INFLUENCING FACTORS OF DATA REUSE INTENTION OF SOCIAL SCIENCE RESEARCHERS: A STRUCTURAL EQUATION MODELING APPROACH

Xiang Chen[1*] and Poonphon Suesaowaluk[2]

[1]PhD Candidate of Technology Education and Management, Graduate School of Business and Advanced Technology Management, Assumption University of Thailand, and Xihua University

[2]Full-Time Lecturer, Graduate School of Business and Advanced Technology Management, Assumption University of Thailand.

*Corresponding author E-mail: 674555251@qq.com

Received 15 October 2022
Revised 15 February 2023
Accepted 4 March 2023

Abstract

This research aims to explore the influencing factors of data reuse intention of 500 social science researchers in Sichuan, China. Based on the theory of planned behavior (TPB), technology acceptance model (TAM), and extended technology acceptance model (ETAM), this study constructs a research model based on information quality, service quality, subjective norms, data repositories, perceived effort, and intention to reuse data. This quantitative study employs sample techniques, using purposive, quota and convenience sampling. Confirmatory Factor Analysis (CFA), and Structural Equation Model (SEM) were used to analyze the data and examine the research hypotheses. Results show that all hypotheses were approved, except the relationship between perceived ease of use and perceived usefulness. In conclusion, all significant factors should be intervened in the early stage of data sharing and reuse to facilitate the smooth development of data sharing and reuse in the later stage.

Keywords: Data Reuse, Intention to Reuse, Data Repository, Structural Equation Modeling, Social Science

Introduction

Data reuse is an integral part of the sustainable development of open data. Data reuse refers to researchers' secondary use of data sets beyond their original intent (Geissbuhler et al., 2013). Data reuse's intention will help form a circular ecology in which data reuse and sharing promote each other. It is helpful to enhance the recognition and continuous participation of scientific researchers in the concept of open data (Pronk, 2019). Many scholars use behavioral theory to verify that researchers' data reuse attitude, perception factors, subjective norm, and data repository will affect their intention and behavior of data reuse, such as the theory of planned behavior (TPB), technology acceptance model (TAM), and extended technology acceptance model (ETAM) (Yoon & Kim, 2017; Joo & Kim, 2017)

There are disciplinary differences in the influencing factors of data reuse behavior. The Digital Curation Center surveyed researchers in the arts and humanities, social sciences, physical sciences, and other attitudes about data sharing and reuse and found that differences between disciplines are reflected at the level of technology and behavior (Fairley, 2009). There may also be disciplinary differences influencing researchers' intention to reuse data. Sichuan Province is a central province of social science research in China. It has produced and gathered much data on policies and regulations, education and culture, public security, finance, economic statistics, commercial circulation, and legal services. Therefore, this study selects researchers in the field of social sciences in Sichuan Province, China, as the survey object to explore the influencing factors of the intention to reuse data in this field.

Literature Review

1. Service quality (SQ).

SQ is one factor that determines a product's success (Wang & Lin, 2012). SQ affects users' PEOU and PU (Rui-Hsin & Lin, 2018). Leon (2018) emphasized that SQ positively affected the PU and PEOU of virtual communities. When social science researchers conduct data reuse, they involve data search, download, understanding, and application processes. If we can provide fast response service and good response effect in these processes, then researchers' confusion in reusing data will be solved. They will find the data easier to use and may use it in their research. Consequently, the following hypotheses are constructed:

H1a: Service quality has a significant effect on perceived usefulness.

H1b: Service quality has a significant effect on perceived ease of use.

2. Information quality (IQ).

PEOU and PU are affected by individuals' criteria for judging the quality of relevant information (Wang & Lin, 2012). Faniel et al. (2016) focused on factors such as data relevance, completeness, availability, reliability, quality of information sources, and ranking of the journals in which the data were located play an essential role in sociologists' satisfaction with data reuse.IQ is related to the quality of scientific research results. The higher the quality of information, the more valuable it will be to researchers, and the more they will appreciate the value of reusing data. Accordingly, the below hypotheses are proposed:

H2a: Information quality has a significant effect on perceived usefulness.

H2b: Information quality has a significant effect on perceived ease of use.

3. Perceived ease of use (PEOU).

Lederer et al. (2000) pointed out that if a system was easy to access and use, easy to understand the service content and easy to read, had a navigation page, easy to jump to the link of relevant information, short response time, could be quickly retrieved, it indicated that the usability of the system or electronic services had been improved. Xie et al. (2017) focused on how PEOU in e-government services would positively affect PU. Leon (2018)

discussed that among all the factors affecting the perceived usefulness of mobile service applications, PEOU had the most significant effect. Accordingly, the following hypothesis is proposed:

H3: Perceived ease of use has a significant effect on perceived usefulness.

4. Perceived usefulness (PU).

The determinant of a researcher's data reuse is primarily based on the expected benefit and whether the reused data is relevant to his research (Yoon & Kim, 2020). Data users realize that utilizing existing data can improve the efficiency of their research, such as an increase in the number of data publications and a reduction in data collection time. A social science researcher will be willing to use existing data to research if it benefits from reusing data or increases work efficiency to solve the research problem (Kim & Zhang, 2015). Therefore, a hypothesis is set:

H4: Perceived usefulness has a significant effect on attitudes toward data reuse.

5. Perceived effort (PE).

Joo and Kim (2017) found that although many researchers believed data sharing and data reuse were important, they believed that preparing data for sharing would take much work due to their lack of expertise. When data users spend less time and effort acquiring and processing data, their attitude toward reusing data increases (Kim & Zhang, 2015). If researchers perceive that reusing data requires much effort, it will negatively affect attitudes and intention to reuse data (Yoon & Kim, 2020). Thus, the following hypothesis is developed:

H5: Perceived effort has a significant effect on attitudes toward data reuse.

H6: Perceived effort of has a significant effect on intention to reuse data.

6. Subjective norms (SN).

The SN of data reuse is an important indicator that affects the attitude toward data reuse (Yoon & Kim, 2017). Rui-Hsin and Lin (2018) emphasized that SN positively impacted people's intention to use information systems. Calisir et al., (2009) found that SN significantly impacted individuals' behavioral intentions. The SN of data reuse also contributes to the dissemination and utilization of data, promotes academic exchanges, and promotes researchers' emotional cognition of data reuse (Curty & Qin, 2014; Lim & Duang-Ek-Anong, 2021). Accordingly, the following hypotheses are proposed:

H7: Subjective norms have a significant effect on attitudes toward data reuse.

H8: Subjective norms have a significant effect on intention to reuse data.

7. Attitude toward data reuse (ADR).

Combining planned behavior theory, it is believed that positive or negative attitudes toward data reuse will directly affect the intention to reuse data (Joo & Kim, 2017). Researchers' attitudes toward data reuse positively affect their intention to reuse data (Yoon & Kim, 2017). If social science researchers have a positive attitude toward reusing data, they will have a solid incentive to reuse data. Hence, the following hypothesis is proposed:

H9: Attitude toward data reuse has a significant effect on intention to reuse data.

8. Data repositories (DR)

A survey of researchers in STEM (science, technology, engineering, and mathematics) disciplines by Kim and Zhang (2015) showed that the perceived availability of data knowledge bases had a more significant impact on researchers' data-sharing behaviors. Joo et al. (2017) found that the availability of data repositories played a crucial role in promoting the data reuse behavior of health scientists. Joo and Kim (2017) argued that the availability of data repositories was essential for resource utilization. Accordingly, the following hypothesis is proposed.H9. Positive attitude toward data reuse significantly affects a social science researcher's intention to reuse other researchers' data. Subsequently, the last hypothesis is finalized:

H10: Data repository has a significant effect on intention to reuse data.

Research Framework

The research model in this paper is shown in Figure 1. Among them, PEOU was adapted (Wang & Lin, 2012). PU was adapted from (Joo et al., 2017). SN was adapted from (Yoon & Kim, 2017). PE was adapted from (Joo & Kim, 2017). SQ was adapted from (Zhou, 2011). IQ was adapted from (Rotchanakitumnuai & Speece, 2009). DR was adapted from (Kim & Nah, 2018). ADR was adapted from (So & Bolloju, 2005). IRD was adapted from (Kim & Yoon, 2017).

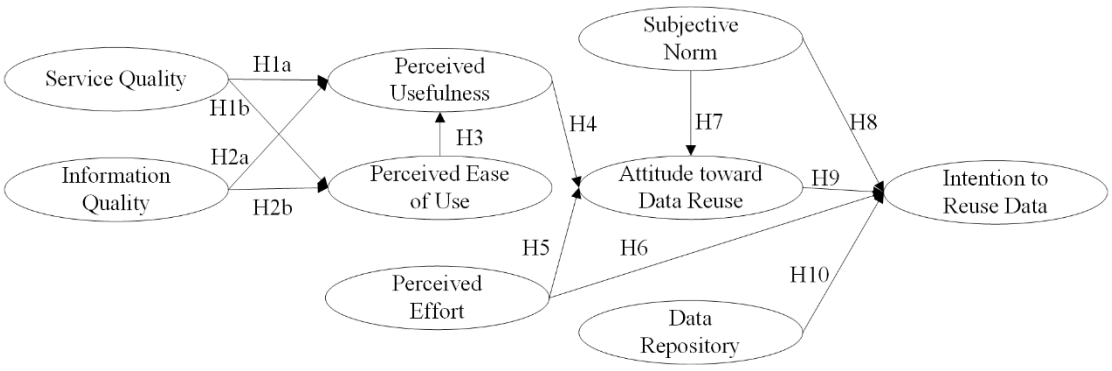


Figure 1. The Conceptual Framework

Research Methodology

The questionnaire consists of screening questions, measurement items of each latent variable, and respondents' information. The introductory part explains the core concepts of the questionnaire to ensure that the respondents have a consistent understanding of the content involved in the research question. The design of the measurement items in the questionnaire was derived or adapted from the existing literature. Questionnaire items were measured using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The index of Item–Objective Congruence (IOC) of six PhD and pilot test of 50 participants were used to verify content validity and construct reliability. Confirmatory Factor Analysis (CFA), and Structural Equation Model (SEM) were used to analyze the data and examine the research hypotheses.

1. Population and Sample Size

The target population are researchers in the field of social sciences who are Master's degree or above and have experienced in conducting research in Sichuan Province, China, except Chengdu. Through the statistics of the questionnaires, a total of 539 questionnaires were collected. Through careful review of each questionnaire, 39 invalid questionnaires with too short filling time were excluded, and the number of valid questionnaires for this survey was 500.

2. Sampling Techniques

This quantitative study employs sample techniques, using purposive, quota and convenience sampling. For purposive sampling, it is found by the development of Philosophy and Social Sciences in Sichuan (2019) (Lv & Peng, 2019, pp. 28-32) that 56 of the top 138 Sichuan Philosophy and Social Sciences research institutions are scattered in other parts of Sichuan Province except for Chengdu. Statistics show that institutions with higher rankings have more social science researchers. In terms of the number of social science research projects, scientific research results, social science platforms, and scientific researchers, these 56 institutions are relatively small, and the distribution is seriously uneven, so the top 20 institutions are selected as the sampling units in the region. Quota sampling were used to generalize 25 participants per each institution. The convenience sampling was to distribute online questionnaire to the target group.

Results and Discussion

1. Demographic Results

The demographic results are explicated in Table 1, including gender, age, time engaged in scientific research and academic position.

Table 1 Demographics of respondents

Demographic Profile (N=500)		Frequency	Percentage
Gender	Male	223	44.6%
	Female	277	55.4%
Age	Under 24	21	4.2%
	25-35	163	32.6%
	36-45	190	38.0%
	46-55	107	21.4%
	56+	19	3.8%
Time engaged in scientific research	Less than 5	140	28.0%
	6-10	139	27.8%
	11-15	100	20.0%
	16-20	66	13.2%
	20+	55	11.0%
Academic Position	Assistant	77	15.4%
	Lecturer/Instructor	197	39.4%
	Associate professor	159	31.8%
	Full professor	50	10.0%
	Others	17	3.4%

2. Confirmatory Factor Analysis (CFA)

The test of the measurement model is mainly based on the reliability and validity of the scale. The reliability of the measurement model was tested by the composite reliability and internal consistency coefficient (Cronbach's Alpha) of the latent variables. It is generally believed that the CR and Cronbach's **α** of the variable reaching 0.7 is sufficient to indicate that the measurement model has good reliability. From Table 2, the CR are all greater than or equal to 0.826, and Cronbach's **α** are all greater than or equal to 0.827, indicating that the measurement model has good reliability. Furthermore, Average Variance Extracted (AVE) is greater than 0.5, indicating that the scale has ideal convergent validity. As a results, the AVE is all greater than 0.54, indicating that the measurement model has ideal convergent validity.

Table 2 Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Latent Variables	Cronbach's Alpha	CR	AVE
Perceived Ease of Use (PEOU)	0.874	0.875	0.54
Perceived Usefulness (PU)	0.886	0.887	0.663
Subjective Norm (SN)	0.834	0.835	0.627
Perceived Effort (PE)	0.839	0.841	0.639
Service Quality (SQ)	0.895	0.895	0.681
Information Quality (IQ)	0.92	0.921	0.66
Data Repository (DR)	0.889	0.89	0.729
Attitude toward Data Reuse (ADR)	0.862	0.862	0.676
Intention to Reuse Data (IRD)	0.826	0.827	0.614

Source: Created by the author.

Discriminant validity was assessed by correlation coefficients between latent variables. Table 3 shows that the AVE square root of the latent variable is much larger than the correlation coefficient between it and other latent variables, indicating the measurement model has good discriminant validity.

Table 3 Correlation coefficient between latent variables and AVE square root

	PEOU	PU	SN	PE	SQ	IQ	DR	ADR	IRD
PEOU	**0.735**								
PU	0.202	**0.814**							
SN	0.223	0.321	**0.792**						
PE	-0.146	-0.356	-0.274	**0.799**					
SQ	0.227	0.421	0.212	-0.303	**0.825**				
IQ	0.268	0.369	0.246	-0.222	0.378	**0.812**			
DR	0.057	0.286	0.146	-0.208	0.207	0.331	**0.854**		
ADR	0.185	0.434	0.297	-0.304	0.276	0.362	0.316	**0.822**	
IRD	0.181	0.346	0.331	-0.311	0.278	0.363	0.421	0.360	**0.784**

Note: The diagonally listed value is the AVE square roots of the variable

3. Structural Equation Model (SEM)

In Table 4, the statistical indicator values from the SEM represent good fit after the adjustment. The indices and its value used for goodness of fit are CMIN/DF = 1.848, GFI = 0.900, AGFI = 0.884, NFI=0.904, CFI = 0.953, TLI = 0.949, RMSEA = 0.041. All the index values were within the acceptable standard, which confirmed the model's fitness.

Table 4 Goodness of Fit for Measurement and Structural Model

Index	Acceptable Criterion	Statistical Values (Before Adjustment)	Statistical Values (After Adjustment)
CMIN/DF	< 3.00 (Hair et al., 2006)	1148.820/548 or 2.096	1005.471/544 or 1.848
GFI	≥0.90 (Hair et al., 2006)	0.878	0.900
AGFI	≥ 0.85 (Schermelleh-Engel & Moosbrugger, 2003)	0.859	0.884
NFI	≥ 0.90 (Hair et al., 2006)	0.890	0.904
CFI	≥ 0.90 (Hair et al., 2006)	0.939	0.953
TLI	≥ 0.90 (Hair et al., 2006)	0.934	0.949
RMSEA	<0.05 (Hu & Bentler, 1999)	0.047	0.041
Model Summary		**Unacceptable Model Fit**	**Acceptable Model Fit**

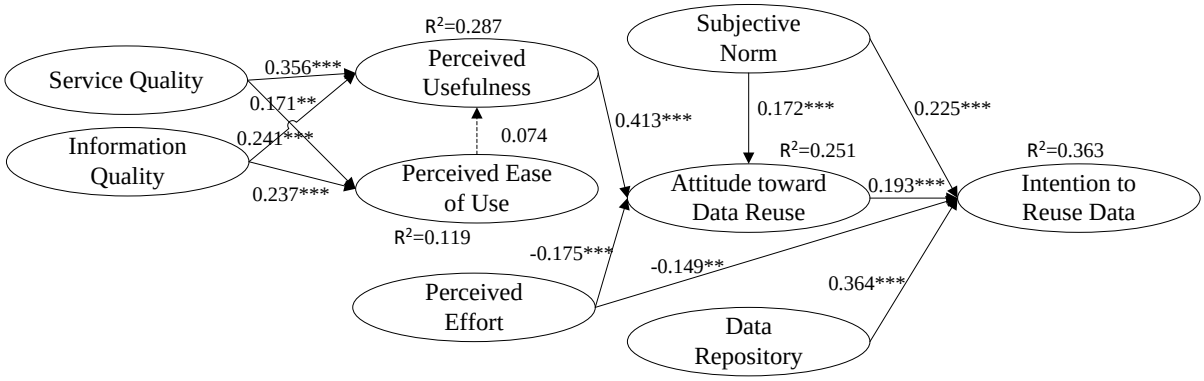
Note: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, NFI = Normed fit index, CFI = Comparative fit index, TLI = Tucker-Lewis index and RMSEA = Root mean square error of approximation

4. Hypothesis Testing Result

The analysis results of a structural model present factors affecting social science researchers' intention to reuse data. The results in Figure 2 showed that SQ had a significant effect on PU (β = 0.356, p < 0.001) and PEOU (β = 0.171, p < 0.01) for data reuse. IQ had a significant effect on PU (β = 0.241, p < 0.001) and PEOU (β = 0.237, p < 0.001) for data reuse. PU had a significant effect on ADR (β=0.413, p<0.001). SN had a significant effect on ADR (β=0.172, p<0.001). PE had a significant effect on ADR (β = - 0.175, p<0.001) and IRD (β = - 0.149, p<0.01). ADR had a significant effect on IRD (β=0.193, p<0.001). SN had a significant effect on IRD (β=0.225, p<0.001). DR had a significant effect on IRD (β=0.364, p<0.001). Among the influencing factors of data reuse intention, DR has the greatest explanatory power on intention. The effect of PEOU for data reuse on PU was not significant (β=0.074, p>0.05).

Table 5 Hypotheses Testing Result of the Structural Model

Hypothesis	Dependent variable ⟵ independent variable	C.R.	Beta(p)	Result
H1	PU⟵PEOU	1.550	0.074	Not Supported
H2a	PU⟵SQ	6.717	0.356***	Supported
H2b	PEOU⟵SQ	3.135	0.171**	Supported
H3a	PU⟵IQ	4.697	0.241***	Supported
H3b	PEOU⟵IQ	4.321	0.237***	Supported
H4	ADR⟵PU	8.254	0.413***	Supported
H5	ADR⟵PE	-3.389	-0.175***	Supported
H6	IRD⟵PE	-2.845	-0.149**	Supported
H7	ADR⟵SN	3.321	0.172***	Supported
H8	IRD⟵ADR	3.944	0.193***	Supported
H9	IRD⟵SN	4.307	0.225***	Supported
H10	IRD⟵DR	7.316	0.364***	Supported



Note: ***=p<0.001, **=p<0.01

Figure 2 SEM Results

Conclusions, Recommendations, Limitations and Future Research

1. Conclusions

This study integrates the quality theory into the research of data reuse intention, explains the connotation of perceived usefulness and ease of use of data reuse, and believes that information quality and service quality are very important in data reuse. This discovery provides a perfect space for data reuse practice. For practical implications, the specific roles and degrees of different influencing factors in data reuse can provide theoretical support for

future data management, reuse, and governance practices. For example, subjective normative, service quality, information quality, data repository, and other important aspects should be intervened in the early stage of data sharing and reuse to facilitate the smooth development of data sharing and reuse in the later stage.

2. Recommendations

SQ and IQ have a direct and significant impact on both the PU and PEOU of data reuse. This shows that social science researchers pay great attention to the quality of service and information provided in the process of data reuse. In view of the existing problems, it helps to explore data reuse rules and methods suitable for the development needs of different social disciplines and provides a timely response and personalized and professional services. For example, the Lancaster University Library held the Lancaster data conversations activity with the library as the main organizer (Lancaster University Library, 2022). The library can also cooperate with the social sciences teaching colleges and departments. For example, the National University data-driven innovation research competition held by Peking University takes the data from the open research data platform of Peking University as one of the sources of data used in the competition and trains the participating teams before the competition.

PU has a direct and significant effect on social science researchers' ADR. Based on this, an incentive mechanism should be established to encourage social science researchers to actively share data and enhance the awareness of sharing and reuse. Strengthen the publicity of the advantages of social science data sharing and reuse, encourage the development of diversified social science data innovation and application guidance and empowerment activities, and establish and issue data patent certificates. Hold social science data innovation and application competition.

SN has a direct and significant impact on social science researchers' attitudes and intention to reuse data; that is, the recommendations and opinions of friends, relatives, and important people around them will affect whether they reuse data. The following steps can be taken to improve the SN of data reuse by social science researchers. First, form a social science data community, and encourage researchers to actively participate in the evaluation, sharing, and interaction of data. For example, apply for Weibo and WeChat official accounts, regularly display the results, cases, and hotspots of data sharing and reuse, promote the promotion of data achievements, and attract more users to join in data sharing and reuse. Second, increase data literacy courses in colleges and universities to improve the data literacy of social science beginners in terms of data culture, data awareness, and data skills, and strengthen their intention to reuse data. Third, establish and maintain dataset attribution and citation policies.

PE has a negative impact on attitudes and intention to reuse data. Based on this, we can optimize the functions of the social science data repository platform, improve the performance and efficiency of the platform, enrich the website tools, and reduce the

perceived efforts of social science researchers in data reuse. For example, improve the data directory list, provide data multi-angle retrieval, data association, data online browsing and analysis, data format verification and conversion, data automatic recommendation and visualization, interactive docking with users, and collect data attachments related to research.

Consistent with the theory of planned behavior, social science researchers' ADR has a direct and significant impact on their IRD. Therefore, making people aware of the value and importance of reusing data and vigorously publicizing and popularizing the important role of data in scientific research activities can encourage people to reuse other people's scientific data.

DR has a significant impact on the intention of social science researchers to reuse data. Based on this, the construction of social science data repositories and the establishment of data processing and processing norms should be promoted at the national and international organization levels so that more researchers can reuse data through various channels. Promote the international certification process and promotion of social science data repositories in my country so that they can appear in the positions recommended by journals in many fields. During this research, it was found that many social science data are only open to specific groups of people (such as university teachers or insiders of research institutes). Data repositories do not only collect government data but should include as many discipline-specific data or datasets as possible in the social sciences.

PEOU of data reuse has no significant effect on PU. This is inconsistent with the conclusions in the theory of planned behavior. This may be due to the fact that some cities (prefectures) in Sichuan Province currently have a small number of effective data application results, have not displayed effective data results, and lacked active exploration of data innovation applications. As a result, the social participation of most data recipients is low, and they do not perceive the difficulty of data reuse when reusing data shared by other researchers.

3. Limitations and Future Research

Several imitations of the study can be stated for the improvement of the future research. First, it can examine other researchers in the different region or countries for factors affecting the data reuse intention. Second, the conceptual framework can be modified and investigate other factors beyond this study. Finally, the qualitative research could be considered to provide logic and insights of social science researcher of their intention to reuse the data.

References

Calisir, F., Altin Gumussoy, C., & Bayram, A. (2009). Predicting the behavioral intention to use enterprise resource planning systems: An exploratory extension of the technology acceptance model. *Management Research News, 32*(7), 597-613. Retrieved from https://doi.org/10.1108/01409170910965215

Curty, R. G., & Qin, J. (2014). Towards a model for research data reuse behavior: Towards a Model for Research Data Reuse Behavior. *Proceedings of the American Society for Information Science and Technology, 51*(1), 1-4. Retrieved from https://doi.org/10.1002/meet.2014.14505101072

Fairley, E. (2009). Curated databases in the life sciences: the Edinburgh Mouse Atlas Project. Retrieved from https://www.dcc.Acuk/sites/default/files/documents/publications/casestudies/SCARP_EMAP.pdf.

Faniel, I. M., Kriesberg, A., & Yakel, E. (2016). Social scientists' satisfaction with data reuse. *Journal of the Association for Information Science and Technology, 67*(6), 1404-1416. Retrieved from https://doi.org/10.1002/asi.23480

Geissbuhler, A., Safran, C., Buchan, I., Bellazzi, R., Labkoff, S., Eilenberg, K., Leese, A., Richardson, C., Mantas, J., Murray, P., & De Moor, G. (2013). Trustworthy reuse of health data: A transnational perspective. *International Journal of Medical Informatics, 82*(1), 1-9. Retrieved from https://doi.org/10.1016/j.ijmedinf.2012.11.003

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, L. R. (2006). *Multivariant Data Analysis.* (6th ed.). New Jersey: Pearson Prentica Hall.

Hu, L.-T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1-55. Retrieved from https://doi.org/10.1080/10705519909540118

Joo, S., Kim, S., & Kim, Y. (2017). An exploratory study of health scientists' data reuse behaviors Examining attitudinal, social, and resource factors. *Journal of Information Management, 69*(4), 389-407.

Joo, Y. K., & Kim, Y. (2017). Engineering researchers' data reuse behaviours: a structural equation modelling approach. *The Electronic Library, 35*(6), 1141-1161. Retrieved from https://doi.org/10.1108/el-08-2016-0163

Kim, Y., & Yoon, A. (2017). Scientists' data reuse behaviors: A multilevel analysis. *Journal of the Association for Information Science and Technology, 68*(12), 2709-2719. Retrieved from https://doi.org/10.1002/asi.23892

Kim, Y., & Zhang, P. (2015). Understanding data sharing behaviors of STEM researchers: The roles of attitudes, norms, and data repositories. *Library & Information Science Research, 37*(3), 189-200. Retrieved from https://doi.org/10.1016/j.lisr.2015.04.006

Lancaster University Library. (2022). *Lancaster Data Conversations.* Retrieved from *https://www.lancaster.ac.uk/library/research-data-management/data-conversations/*.

Lederer, A. L., Maupin, D. J., Sena, M. P., & Zhuang, Y. (2000). The technology acceptance model and the World Wide Web. *Decision Support Systems, 29*(3), 269-282. Retrieved from https://doi.org/10.1016/s0167-9236(00)00076-2

Leon, S. (2018). Service mobile apps: a millennial generation perspective. *Industrial Management & Data Systems, 118*(9), 1837-1860. Retrieved from https://doi.org/10.1108/imds-10-2017-0479

Lim, S., & Duang-Ek-Anong, S. (2021). Determinants of Intention to Use DevOps in Cambodia's Technology Industry. *AU-GSB E-JOURNAL*, *14*(2), 27-39. Retrieved from https://doi.org/10.14456/augsbejr.2021.12

Lin, H.-F. (2007). Predicting consumer intentions to shop online: An empirical test of competing theories. *Electronic Commerce Research and Applications, 6*(4), 433-442. Retrieved from https://doi.org/10.1016/j.elerap.2007.02.002

Lv, X. J., & Peng, G. L. (2019). Report on the development of Philosophy and Social Sciences in Sichuan. *Comprehensive evaluation of institutions*, *1*(2), 28-32.

Pronk, T. E. (2019). The Time Efficiency Gain in Sharing and Reuse of Research Data. *Data Science Journal, 18*. Retrieved from https://doi.org/10.5334/dsj-2019-010

Rotchanakitumnuai, S., & Speece, M. (2009). Modeling electronic service acceptance of an e-securities trading system. *Industrial Management & Data Systems, 109*(8), 1069-1084. Retrieved from https://doi.org/10.1108/02635570910991300

Rui-Hsin, K., & Lin, C.-T. (2018). The usage intention of e-learning for police education and training. *Policing: An International Journal, 41*(1), 98-112. Retrieved from https://doi.org/10.1108/pijpsm-10-2016-0157

Schermelleh-Engel, K., & Moosbrugger, H. (2003). Evaluating the Fit of Structural Equation Models: Tests of Significance and Descriptive Goodness-of-Fit Measures. *Methods of Psychological Research Online*, 8, 23-74.

So, J. C. F., & Bolloju, N. (2005). Explaining the intentions to share and reuse knowledge in the context of IT service operations. *Journal of Knowledge Management, 9*(6), 30-41. Retrieved from https://doi.org/10.1108/13673270510629945

Wang, K., & Lin, C. L. (2012). The adoption of mobile value-added services: investigating the influence of IS quality and perceived playfulness. *Managing Service Quality, 22*(2), 184-208.

Xie, Q., Song, W., Peng, X., & Shabbir, M. (2017). Predictors for e-government adoption: integrating TAM, TPB, trust and perceived risk. *The Electronic Library, 35*(1), 2-20. Retrieved from https://doi.org/10.1108/el-08-2015-0141

Yoon, A., & Kim, Y. (2017). Social scientists' data reuse behaviors: Exploring the roles of attitudinal beliefs, attitudes, norms, and data repositories. *Library & Information Science Research, 39*(3), 224-233. Retrieved from https://doi.org/10.1016/j.lisr.2017.07.008

Yoon, A., & Kim, Y. (2020). The role of data-reuse experience in biological scientists' data sharing: an empirical analysis. *The Electronic Library, 38*(1), 186-208. Retrieved from https://doi.org/10.1108/el-06-2019-0146

Zhou, T. (2011). Examining the critical success factors of mobile website adoption. *Online Information Review, 35*(4), 636-652. Retrieved from https://doi.org/10.1108/14684521111161972