The Validation of Theory of Planned Behaviour among Tax e-filers in Pakistan

Hafiz Ahmed Ullah
Ph.D. Scholar, Hailey College of Commerce, University of the Punjab
ahmed.awan757@gmail.com
Dr. Rizwan Qaiser Danish
Associate Professor, Institute of Business & Administration, University of the Punjab
rqdanish@ibapu.edu.pk
Dr. Ashfaq Ahmed
Associate Professor, Hailey College of Commerce, University of the Punjab
ashfaq.hcc@pu.edu.pk
Dr. Humaira Asad
Assistant Professor, Institute of Business & Administration, University of the Punjab
humaira@ibapu.edu.pk
Waqas Baig
Ph.D. Scholar, Hailey College of Commerce, University of the Punjab
waqasbaig33@yahoo.com

Abstract
In 2005, the Federal Board of Revenue (FBR), Government of Pakistan launched an e-tax filing portal to facilitate the tax filers to file their tax returns online. Submitting tax returns online is considered swift, easy, and economical. In this research study, we explain the tax filer's intention to use the e-tax filing system through the theoretical lens of the Theory of Planned Behaviour after fifteen years of its implementation in Pakistan. Data was collected from 218 e-tax filing portal users located within the city of Lahore. The results show that subjective norm, attitude towards using e-tax filing portal and perceived behavioural control are associated with intention to use significantly. At present, the FBR is putting a lot of effort to increase the use of electronic filing systems, the outcomes of this study may facilitate the FBR to design a more effective plan to increase the electronic filing usage among Pakistani taxpayers. At the end of the article limitations and future instructions are given.
Key Words: Subjective Norm, Perceived Behavioural Control, Attitude Towards Using e-Tax Filing Portal, Intention to Use.

Introduction

Whether small or large, developed or developing, Eastern or Western, the government of each country requires resources and income to run the affairs of the state. Tax is considered a significant source of revenue for the governments of developing countries to ensure continued

economic development. International Centre for Tax and Development (ICTD) recently estimated that 80% of the total revenue of about half of total countries in the world comes from the tax revenue. Historically, tax rates and tax collections from citizens are the important policy issues for the last two centuries. Tax collection in developed countries is almost twice as compared to the tax collected in developing countries. Although, developed countries show small growth in tax to GDP ratio at the beginning of the twentieth century while developing countries show a negative trend. This cross-country heterogeneity can be explained by two major factors: compliance behaviour and efficiency of tax collection mechanism.

Tax is a significant source of government revenue used to deliver infrastructure progress and social facilities (Bame-Aldred et al., 2013). In developing countries, less tax return filing as well as tax noncompliance culture is a major issue as compared to the developed countries (Abdul & Wang, 2018). Pakistan, being a developing country, is also facing the problem of a very low tax collection since its inception.

According to Cobham (2017), the estimated tax loss due to tax avoidance is $10.4 billion in Pakistan which amounts to 39.68% of the total tax revenue. The loss of tax revenue as the percentage of GDP is 4.4% in Pakistan, which is much larger as compared to 1.13% in the US and 0.75% in China. In Pakistan, FBR has the responsibility to collect taxes on the behalf of Government of Pakistan. FBR introduced the system of E-filing for income tax returns in December 2005 for individual taxpayers. Under this system, the individual and corporate taxpayers have to assess their income tax, arrange documents, and file returns after paying their taxes.

The core purpose of implementing this system is to enhance tax compliance and reduce the tax collection processing cost. Finance Division, Government of Pakistan (2020) reported a slight increase in the tax to GDP ratio (at market prices) from 9.6 in 2006-07 to 11.4 in 2019-20. We may attribute this increase in the tax to GDP ratio to the introduction of the e-tax filing system besides other measures being taken by the Government of Pakistan. E-filing implementation increase the tax compliance rate. This may be confirmed by a significant increase in the users of the e-tax filing portal. Research studies indicate that many developed countries also faced problems during the implementation of electronic filing. These studies identify multiple factors resulting in low usage of e-tax filing system in Taiwan (Wang, 2002; Fu, Farn & Chao, 2006; Hung, Chang & Yu, 2006), Singapore (Teo & Wong, 2005), and the United States (Schaupp, Carter, & McBride, 2010). Gangl, Kirchler, Lorenz, and Torgler (2015) investigated the tax return filing issues in Pakistan. The findings of this study indicate that the perceived service orientation of the tax administration can improve tax knowledge.

As stated by James and Alley (2002) tax compliance means the willingness of individuals to act according to tax rule, without any burden or enforcement movement. Theory of Planned Behaviour (TPB) is an extension of the Theory of Reasoned Action. TPB recommends individual motivation to do definite behaviour. The intention to behave in a certain way can be determined with the help of subjective norm and attitudes towards that certain thing. Manstead (2001) described the attitude towards a certain object or activity as an individual's valuation of performing a behaviour. Subjective norm is recognized as the supposed social force to act or not. Akram (2018) found that there is a positive and significant relationship between attitude toward

compliance and intention to comply. Ullah (2019) claimed that intention to comply gets affected by attitude towards compliance. In this study, attitude towards compliance behaviour is used to examine the impact of attitude on the behavioural intention of individuals. Subjective norm impact the individual's intention to perform a certain behaviour. Ullah (2019) conducted the research in Pakistan. The results of this study reported that there is a noteworthy association between subjective norm and intention to comply among the taxpayers. Similarly, Fischer, Wartick, and Mark (1992) recognize the value of subjective norm in defining the behaviour of taxpayer individuals regarding tax compliance. Hanno and Violette (1996) describe the value of subjective norm in tax compliance behaviour. The objective of this research is to test the theory of planned behaviour to explain the intention to use the electronic tax filing system in Pakistan.

The following sections present the problem statement, research objectives, research questions answered in this study, and hypotheses tested in this study.

Problem Statement

All over the world, particularly in developing countries income tax noncompliance has been considered a major issue because revenue authorities are unable to gather tax revenues that are payable to them. Tolger (2013) assumed that governments have the intention to utilize the income tax revenues for economic development and to make the public living standards better. Since 1947, Pakistan has been facing tax non-compliance issues. According to the Economic Survey of Pakistan (2020), the fiscal deficit increased from 8.8 percent in FY2012 to 9.1 percent during FY2019. Waris (2013) observed that out of 180 million people of Pakistan about less than one percent of people file tax returns. Tax system complexity (paperwork requirement) and tax compliance cost are the most important factors while studying tax compliance behaviour (Evans, 2003). The tax department of Pakistan offers the e-filing tax system to increase compliance rate and reduce the tax compliance cost as well to facilitate taxpayers to avail services anytime from anywhere.

The level of tax compliance is still very low and the tax collected in FY2019-20 is much lower than the amount targeted (Economic Survey of Pakistan, 2020). One of the many reasons behind the low level of tax compliance is that many taxpayers are unable to use the e-filing system. FBR organizes training workshops for taxpayers to update people about the acceptance of e-filing systems on regular basis. Unfortunately, the number of users of the e-filing system is still very low due to lack of financial and literacy and poor or no knowledge of filing returns using the electronic system. Despite its significance, we observe that there is limited research in the area of e-filing by using TPB among taxpayers, mainly in Pakistan. Therefore, there is a need to investigate the effect of TPB variables on intention to use e-filing in Pakistan. The outcomes of this research may be helpful for the government or authorities to develop a program for the guidance of the taxpayer to use the e-filing system in Pakistan.

Research Objectives
1. To find out whether attitude towards compliance impacts the taxpayer's intention to use the electronic filing system.

2. To see whether subjective norm impacts the taxpayer's intention to use the electronic filing system.
3. To find out whether perceived behavioural control impacts the taxpayer's intention to use the electronic filing system.

Research Questions

1. Does attitude towards compliance influence intention to use electronic filing system?
2. Does subjective norm influence intention to use the electronic filing system?
3. Does perceived behavioural control influence intention to use the electronic filing system?

Hypotheses

H_1: The attitude towards compliance is positively related to intention to use the e-filing system.

H_2: There is an effect of subjective norm on intention to use electronic filing system.

H_3: There is an effect of perceived behavioural control on intention to use electronic filing system.

Literature Review

The Federal Board of Revenue (FBR) introduced the system of e-filing of income tax returns in December 2005. FBR reported that just five thousand taxpayers have obtained Digital Certificates from National Institutional Facilitation Technologies (NIFT) up to February 2006. The key purpose of introducing the electronic filing system was to make the procedure of filing a tax return easier for the taxpayers as well as transparent. It was expected that the taxpayers are capable of using the e-filing system because of its time-saving and money-saving features. Another interesting feature of this system is that it calculates the tax amount automatically, which helps in reducing the probability of miscalculations. Hence, if the taxpayers do not have sufficient technical knowledge about taxes, the system is designed to perform the calculations itself.

Results from previous research studies showed that the low acceptance level of electronic filing system in its early execution all over the world is not specific to any particular country (Teo & Wong, 2005; Hung et al., 2006; Azmi & Bee, 2010; Schaupp et al., 2010). According to Singapore Inland Revenue Authority (IRA), in 2012 Singapore had the maximum level of e-filing usage as compared to other countries like Pakistan, and countries in East Asia. In 2011, Indonesia started the system of e-filing, Thailand adopted the e-filing system in 2013.

In Pakistan, the initial difficulties (or teething problems) were caused due to vagueness created by the new system. There is a need for a sufficient level of financial literacy of tax to use the e-filing system correctly. Palil, Md-Akir, and Wan-Ahmad (2013) argued that tax knowledge is important for calculating the tax accurately. Loo et al. (2008; 2009) noted that different research studies conducted in Malaysia also proposed that in system based on self-judgment, sufficient knowledge of tax is a significant factor to fix the problem of low tax compliance. On the other hand, as identified by Ullah (2019) there is no significant association between tax awareness or tax knowledge and intention to pay tax. According to the Unified Theory of Acceptance and Use of Technology (UTAUT) by Venkatesh et al. (2003) the usefulness and ease

of use are the most important factors which are anticipated to be linked with the taxpayers to use new or modified technology. In different countries like Taiwan, the United States and Malaysia, the intention to use electronic filing system is related to ease of use (Wang, 2002; Schaupp & Carter, 2009; Azmi & Bee, 2010). Chaupp and Carter (2009) identified that in the United States intention of taxpayers to practice electronic filing is affected by their perception of its usefulness.

The review of the literature shows that multiple studies aiming at explaining the intention to use a certain technology have employed TPB. According to Armitage and Conner (2001), TPB was mostly used in studies related to behaviour; to define the behaviour as well as to predict the behaviour. Literature suggests that TPB developed by Ajzen (1991) describes that in numerous fields, behavioural models based on TPB explain the individual's behaviour efficiently.

According to Taylor and Todd (1995) TPB suggests that the perception of subjective norm affects the intention of taxpayers regarding the new system. Venkatesh, et. al. (2003) said that social or subjective norm is a significant element that can impact on individual specific behaviour. Different studies reported that perceived behavioural control affects behavioural intention (e.g. Hung et al., 2006). Perceived behavioural control has a notable and positive link with intention to comply (Akram, 2018). Ullah (2019) recommended that subjective norm has a meaningful connection with individual taxpayer's intention to comply.

There is a need for developing awareness and seriousness among individuals to pay tax and to file the tax return in Pakistan (Ullah, 2019). Hence, the objective of the current research is to identify the factors that explain variation in the intention to use electronic filing system for taxpayers with the help of TPB.

The above section presents the literature review of variables and explains the theory used in this study. In the following sections, the methodology used in this study is explained.

Methodology

This research used primary data collected through questionnaires. The measurement scales were adapted from Fu et al. (2006), Hung et al. (2006) and Taylor and Todd (1995). The researcher faced trust-related issues from respondents because they supposed that the researcher is from the tax or revenue department of the government. To solve this problem, snowball sampling was used in this study. This study is conducted on salaried people of Pakistan. For analysis purpose 350 questionnaires were distributed. 218 complete questionnaires were collected (response rate was 62%). The sample size of 218 is consistent with the rule of calculating sample size i.e. (number of items in the questionnaire*10). We have used 13 items to measure four variables given in the conceptual model presented in Figure 1. This rule of calculating sample size is used when the population is unknown, as the case in this study. Questionnaires were distributed both physically and online through Google doc. SPSS software was used for the data entry. Smart PLS software was used to estimate the proposed model.
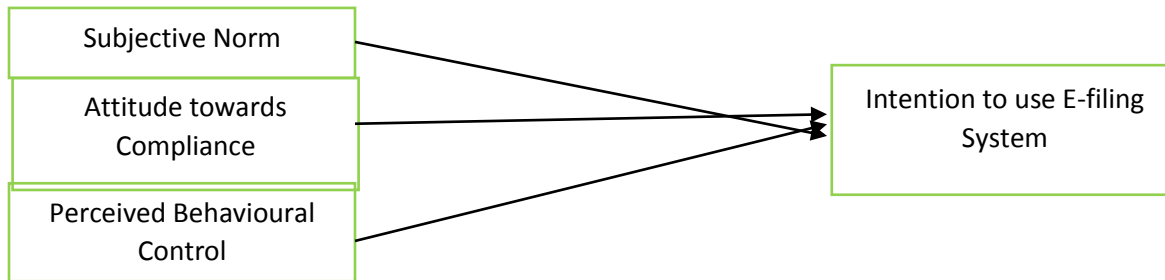
Figure 1: Conceptual Model

Results and Discussion

Table 1 displays the summary of the profile of respondents. In this research, data is gathered from the salaried people of Pakistan. The frequencies and percentages of gender, age, qualification, job nature, monthly income, and average computer use in a week are calculated through SPSS.

Table 1

Demography of the study

Characteristics	Classification	Frequency	Percent
Gender	Male	206	94.5
	Female	12	5.5
	Total	**218**	**100.0**
Age	Below 20	13	6.0
	20-30	81	37.2
	30-40	81	37.2
	Above 40	43	19.7
	Total	**218**	**100.0**
Qualification	Matric	46	21.1
	Intermediate	56	25.7
	Graduation	82	37.6
	Master/M.Phil.	17	7.8
	Other	17	7.8
	Total	**218**	**100.0**
Job Nature	Lower lever job	50	22.9
	Middle Level job	102	46.8
	Top level job	66	30.3
	Total	**218**	**100.0**
Income (Monthly)	Below Rs.40,000	4	1.8
	Rs.40000-Rs.50000	66	30.3
	Rs.50000-Rs.60000	86	39.4
	Above Rs.60000	62	28.4
	Total	**218**	**100.0**

Average hours of computer use in a week	< 1	24	11.0
	1–3	44	20.2
	3–5	14	6.4
	5 or above	136	62.4
	Total	**218**	**100.0**

Reliability and Validity Analysis

Construct Reliability

Table 2 displays the results of the construct reliability of variables. The reliability of instruments can be examined with the help of the value of Cronbach's alpha. According to Gliem et al. (2003) the standard value of construct reliability must be greater than 0.70. The values of Cronbach's alpha and Composite Reliability indicate that the items used to measure attitude towards compliance, intention to use e-filing, perceived behavioural control and subjective norm are reliable.

Composite Reliability

The composite reliability value represents the internal consistency of variables. Leguina (2015) claimed that to achieve the internal consistency of a variable its composite reliability must be greater than 0.60. The values of composite reliability for all four variables of study are greater than 0.6 indicating that all scales used possess internal consistency. See Table 2 column (3).

Table 2
Construct Reliability and Validity

	Cronbach's Alpha	Composite Reliability
Attitude towards Compliance	0.827	0.896
Intention to use E-filing	0.918	0.948
Perceived behavioural control	0.700	0.783
subjective norm	0.873	0.922

Discriminant Validity

Hetrotrait-Monotrait correlations (**HTMT**) is a measure of discriminant validity. To achieve discriminant validity, the HTMT value must be lower than 0.90 (Fornell, 1981). Table 3 demonstrates that all values of HTMT for the variables of interest are less than 0.90 hence validating that the scales used possess discriminant validity.

Table 3
Discriminant Validity

	ATC	BI	PBC	SN
Attitude toward Compliance				
Intention to use E-filing	0.738			
Perceived behavioural control	0.635	0.706		
Subjective Norm	0.557	0.741	0.665	

Average Variance Extracted

Average Variance Extracted (AVE) was calculated to examine the convergent validity of the scales used. The values of AVE for the four variables are presented in Table 4. A scale is considered to possess convergent validity if the value of AVE is greater than 0.5 (Fornell, 1981). The values of AVE for all four variables are given in Table 4. It can be seen that all values of AVE are within the acceptable range (AVE>0.50).

Table 4
Convergent Validity

	Average Variance Extracted (AVE)
Attitude toward Compliance	0.743
Intention to use E-filing	0.859
Perceived behavioural control	0.478
Subjective norm	0.797

Model Evaluation: Structural Model Findings

After estimating the proposed model, the subsequent phase encompassed the statistical proofs to support the theoretical model of the research. This can be done by analyzing the structural model. The structural model was estimated to examine the connections among dependent and independent variables. The relationship significance can be analyzed with the help of the path coefficients included in the valuation of the estimated structural model.

Collinearity Issue Assessment

The initial step is to analyze the collinearity between the variables. The value of VIF must be less than 5 (Hair, 2011). Though, the results displayed in the following table represent the values of all variables are less than the 5 according to standard. Thus, there is no collinearity problem.

Table 5
Inner VIF Values

	Intention to use E-filing
Attitude toward Compliance	1.411
Intention to use E-filing	
Perceived behavioural control	1.502
Subjective norm	1.532

Model Fitness Evaluation

For the model fitness measurement, we have estimated the values of Standardized Root Mean Squared Residual (SRMR). The SRMR value closer to zero indicates the goodness of fit. The model estimated has a value of standardized root mean square of 0.092. It represents that the estimated model is a good fit. Table 6 presents the model fitness indicators.

Table 6
Model Fitness

	Saturated Model	Estimated Model
SRMR	0.092	0.092
d_ULS	0.777	0.777
d_G	0.310	0.310
Chi-Square	855.155	855.155
NFI	0.757	0.757

Outer Loadings Evaluation

T-values help to evaluate the outer loadings of the measurement model. In Smart PLS the value of outer loading must be higher than 0.70 or not less than 0.60 as suggested. The results for the measurement model (Outer Loadings) are presented in Table 7. All measurement model loadings are greater than 0.60.

Table 7
Outer loadings

	ATC	BI	PBC	SN
ATC1	0.838			
ATC2	0.861			
ATC3	0.885			
BI1		0.938		
BI2		0.919		
BI3		0.923		
PBCONT1			0.600	

PBCONT2	0.622	
PBCONT6	0.759	
PBCONT7	0.770	
SN1		0.874
SN2		0.890
SN3		0.915

PLS Path Model Analysis

Figure 2 presents the structural model along with the estimated values of the coefficients of the three regressors. In this study Perceived Behavioural Control, Subjective Norm and Attitude toward Compliance Behaviour are independent variables and Behavioural intention to use E-filing is the dependent variable. The arrows indicate the connection of variables with each other.
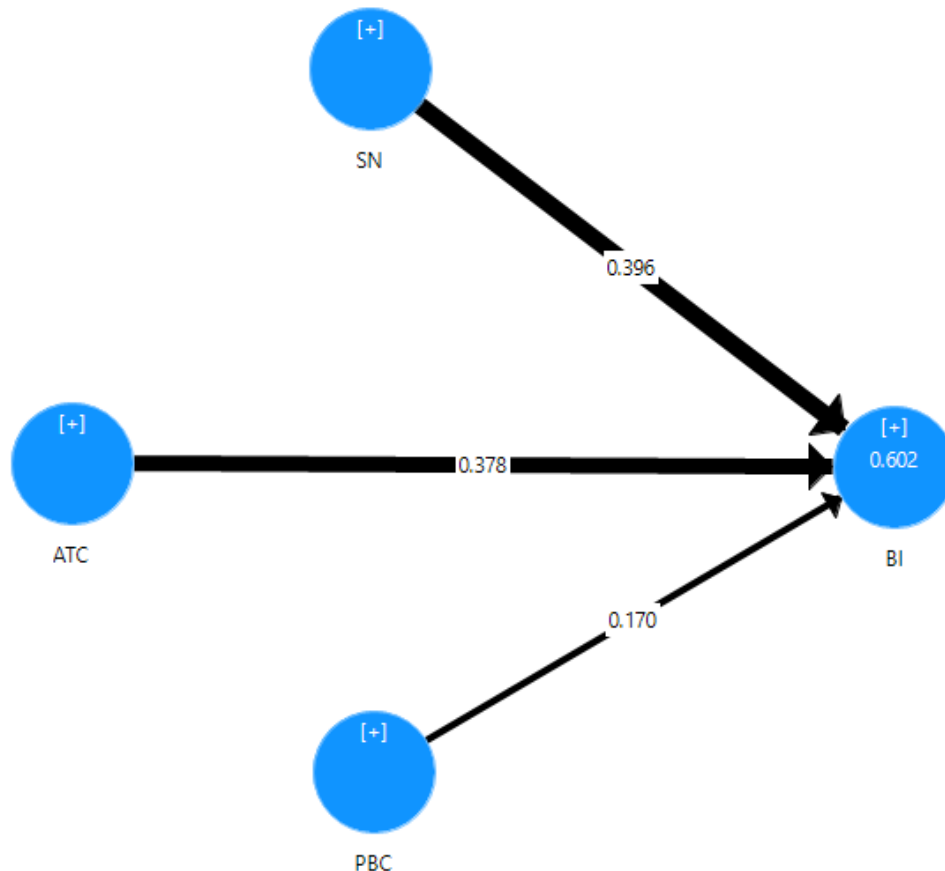

Figure 2: Structural Model

Table 8 displays that H_1 of this study is accepted because attitude toward compliance behaviour impact the intention to use e-filing system positively and significant with β=0.378 signicant at 0.000<0.05. Our finding confirm the results obtained in the previous studies. For instance, study conducted in Indonesia by Aliffiani, Syamsurijal and Fuadah (2018) disclosed that attitude is positively connected with taxpayers' intention to use e-filing. The studies by Marthadinasyah et

al. (2014) and Gupta et al. (2015) have found that attitudes toward behaviour has a positive effect on intention towards the behaviour.

The results of the structural model confirm H_2 implying that the subjective norm impacts the intention to use e-filing system positively and significantly with β=0.396 signicant at 0.010<0.05. Prior studies have also valued the role of subjective norm to use e-filing system (e.g. Aliffiani, Syamsurijal & Fuadah., 2018).

H_3 of the study is also accepted because perceived behavioural control impacts the intention to use e-filing system positively and significant with β=0.17 signicant at 0.010<0.05. Different studies in literature show different results about perceived behaviour control influence on intention to use electronic filing (e.g. Aliffiani, Syamsurijal &Fuadah., 2018). The results are summarised in Table 8.

Table 8

Direct Relationship for Hypothesis Testing

		Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	t-values	P-Values	Decision
$H_{\circ 1}$	Attitude toward compliance behaviour -> Behavioural Intention to use E-filing	0.378	0.382	0.076	4.952	0.000	Accepted
$H_{\circ 2}$	Perceived behavioural control -> Behavioural Intention to use E-filing	0.170	0.178	0.065	2.593	0.010	Accepted
$H_{\circ 3}$	Perceived subjective norm -> Behavioural Intention to use E-filing	0.396	0.387	0.079	5.019	0.000	Accepted

Conclusion

Although the system of electronic filing is realized as not just offering more benefits to the tax authorities, but also beneficial for taxpayers. In developing countries, the usage of e-filing is still low in Pakistan. The current research examines the intention to use the e-filing system from the perspective of the Theory of Planned Behaviour. The research investigates whether attitude affects taxpayer's intention to use electronic filing system because the attitude of a person is vital to confirm that individual will behave in the same manner mostly.

The outcomes from this research indicate that the factors of TPB affect the taxpayer's intention to use this system. Though variables of TPB are claimed to be significant in many previous studies about tax filing activities, we have validated their impact on the intention to use the e-filing system in this study. The outcomes of this study report that subjective norm, attitude towards compliance behaviour and perceived behavioural control affect intention to use e-filing system of salaried individuals in Pakistan positively and significantly.

The study supports that software PLS-SEM is suitable for analysis. Significant results recommend that administration must make plans which will support the salaried individuals to file their tax return appropriately and correctly. The current research is vital since problems regarding the comparatively low practice of electronic filing, particularly in Pakistan, are still debatable. Although the Federal Board of Revenue has devoted countless efforts to promote electronic filing use in Pakistan, it remains a less used utility by Pakistani individuals or taxpayers. However, the results recommend that the FBR should continue to try to make the online system user-friendly for the users.

The data collected for this research study was only gathered from salaried individuals in Lahore, Pakistan. For further research, data can be collected from other cities in Pakistan. This research study used the quantitative technique; further research can use the mix-methods research design to have a deeper understanding of the problem investigated in this study.

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