

## HOW USEFUL IS DIGITAL LOCKER? AN EMPIRICAL STUDY IN INDIAN CONTEXT

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### ABSTRACT

*Sharing documents with various government and private agencies for different purposes is a tedious task. Government of India has initiated Digilocker (or digital locker) in July 2015, with the aim of minimizing the usage of physical documents and enable sharing of e-documents across agencies. It is a repository of digital documents for each resident of the country. Digital locker helps citizen to store the documents, certificates etc. online and the portal is linked to UID Aadhaar Card. This paper focus on how useful will be the digital locker and further tries to investigate the factors such as perceived ease of use, social influence, variety of service and perceived risk and their influence on digital locker usefulness for Indian citizen. A convenience sampling technique was employed to collected data from 165 respondents representing the desired range of demographic characteristics (e.g. gender, age, and education). The finding suggests that Perceived ease of use, variety of services has a strong positive influence on usefulness of Digital locker while Perceived risk and Social influence has less impact on Indian consumer.*

**Keywords:** Digital locker, Perceived usefulness, Online Repository, Social Influence, Perceived Risk.

### Introduction:

In the era of internet, where everyone remains online, had at some point of time uploaded or downloaded documents for purposes such as filling forms, sending important document etc. But, users have faced issues related to safety of documents and the information getting leaked. Thus, safety and privacy of data has become a global challenge. Digilocker (or Digital locker), a key initiative by government of India under digital India program, was launched in July 2015. Digital locker is a website or a portal where one can upload and store documents like PAN Card, passport, mark sheets and degree certificates. It aims at eliminating the use of physical documents and enables sharing of verified electronic documents across agencies. Digital Locker provides an online personal storage space in the cloud to citizens, linked to citizen's Aadhaar number. Citizens can also upload and securely store the scanned copies of legacy documents in Digital Locker. These legacy documents can be electronically signed using e-Sign facility. A citizen can share these electronic certificates online with various departments and agencies registered on

Digital Locker while applying for the services provided by them. Thus, Digital Locker brings the citizens, issuers and requestors on one platform.

Features of Digital Locker:

For citizens & residents who sign up for the digital locker, the following features are available,

- Digital Locker of each resident is linked to their Aadhaar number
- 10MB of free space is provided to citizen in the locker to securely store resident documents and store links (URI) of Govt. department or agency issued e-documents. The storage space allocation will be increased to 1GB in subsequent release.
- e-Sign online service to digitally sign the documents online
- Sharing of e-documents online with any registered requester agency or department
- List of issuers which have issued e-documents to residents and list of requestors which have accessed resident's documents.

For issuers who issue these e-documents like Universities, schools, government agencies, a facility to upload e-documents in a standard XML format in the digital locker repository and push e-document URI

in the resident's digital locker has been provided. For Requesters, secure access to documents in repository or in digital has been provided. Every user account would have two types of documents.

- Digital Documents, which contains URI (links) of the documents issued to the resident by the Govt. department or other agencies.
- Uploaded Documents, the documents which are uploaded by the resident. This can be your SSC Certificate, HSC Certificate, PAN card, Voter ID card, etc. These documents have to e-signed for them to be valid and issued to the requester.

Each uploaded document can be a maximum of 1MB in size and can be in pdf, jpg, jpeg, png, and bmp or gif file type.

The Beta version of the digital locker was launched in February, 2015. Since then, more than 2.5 lakhs people have registered and uploaded more than 1.8 lakhs documents according to the latest available data. In terms of states, Madhya Pradesh has more than 31000 users followed by Uttar Pradesh with close to 31000 users followed by Maharashtra with more than 23000 users. [9]

Benefits of using Digital Lockers-

Digital Locker will provide secure access to documents issued by various agencies. It uses authenticity services provided by Aadhaar. Digital Locker will minimize the use of physical documents by use of the electronic documents. It is easy to validate the authenticity of these documents as they will be issued directly by the registered issuers. Digital Locker will reduce the administrative overhead of departments and agencies created due to paper work. It will also make it easy for the residents to receive services by saving time and effort as their documents will now be available anytime, anywhere and can be shared electronically. [8]

### Literature Review:

The aim of paper is to know whether digital locker is useful for citizen of India. For that purposes following factors have been taken into consideration and its influence on usefulness of digital locker is observed. These factors are:

### Perceived Ease of Use (PEOU):

According to a study [11], perceived ease of use is the term that represents the degree to which an innovation is perceived not to be difficult to understand, learn or operate. It was also stated that perceived ease of use is the degree to which consumers perceive a new product or service as better than its substitutes [12] Similarly, it was [13] stated that the degree to which an innovation is easy to understand or use could be considered as perceived ease of use. In banking word, [14] the perceived ease of use is the consumer's perception that banking on the internet will involve a minimum

of effort. Similarly, it was noted [15] that perceived ease of use refers to the ability of consumers to experiment with a new innovation and evaluate its benefits easily. [3] Digital locker has made the process easy for citizen by providing them an online platform to store and manage important documents. As well as linking them to Aadhaar card and using e-sign service for – documents. Thus, ease of use affects the usefulness among the citizen.

### Perceived Risk (PR):

As the amount of data is increasing online the consumers are more and more concerned about security and privacy issues. According to many studies [16] [17] [18], privacy issues have proven important barriers to the use of online services. As trust, security, and privacy are multidimensional constructs and need further explanation, in this emphasis is given on perceived risk involved in using digital locker [3]. According to press release by government of India [1], Only the owner has the right to see and share the documents as per their own requirement and convenience. But with increasing hacking and misuse cases, usefulness of digital locker may be in doubt among the citizens. Also, the local bodies issuing these documents can push these certificates in digital form directly in the Digital Locker eliminating the risk of fake document. This will greatly benefit the people who find it difficult to have proper storage space for physical documents. This would be safe during the National Disaster such as floods, cyclones, fire etc[1]

### Variety of services (VOS):

Varieties of services have been provided by digital locker to make the process of using the website convenient. According to a survey, India has around fifty eight thousand (58,000) Aadhaar linked Digital Locker. Linking Aadhaar card with the digital locker will help in minimize the use of physical documents and will provide authenticity to e-documents. Such service will also provide users a secure access to government issued documents.

As already stated it will also reduce administrative overhead of Government departments and agencies and make it easy for the residents to receive services. Using e-Sign facility provided as part of DigiLocker system can be used to digitally sign e-documents. Though the variety of services offered by it might not be comparable to services offered by e-commerce websites. [19]

### Social Influence (SI):

The concept of Social Influence (SI) refers to 'the extent to which an individual perceives that important others believe he or she should use the new system' [20]. According to studies [21], SI is similar to the

subject norm, and is described as an individual's belief concerning whether other people maintain that an individual should become involved in the activity. Subject norm is taken into account in terms of both TPB (Theory of Planned Behavior) and TRA (Theory of Reasoned Action) as the fundamental aspect concerned with describing system implementation. Also, according to DOI (Diffusion of Innovation) theory, Social Influence may be broken down into two separate types, namely interpersonal influence and mass media [22]. Thus it can be stated that interpersonal influence may derive from social networks through friends, peers and superiors, etc.; on the other hand, mass media influence comprises internet, newspapers, magazines, radio, television, and other mediums [23], which emphasize that a user is more inclined to propose and advocate a service to others if she or he is satisfied with those services. Social influence affects the adoption intention of technology (TAM). (Relationship between social influence and Perceived usefulness) Thus, social influence may have a positive impact on usefulness of Digital locker.

### Perceived Usefulness (PU):

In electronic banking field, the importance of perceived usefulness has been widely recognized [24][25][26][27]. According to them usefulness is the subjective probability that using the technology would improve the way a user could complete a given task. [4] According to the TAM, perceived usefulness is the degree to which a person believes that using a particular system would enhance his or her job performance. According to a study [28], perceived usefulness refers to consumers' perceptions regarding the outcome of the experience. Study [29] defined perceived usefulness as the individual's perception that using the new technology will enhance or improve her/his performance. Similarly, in another study [30] defined perceived usefulness as the extent to which a person deems a particular system to boost his or her job performance. Digital locker minimize the need for physical documents; for examples if someone's birth and education certificates are online thus one can apply for a passport, then the Passport Office could use your Aadhaar number to request the DigiLocker for details, without the need to carry a large file of documents for the application. Thus it enhances the performance level and also benefits consumers.

Accordingly, in this paper following Hypothesis are used in the research to-

**H1:** Perceived Ease of Use has a positive influence toward Perceived Usefulness of digit locker among citizen in India

**H2:** Perceived Risk affects the Perceived Usefulness among the users of digital locker in India

**H3:** Variety Of Services affects the Perceived Usefulness among digital locker users in India

**H4:** Social influence will have a significant influence on increasing perceived usefulness among the digital locker users.

### Methodology:

Sampling method and respondents' demographic information

The study targeted 165 respondents based on convenience sampling technique. Table shows the demographic profile of the respondents. The age groups are somewhat spread, with the majority of respondents are from 18 to 30 age group.

**Table 1: Demographic profile of respondents (n=165)**

	Characteristics	Descriptor	Distribution	%
1.	Gender	Male	128	77.6
		Female	37	22.4
2.	Education	Up to 12th standard	20	12.1
		Bachelor degree	82	49.7
		Master Degree of higher	63	38.2

### Survey Instrument:

The survey was carried out by using a self-administered questionnaire which is divided into two major parts. The first part collected the respondent's demographic data, such as age, gender, and education. The second part of the questionnaire has five sections: perceived ease of use, perceived risk, perceived trust, social influence and, perceived usefulness. All the questions were on Five-point likert scale ranging from "Strongly Disagree" (1) to "Strongly agree" (5) for measuring different independent variables.

### Validity and Reliability Analysis:

The questionnaire was pretested on a small sample (n=20) of respondents. After the pre-test, some questions were eliminated and wording of some questions was modified. In addition, the questionnaire construct validity was also measured. Cronbach's alpha coefficient was applied to assess data reliability. The results are shown below and the value greater than 0.6 is acceptable.

KMO & Bartlett's Test of Sphericity is a measure of sampling adequacy that is recommended to check the case to variable ratio for the analysis being conducted. In most academic and business studies, KMO & Bartlett's test play an important role for accepting the sample adequacy. While the KMO ranges from 0 to 1, the world-over accepted index is over 0.6 [10]. In our research, KMO measure of sampling adequacy is 0.717 which is in acceptable range. Values in the table indicate that data collected from the survey are suitable and reliable for further. All testing and reliability checks were completed using SPSS software version 22 Analysis.

**Table 2: KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.717
Bartlett's Test of Sphericity	Approx. Chi-Square	935.130
	df	105
	Sig.	.000

**Table 3: Cronbach's alpha reliability Test**

Variables	Cronbach's Alpha
Perceived ease of Use	0.665
Perceived Usefulness	0.743
Perceived risk	0.778
Variety of Services	0.667
Social influence	0.796

**Data Analysis and Findings:**

The analysis shows various variables that affect the usefulness of digital locker and its relation with other variables. Results of the estimated model show that all four independent variables significantly influence the perceived usefulness of digital locker. The results from regression analysis shows that the value of  $R^2$  is 0.361, which tells us that Perceived usefulness can account for 36.1% variation in adoption of digital locker.

**Table 4 : Regression Analysis (R and R square)**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.601 <sup>a</sup>	.361	.345	.600

**Table 5: Regression analysis (Beta and t-values)**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.705	.368		1.917	.057
	Perceived ease of use	.234	.080	.198	2.914	.004
	Perceived Risk	.059	.068	.064	.872	.385
	Variety Of Services	.497	.086	.442	5.804	.000
	Social Influence	.082	.051	.103	1.602	.111

a. Dependent Variable: PU

Hypothesis 1 proposes that PEOU has a positive influence toward Perceived usefulness of digital locker among India users. While the relation obtained after regression and correlation analysis depicts that there is positive and direct relationship between similar positive influence. Ease of using the website of digital locker and its usefulness for Indian users. The path Coefficient ( $\beta = 0.198$ ) is strong with a high t value (2.914) indicating strong positive association with usefulness. However from table 6, value (.367\*\*) indicate that there is moderate correlation between the

Perceived ease of use and its usefulness to consumers. Thus, hypothesis 1 receives significant support from the data.

Hypothesis 2 proposes that perceived risk associated with digital locker affects its usefulness among users. What we find is that the relationship is positive and significant. The path coefficient ( $\beta = 0.64; t = 0.879$ ) indicate that there is an association between risk involved and usefulness. However, correlation is also significant between (0.348\*\*) these variables. The results indicate that risk involved in using the website of digital locker does affect the consumer intention of its usefulness of digital locker.

**Table 6: Correlation analysis**

	Perceived Usefulness	Perceived ease of use	Perceived Risk	Social Influence	Variety Of Services
Perceived Ease Of Use	.367**	1			
Perceived Risk	.348**	.284**	1		
Social influence	.178*	-.008	.070	1	
Variety Of Services	.559**	.343**	.498**	.164*	1

\*\*. Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

Hypothesis 3 argues that variety of services has a positive influence on its usefulness of digital locker among Indian users. The path coefficient is positive ( $\beta = 0.442, t = 5.804$ ) supporting the hypothesis with a correlation of 0.559\*\* between these two variables. Thus, it is perceived that variety of services help users to explore more in website and thus impacts the usefulness of Digital locker.

Hypothesis 4 hypothesize that Social influence will have a significant influence on increasing perceived usefulness among the digital locker. The path coefficients for these hypothesis are quite similar ( $\beta = 0.103, t = 1.602$ ). The correlation (0.178\*\*) also indicate that there is a positive impact of social influence among Indian users which impacts the usefulness of digital locker.

**Conclusion:**

The aim of paper is to know whether digital locker is useful for citizen of India for that purpose four independent factors that are perceived Ease of use, variety of services, Social influence and Perceived Risk were taken into consideration. While Perceived ease of use & variety of services has positive impact on the usefulness of digital locker. Social influence can play an important role in creating more awareness among the citizen of India but it did not have strong influence on usefulness of digital locker. Also,

Perceived risk does have a positive influence but it does not establish strong relation as compared to other factors. Since personal documents are critical for users, thus while uploading the documents, user may have doubts. The security and risk involved will get more clarified in years to come.

The survey has been done on the respondent of age group 18-30 years, further studies can be done on different age group. Digital locker will prove useful for citizens in connecting with government.

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