

# INVESTIGATING FACTORS THAT INFLUENCE INDIVIDUAL'S BEHAVIORAL INTENTION TO DISCLOSE PERSONAL INFORMATION ON DIGITAL WORKFORCE PLATFORMS

Melissa Shahrom\*, Nor Fadzilah Abdul Razak, Siti Halijah Shariff

Faculty of Business and Management, Universiti Teknologi MARA, Puncak Alam Campus, 42300 Selangor, Malaysia

\*For correspondence; Tel. + (60) 192967875, E-mail: [melissashahrom@gmail.com](mailto:melissashahrom@gmail.com)

**ABSTRACT:** Information privacy is a major concern for individuals adopting emerging technologies dependent on location-based services (LBS) or digital applications. The digital workforce is the distribution of well-defined tasks to an anonymous large group of digital workers in a form of an open call through a digital platform. This study sought to determine if a relationship exists among the factors of personalization, locatability, perceived playfulness, privacy concern and behavioral intention to disclose personal information for individuals when using the digital workforce platforms. Questionnaire responses from undergraduate students at a 4-year university provided insight into these relationships. Analysis of beta weights, structure coefficients, and commonality analysis shed light on the variance attributable to the predictor variables of the study. The findings provided an understanding of the specific factors examined in the study and have implications for individuals, businesses, application designers, and policymakers. The results from this study contribute to an understanding of technology acceptance theory and offer insight into competing beliefs that may affect an individual's behavioral intention to disclose personal information. Knowledge gained from the study may be useful for overcoming challenges related to the disclosure of personal information on digital workforce platforms and crowdsourcing environment.

**Keywords:** Privacy, Behavioral Intention, Upwork, Freelancer, Disclosure of Personal Information, Crowdsourcing, Digital Workforce

## 1. INTRODUCTION

In the digital age economy, human activities are mostly driven by the application of digital and ubiquitous technologies. The widespread use of the Internet, location-based services, smartphones and wearable devices have changed how people interact and work as well as do their daily activities. Hence, this culture has recently created new digital, social and economic benefits due to the demand on labor platforms. These platforms are known as digital workforce or crowdsourcing platforms where people are given opportunities to do online work on different things and in different ways [1].

## 2. BACKGROUND

The digital workforce platforms have dissolved a company's traditional management hierarchy by replacing it with open talent platforms. These platforms provide a scalability and on-demand labor. Given a sufficiently large network pool (less difficult to assemble on the Internet than in physical locations), the crowd can accomplish tasks of practically any size. A company or individual now can demand skilled workers or freelancers in an efficient way. Now, many digital workforce platforms are available online, for example, Up works and Freelancer, providing employers and potential employees a platform to be transparent in offering and bidding for jobs [2].

The platforms usually require users to register and provide their personal details so that customized services can be delivered to them such as based on their skills, preferences and location as well as matchmaking transactions. In this scenario, users have, willingly or unwillingly disclosed their personal information to the intermediaries such as to the platforms. However, the unwillingness is what matters. Thus, the research investigates the factors associated with users willingness to disclose their personal information in order to use the digital services.

## 3. DIGITAL WORKFORCE PLATFORM

Digital workforce platform is a system or digital workplace that becomes the mediator where skilful employees offer their services and work online based on the demands from the hirers. It is controlled by a company or an organization and provides a place where businesses and independent professionals connect and collaborate remotely [3]. Employers have a world of workers and information at their fingertips and employees can collaborate with colleagues, and can be hired by anyone across the globe. The developments and acceptance of these digital working platforms have become ubiquitous and have been positive in various ways. Some of the benefits to the employers are cost-effective, faster execution of tasks and, they are easily matched with the needs and solutions. Digital workers or freelancers also gain personal benefits such as flexible working time, additional income, recognition and increased self-esteem. The process of the digital workforce is as follows:

1. A job provider submits a task to the platform
2. A digital worker will select a task according to his or her skills and pull the task from the platform
3. After the task has been completed, a digital worker will upload the completed task into the platform
4. A job provider will check and approve the completed task
5. If the job provider is satisfied with the completed task, he or she will pay the digital worker through the platform.

However, the increased technology use has induced self-awareness and also presented challenges since the providers can provide optimal information and services based on employees' skills, locations, and preferences to third parties. Due to the possibilities of privacy intervention, this brings up the users' concerns about their sensitive and private information disclosure.

#### 4. PERSONAL INFORMATION

Personal information refers to any factual or subjective information, whether recorded or not, about an individual [4]. The frequently used information in digital platforms includes name, age, gender, email address, payment methods and residential address. Personal information is often known to be useful in many ways; however, sometimes it could also be used illegitimately or in a harmful way.

#### 5. FACTORS OF DISCLOSURE OF PERSONAL INFORMATION

Since digital workforce may be used functionally as well as for pleasure, this study examined users' behavior in relation to both extrinsic and intrinsic technology beliefs. As an extrinsic motivator, usefulness is derived from digital workforce based on features that provide personalized, relevant, and timely information to users. As an extrinsic motivator, a user's concern for privacy is derived from the necessity to reveal personal information when using digital workforce platform. As an intrinsic motivator, playfulness is derived from a user's interactions with design features and capabilities of the systems and is internal to the user.

Within the context of user adoption of a digital workforce, the present study examined the relationship between behavior intention to use the system and four belief factors. Usefulness was examined based on the capability of the digital workforce platforms to provide personalization and locatability. Perceived playfulness was examined as a belief factor depicting the capability for user activity to be enjoyable in itself. Privacy concern was examined as a belief factor depicting an individual's concern over disclosure of personal information when using the digital workforce platforms.

##### 5.1 PERSONALIZATION

Personalization refers to the process of tailoring pages to individual users' characteristics or preferences. Personalization is also a means of meeting the customer's needs more effectively and efficiently, which make interactions faster and easier and results in increased customer satisfaction and the likelihood of repeat visits. Personalization in the digital workforce can be defined as the ability to provide personal information such as a profile picture, education background and working experiences as well as preference information. According to Chellappa [4], personalization is critically dependent on two factors:

1. platform developers' ability to acquire and process user information, and
2. users' willingness to share information and use personalization services.

While recent advances in big data tracking and profiling technologies have enabled the intermediaries to collect users' information, some studies have shown that the privacy concern is high when it comes to online personalization [5]. At the developer side, this personalization is good in predicting demand in the job-related area, managing job offers, and assessing their profits. Whereas, users will find the personalization services, meeting their needs efficiently and effectively.

#### 5.2 LOCATABILITY

Locatability refers to the ability of mobile hosts to determine the current physical location of wireless devices. Digital workforce platforms utilize the localization capabilities of mobile devices to offer users access to location-linked information in a timely manner. The applications are uniquely designed to offer capabilities for users not only to access geospatial information from any location at any time, but also to access information unique to the identity of the user, and thus tailored to individual preferences or built on user social connections. In the locatability aspect, this study wants to measure the degree of perceived value related to being able to access needed information and services in the right place at the right time.

According to Junglas and Watson [6], GPS enabled devices equipped with LBS offer users the capability to have access to information services due to the portability of the device, continuity of connection at all hours of the day, access to network services at any time and from any place, localization services based on geographical coordinate recognition, and user identification by means of the attached SIM (subscriber identity module) card.

##### 5.3 PERCEIVED PLAYFULNESS

According to Lin, Wu and Tsai [7], characterizing playfulness could be difficult because researchers use the term "play" in several ways. But playfulness may instead be defined as a situational characteristic of the interaction between an individual and a situation. Hence, playfulness is regarded as an individual state, because an individual can feel more or less playful at various points during his/her visit to location-based services (LBS) applications.

The study of perceived playfulness (PP) as an attribute of technology acceptance has been explored as a contextual state or condition that is helpful in explaining how an individual behaves within a given situation. According to Moon and Kim [8], perceived playfulness refers to a determination of the degree to which a user experiences pleasure and enjoyment within a technological context. In this mental state, a person is fully immersed within the context and process of the activity as an experience that is intrinsically interesting.

##### 5.4 PRIVACY CONCERN

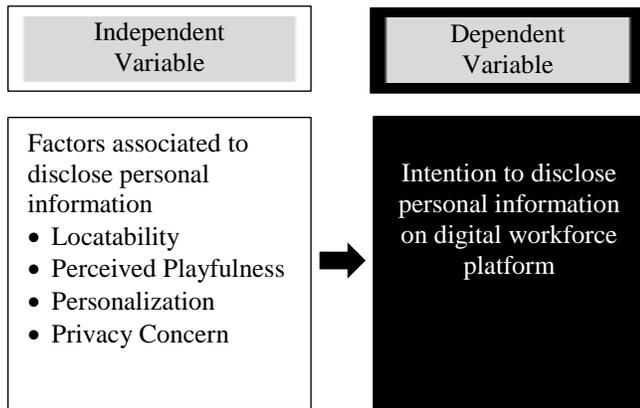
The use of digital workforce platforms as the intermediaries between users and potential employers has made users disclose their personal information. The demand of these services also places a privacy cost on users due to the requirement for disclosure of personal information as part of the functionality of the system itself [9]. For example, the requirement to upload a profile picture and provide evidence for the payment methods requires users to make a series of privacy-related judgements about levels of public access related to both security considerations and the risk of self and other disclosure [10]. However, the relationship between users' privacy concerns and actual behavior is neither straightforward nor has any link been established incontrovertibly. There is evidence that although many Internet users express privacy-protectionist attitudes, this rarely translates to their actual behavior [11]. A study by Pechpeyrou, Pauline and Nicholson [12] reveals that people's willingness to share depends on who they are sharing the

information with. This highlights the importance of the relationship between the disclosure and the recipient in determining disclosure behavior, including the trust they have with the other party to their information.

**6. BEHAVIORAL INTENTION TO DISCLOSE PERSONAL INFORMATION**

Behavioral intention is defined as a person’s perceived likelihood or subjective probability that he or she will engage in a given behavior. Besides that, behavioral intention reflects how hard a person is willing to try, and how motivated, he or she is, to perform the behavior.

Since user’s behavioral intention to disclose personal information has a potential to be affected by an individual’s social concerns, the study of the factors that have a significant influence towards behavioral intention becomes relevant. Figure 1 below shows the framework of this study.



**Fig (1) Research Framework [13]**

H1: There is a relationship between locatability and behavioral intention to disclose personal information on digital workforce platforms.

H2: There is a relationship between perceived playfulness and behavioral intention to disclose personal information on digital workforce platforms.

H3: There is a relationship between personalization and behavioral intention to disclose personal information on digital workforce platforms.

H4: There is a relationship between privacy concern and behavioral intention to disclose personal information on digital workforce platforms.

**7. METHOD**

A quantitative method has been applied to investigate significant relationship between locatability, perceived playfulness, personalization, and privacy concern towards behavioral intention. The questionnaires were distributed to 110 students from the Faculty of Business and Management of Universiti Teknologi MARA. Most of the students were from two main campuses; Puncak Alam, Selangor and Machang Kelantan. Those students were actively experienced in digital marketing and digital workforce platforms.

The items measurement for locatability, perceived playfulness, personalization, and privacy concern towards behavioural intention were adapted from Cox [13]. All the items used five likert scale ranging from 1 = strongly disagree to 5 = strongly agree.

**8. FINDING AND DISCUSSION**

Data from the survey was analyzed by structural equation modelling using the PLS (Partial Least Square) software.

**8.1 MEASUREMENT MODEL**

A convergent validity measured content and construct validity. Construct validity was purposely conducted to measure the consistency of the items tested which were measurable to the study. In Partial Least Square (PLS) a construct validity was conducted to identify each item loading where the threshold values must exceed 0.5 [14]. From the finding, Table 1 shows that all the loading for the item tested exceeded the cutoff values of 0.5 and this indicates that all the items used in the study were loaded highly on the constructs. Then, the composite reliability was analyzed and the cutoff values, as recommended by Hair, Black and Babin [14] were greater than 0.7. The average variance extracted (AVE) measured the variance captured by the indicator relatives to measurement error, and the threshold values should exceed 0.50. The finding further indicates the composite reliability of behavioral intention (CR = 0.958, AVE = 0.919), locatability (CR = 0.939, AVE = 0.794), perceived playfulness (CR = 0.933, AVE = 0.778), personalization (CR = 0.929, AVE = 0.813) and privacy concern (CR = 0.960, AVE = 0.923) interpret there were greater than 0.7 and the AVE values exceeded 0.50. Based on this finding, it is concluded that the 15 indicators of the five constructs were validated and thus, reliable for this study.

**Table 1: Convergent Validity**

Constructs	Items	Items Loading	Composite Reliability (CR)	Average Variance Extracted (AVE)
Behavioral Intention	BH1	0.958	0.958	0.919
	BH2	0.959		
Locatability	L1	0.874	0.939	0.794
	L3	0.889		
	L4	0.922		
	L5	0.878		
Perceived Playfulness	PP1	0.894	0.933	0.778
	PP2	0.859		
	PP3	0.85		
	PP4	0.924		
Personalization	P1	0.924	0.929	0.813
	P2	0.914		
	P3	0.865		
Privacy Concern	PC3	0.95	0.96	0.923
	PC4	0.972		

\*\* Item deleted due to lower factor loading values of <0.5

\*\* Item of L2, P1 and P2 have been deleted

**8.2 DISCRIMINANT VALIDITY**

A discriminant validity was purposely conducted to examine the cross loading between the constructs. The assumption of discriminant validity was that the items should load more strongly on their own construct and the average variance shared between each construct, and its measurement should be greater than the variance shared between the construct and other constructs [15]. To test the discriminant validity,

Fornell Lacker assessment was conducted and the result from Table 2, found the values on the diagonal were greater than the corresponding row and column values. This can explain that the constructs were discriminants.

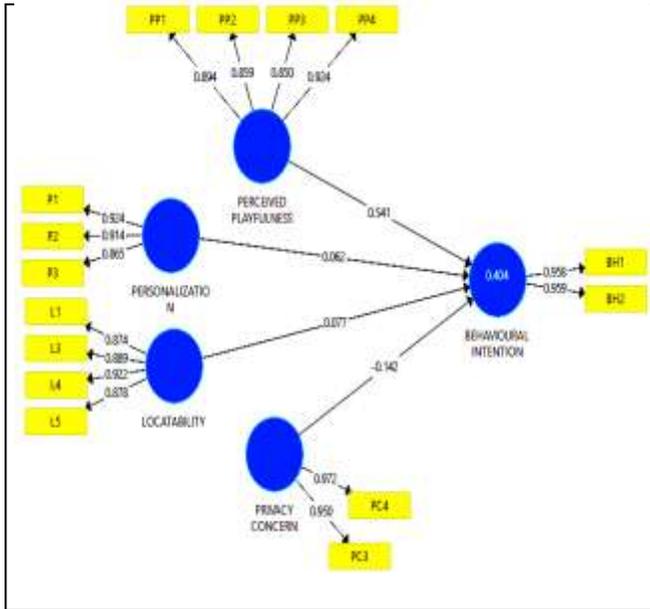


Fig (2) Measurement Model

Table 2: Discriminant Validity

Constructs	1	2	3	4	5
1. Behavioral Intention	<b>0.959</b>				
2. Locatability	0.451	<b>0.891</b>			
3. Perceived Playfulness	0.615	0.643	<b>0.882</b>		
4. Personalization	0.496	0.778	0.724	<b>0.902</b>	
5. Privacy Concern	-0.044	0.16	0.145	0.122	<b>0.961</b>

This result was also supported from the analysis of Heterotrait-Monotrait Ratio (HTMT) as indicated in table 3 which refers to an average of the heterotrait-hetero method correlations. HTMT was used as a criterion that compared it to a predefined threshold. If the value of the HTMT is higher than this threshold, one can conclude that there is a lack of discriminant validity. The exact threshold level of the HTMT was a threshold of 0.85 [16], whereas others proposed a value of 0.90 [17-18]. This study used the notations HTMT.85 and HTMT.90 in order to distinguish between these two absolute thresholds for the HTMT.

Table 3: Heterotrait-Monotrait Ratio (HTMT)

Constructs	1	2	3	4
1. Behavioral Intention				
2. Locatability	0.487			
3. Perceived Playfulness	0.674	0.702		
4. Personalization	0.549	0.862	0.806	
5. Privacy Concern	0.047	0.182	0.161	0.135

Hence, the finding as in table 4 indicates the all HTMT values passed the HTMT.90 [17] and the HTMT.85, so based on the result, it can be concluded that discriminant validity has been ascertained. Concluding from the measurement model, this finding reveals that there was highly internal consistency of the indicators that measured the construct and the construct had no issue on discriminant validity.

**8.3 STRUCTURAL MODEL**

In a structural model, a causal relationship tested between perceived usefulness, personalization, locatability, privacy concern and behavioral intention. The R<sup>2</sup> values of 0.404 explained that 40.4 per cent of behavioral intention was explained by perceived usefulness, personalization, locatability and privacy concern.

In addition, to obtain significant of the relationship, a bootstrapping with 500 samples was conducted to determine the path loading and t-values. The relationship measured that significant values should be less than 0.01 with the t-values that must exceed 2.33. As shown in table 4, there was a positive and statistically significant relationship of perceived usefulness (β= 0.415, t- values = 5.002, p<0.01) and behavioral intention. There was a small effect on the relationship as the f square is 0.225 [19]. In addition, the result also found there was positive and not significant relationship of locatability (β= 0.077, t- values = 0.551, p>0.01) personalization (β= 0.062, t- values = 0.461, p>0.01) and behavioral intention. In contrast, the result reveals that there was negative and not statistically significant privacy concern (β= -0.142, t- values = 1.60, p>0.01) and behavioral intention.

This was further supported by the values of confidence interval bias-corrected (CI) of the lower limit (LL) and upper limit (UL). The result explains that if there was a statistically significant relationship, the values of the lower limit and the upper limit was not straddled on values of zero, based on the finding of perceived playfulness (LL=0.229, UL=0.229)..

Table 4: Structural Model

Path Coefficient	Beta	SE	T-Values	P Value	F Square	LL	UL	Decisions
Locatability -> Behavioral Intention	0.077	0.14	0.551	0.291	0.004	-0.413	0.235	Not Supported
Perceived Playfulness -> Behavioral Intention	0.541	0.106	5.091	0	0.225	0.229	0.229	Supported
Personalization -> Behavioral Intention	0.062	0.134	0.461	0.323	0.002	-0.44	0.236	Not Supported
Privacy Concern -> Behavioral Intention	-0.142	0.089	1.600	0.055	0.033	-0.027	0.113	Not Supported

Hence H2 was supported in this study. Meanwhile, the confidence interval bias values of locatability (LL=-0.413, UL=0.235), personalization (LL= -0.440, UL = 0.236), and privacy concern (LL=-0.027, UL=0.113) indicate that the CI values was straddled on values of zero and confirms that the result was not statistically significant. Hence, H1, H3 and H4 were not supported in this study

## 9. CONCLUSION

Digital experience is influenced by the widespread adoption of technologies. The adoption of digital technology has increased people's ability to use digital technology and communication tools to evaluate, use and create knowledge and information. The findings of this study show that people were not really concerned about their personal information disclosure when they perceived playfulness on digital workforce platforms. The study also indicates that the demographic nature and the characteristics of the respondents have influenced the decision on the disclosure of personal information. To them, the degree to which the enjoyments they perceived when participating in the digital workforce does affect their intention to disclose their personal information.

## 10. ACKNOWLEDGEMENT

This work was supported by the Research Management Centre, UiTM 600-RMI/FRGS 5/3 (0041/2016) and Ministry of Higher Education of Malaysia (MOHE).

## 11. REFERENCES

- [1] Colbert, A., Yee, N. and George, G., "The Digital Workforce and The Workplace of The Future", *Academy of Management Journal*, Vol.59, No.3 pp 731-739 (2016).
- [2] Matthews, B., *Freelance Statistics 2015: The Freelance Economy in Numbers* (2015). Available online at [benrmatthews.com](http://benrmatthews.com).
- [3] Triparna, V., Nguyen, C., Vreede, G., Palmon, R., "A Theoretical Model of User Engagement in Crowdsourcing." In book: *Collaboration and Technology*, pp.94-109 (2013).
- [4] Chellappa, R.K. and Sin, R., "Personalization Versus Privacy: An Empirical Examination of the Online Consumer's Dilemma," *Information Technology and Management*, vol. 6, no. 2-3, (2005).
- [5] Culnan, M.J., "Protecting privacy online: Is self-regulation working?" *Journal of Public Policy & Marketing* 19(1) 20-26 (2000).
- [6] Junglas, I.A., and Watson, R. T., "Location-based services." *Communications of the ACM*, 51(3), 65-69, (2008).
- [7] Lin, C.S., Wu, S., Tsai, R.J., "Integrating perceived playfulness into expectation-confirmation model for web portal context." *Information & Management*, 42 (5) pp. 683-693,(2005).
- [8] Moon, J., and Kim, Y., "Extending the TAM for a World-Wide Web context." *Information & Management*, 38(4), 217-230 (2001).
- [9] Joinson, A. N., "Looking at," "Looking up" or "Keeping up with" people? Motives and uses of Facebook." *Proceedings of CHI 2008*. New York: ACM. (2008).
- [10] Ahern, S., Eckles, D., Good, N. S., King, S., Naaman, M., and Nair, R., "Photo sharing: Over-exposed?: Privacy patterns and considerations in online and mobile photo sharing." *Proceedings of CHI '07*. New York: ACM, (2007).
- [11] Metzger, M. J., "Effects of site, vendor, and consumer characteristics on Web site trust and disclosure." *Communication Research*, 33, 155-179 (2006).
- [12] Pechpeyrou, D., Pauline, and Nicholson, P., "An Integrated Framework for Privacy Concerns in France." *International Journal of Integrated Marketing Communications* 4.1 (2012).
- [13] Cox, T., "Factors Associated with Behavioral Intention to Disclose Personal Information on Geosocial Networking Applications." *ProQuest LLC* (2012).
- [14] Hair, J.F, Black, W.C, Babin B.J., "RE Anderson Multivariate data analysis: A global perspective, New Jersey, *Pearson Prentice Hall*, (2010).
- [15] Chin, W.W., "The partial least squares approach to structural equation modelling", in Marcoulides, G.A. (Ed.), *Modern Methods in Business Research*, Lawrence Erlbaum Associates, Hillsdale, NJ, pp. 295-336 (1998).
- [16] Kline, R. B., "Principles and practice of structural equation modelling (3rd ed.)" New York, NY: The Guilford Press (2011).
- [17] Gold, A.H., Malhotra, A., and Segars, A.H., "Knowledge Management: An Organizational Capabilities Perspective," *Journal of Management Information Systems* (18)1, pp. 185-214 (2001).
- [18] Sheng, H., Nah, F., and Siau, K., "An experimental study on U-commerce adoption: The impact of personalization and privacy concerns." *Journal of the Association for Information Systems*, 9(6), 344-376 (2008).
- [19] Cohen, J., "Statistical power for the behavioral sciences (2nd ed.)" Hillsdale, NJ: Lawrence Erlbaum (1988).