiness was strongest at the highest level (+1 SD) of amenities ( $\beta=0.446$ ) and weakest at the lowest level (-1 SD) of amenities ( $\beta=0.109$ ). Additionally, the moderated mediation index was found significant (Effect = 0.219, LLCI = 0.155 and ULCI = 0.282). Thus, H4 was supported.

## **Discussions**

The continuous technological development at the national level has influenced the government to focus on public service deliveries through ICTs in rural areas of the nation. To study how the accessibility of these e-government services create an impact on satisfaction level of citizens of rural area specifically in Haryana, this study has been conducted. The study based on 981 respondents of rural area from six divisions of Haryana has examined the impact of accessibility on satisfaction by using a moderated mediation model. Easiness has been considered as a mediator between accessibility and satisfaction and amenities as a moderator between the indirect relationship of accessibility and satisfaction via easiness.

Results have revealed that accessibility have significant and positive impact on satisfaction. Further, the study findings have disclosed a positive relationship between accessibility and easiness which described that high accessibility acted as a predecessor for generating easiness among citizens. Further, easiness has been found to be related with satisfaction among citizens in a positive way.

Further, the study has depicted the presence of easiness in the relationship of accessibility and satisfaction which indicated that accessibility is not directly linked with satisfaction, but, firstly, it elicits easiness among citizens which resultant helps the citizens to attain satisfaction. However, results have shown a partial mediation but the mediator that is easiness has a strong presence as the indirect effect of accessibility on satisfaction is stronger than the mediated direct effects. In this way, the results have provided a new insight by unveiling the importance of easiness in enhancing satisfaction among citizens.

Afterwards, the study found that amenities moderate the relationship between accessibility and satisfaction via easiness. Further, the varying effects of amenities on the aforesaid relationship were also calculated. Figure 3 depicts that

initially the effect of accessibility on satisfaction via easiness was found lower even at higher level of amenities. This happened because citizens were having low accessibility of public service deliveries at that time. The findings described that when accessibility of e-government services were less than high amenities provided to citizens could not generate easiness among the general public to avail those services which further was not able to provide optimum satisfaction. Further, when accessibility increased then the higher level of amenities produced more easiness which resultantly yielded high satisfaction among citizens. This explained that a high level of amenities was only utilisable when there was equivalent easiness of using public service deliveries through ICTs, in such case, accessibility finally led to increased satisfaction among citizens for e-government services.

### **Managerial Implications of the Study**

The manner in which individuals interact with the government has changed significantly as a result of the growing technological improvements in e-government services, in addition to the points already highlighted. The public's expectations and needs for effective and user-friendly services have changed as a result of these changes. The widespread availability of technology is one of the main elements enhancing the accessibility of e-government services. More individuals than ever before have access to government services quickly and easily thanks to the widespread use of smartphones, tablets and Internet connectivity. Citizens now find it simpler to interact with many government departments and organisations, from requesting licences and permissions to getting access to crucial information and resources.

The accessibility of e-government services has grown to be essential to citizen satisfaction. The public today recognises the efficiency and convenience that these digital platforms provide. Governments may considerably increase the ease with which residents can access these services by offering user-friendly interfaces, streamlined procedures and prompt customer assistance. People's satisfaction levels naturally rise when they meet few obstacles and have a simple, hassle-free connection with e-government platforms.

The study also emphasises the significance of amenities as a regulating component in the link between accessibility, ease and citizen satisfaction. Government agencies must understand how important it is to offer extra advantages and conveniences that improve the overall experience of using e-government services. This might include tools that help users navigate among the many services, such as online lessons and guides, personalised recommendations or online chat support. Governments may develop a pleasant atmosphere that encourages citizen satisfaction by focusing on enhancing amenities along with accessibility and ease. Easy access to services and the prompt supply of additional benefits can help people feel cared for and responsive by the government. When citizens' demands are handled quickly and effectively, they will feel respected and appreciated, which will boost satisfaction and raise the possibility that they will continue to use e-government services.

In conclusion, e-government services are becoming more widely available, and this has changed how governments interact with their citizens. Governments may greatly raise public satisfaction levels by putting a priority on usability and assuring the availability of extra amenities. This study emphasises the value of concentrating on e-government's ongoing improvements.

## Limitations and Future Research Directions

The minor shortcomings of this study point to interesting areas for future research. The first restriction relates to the area of data collection. All aspects were taken into account when collecting data using a cross-sectional design. Future studies can therefore concentrate on longitudinal survey designs because the results may be more intriguing. The second restriction has to do with how data is collected. In this study, the sole form of data collection used was a questionnaire; however when data are gathered through an interview approach, other significant insights may become apparent. Even though some steps were taken to check for biases in the data, future studies can still use some additional techniques as recommended by Podsakoff et al. (2012) to avoid common method bias, such as gathering data from various response modes or separating predictor and criterion variables in the questionnaire.

The association between accessibility and satisfaction has been partially mediated by easiness, suggesting that there may also be additional mediators present in this relationship that may have a favourable impact on satisfaction, such as effectiveness and content availability. Additionally, this study only took amenities into account as a mediator on the way to easiness and satisfaction; however, future studies may also take perception and transparency into account. Last but not least, future studies can examine this association by considering gender, nature and sector as moderators in the aforesaid relationship.

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