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Relationship between Supply Chain Management Effects on the Tax Information System and Willingness to Pay Taxes

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Abstract- The main purpose of this study paper was to examine whether user satisfaction of the tax information systems can increase willingness to pay taxes. We investgated the supply chain management effects on the performance of the tax payment for eller and the user. So we surveyed 234 taxpayers in 16 tax offices in Indonesia. The data were analysed using structural equation modelling. The result showed that the higher user satisfaction on the tax information systems were associated with the greater willingness of taxpayer to pay tax. The findings of this study can be contribute as a premise that can form the basis for further research in the field of technology and tax compliance issues.

Key Words-Tax information system, willingness to pay tax, structural equation modelling, information technology, Supply chain management.

1.   Introduction

Technology is changing the way tax administrations communicate with taxpayers, but not all users have similar access to new technologies and these differences are reflected in tax-paying behavior [1], which has an impact on improving organizational performance [2]. The spread of technology has the potential to increase taxpayer satisfaction, empower tax officers, optimize operations and modernize tax services [3,

4]. An integrated tax information system that can collect and link information about payments and obligations for the government and taxpayers can do a lot to prevent tax evasion [5]. This was demonstrated by a comprehensive survey of tax compliance [6]. [7] Argued that integrated tax information systems would increase taxpayers' compliance with tax laws. Tax compliance is the most neutral term available to describe the willingness of taxpayers to pay their taxes [8]. [9] suggested that the operating aspects of the tax system are extraordinary which are largely based on self-assessment and voluntary compliance, so tax compliance must be defined as the ability and willingness of taxpayers to comply with tax laws based on ethics, law and other situational factors in certain times and places. The Indonesian government has modernized its approach to taxation, but over the past six years compliance with the requirement to submit annual tax returns has been disappointing (see Table 1), whereas global willingness to pay taxes, called the total tax and contribution rate (TTCR), has been relatively stable over the past few decades, and in 2016 increased from the previous year [1].

Table1. Compliance with requirement to submit an annual tax return

Year	Taxpayer Registered	Required Annual Tax Return	Rreceived Annual Tax Return	(%) Compliance
2012	22,030,583	17,659,278	9,482,480	53.70
2013	24,347,763	17,731,736	9,963,154	56.19
2014	27,379,256	18,357,833	10,828,808	58.99
2015	30,044,103	19,468,944	11,929,909	59.00
2016	32,769,255	20,165,718	12,266,337	61.00
2017	36,031,972	16,598,915	12,052,238	73.00

Source: Directorat General of Taxes [10]

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There is still debate about the impact of tax information systems on willingness to pay taxes. Some previous studies [8] concluded that the use of information technology in tax administration was not better than manual and that the only advantage of electronic submission was that the process was easier. Other studies [1, 4] found that the use of modern information technology by tax administration services increases trust in government institutions responsible for the tax system and hence willingness to pay. Given the extant empirical data and the gap in theoretical knowledge we decided to investigate whether user satisfaction on the tax information systems was directly proportional to willingness to pay taxes in the general population of Indonesia.

2.   Research methodology

We surveyed 234 taxpayers in 16 tax service offices. Determination of the number of samples, using purposive sampling technique which represents the population of corporate taxpayers in the west java i region as many as 75,948 corporate taxpayers. the data were analyzed using structural equation modeling (sem). the results were analyzed in three stages: (1) a measurement model was examined using confirmatory factor analysis to assess the validity and reliability of the questionnaire; (2) a structural model was calculated to determine the magnitude of the effect of exogenous latent variables on endogenous latent variables and test our hypothesis; 3) the fit of the model to the questionnaire data was assessed with various indices of fit.

3. Findings and discussion
3.1finding
3.1.1 Respondent profile
Distribution profiles for the sample were calculated with respect to (1) gender, (2) education; (3) age;

(4) eexperience ; (5) taxpayer business field. the sample was fairly evenly distributed between male and female respondents (58.55% and 41.45% respectively). the majority of respondents (65.81%) were graduates, so we can assume that they understood all the items in the questionnaire and were able to answer accurately. the largest age group was the over-40-year-olds (41.45%). the overwhelming majority of respondents had been working for over five years (90.17%), so that the data delivered can be believed to be objective, because it is very experienced. the most common economic sector was commerce ($n = 115$, 49.15%), 88 participants (37.61%) operated in the services sector and 31 (13.25%) in the industrial sector.

4.2 Measurement Model Testing
We tested a measurement model to assess the validity and reliability of the research instruments as tools for assessing the research variables. The results of Goodness of Fit Statistics shown in Table 2 obtained *p*-value is .58 ≥ .05 and value of SRMR=.14 ≥ 0.05 meaning the model has a good match. The model had RMSEA = .089 (> .08), indicating quite good model fit. The values of other fit indices (AGFI, GFI, NNFI, NFI, RFI, CFI and IFI) were all ≥ .90, indicating good fit. All indicators had standardised factor loading (SFLs) ≥ .50, showing good validity. The reliability of a measurement model is indicated by a construct reliability (CR) ≥ .70 and variance extracted (VE) ≥ .50 for all indicators stated good, so it can be concluded that indicators were valid and reliable.

Table2. Results of validity and reliability testing of aspects of user satisfaction on tax information systems

Variables and Indicators	Code	SFL ≥ .50	CR ≥ .70	VE ≥ .50	Conclusion
User Satisfaction on the tax information systems	x1		.91	.73	Good reliability
E-registration	x11	.73			Good validity
E-billing	x12	.66			Good validity
E-Invoice	x13	.68			Good validity
E-filling	x14	.74			Good validity
p-value (≥ .05) = .058; SRMR (≥ .05) =.14					Good Fit

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NFI (≥ .90) = .99; NNFI (≥ .90) = .98; CFI (≥ .90) = .99; RFI (≥ .90) = .98; GFI (≥ .90) =.99; AGFI (≥ .90) =.93; IFI (≥ .90) =.91	Good Fit
RMSEA (≤ .08) = .089	Good Fit

Table3. Result of testing of validity and reliability of willingness to pay taxes

Variables and Indicators	Code	SFL ≥ .50	CR ≥ .70	VE ≥ .50	Conclusion
Willingness to pay taxes	Z		.93	.72	Good reliability
Consultation before making tax payments	Z1	.57			Good validity
Documents required to pay taxes	Z2	.68			Good validity
Information about the procedure and location of payment of taxes	Z3	.74			Good validity
Information about tax payment deadline	Z4	.75			Good validity
Make allocation of funds to pay taxes	Z5	.70			Good validity
p-value = .035					Marginal Fit
NFI (≥ .90) = .99; NNFI (≥ .90) = .99; CFI (≥ .90) = .99; RFI (≥ .90) = .98; GFI (≥ .90) =.97; AGFI (≥ .90) =.91; IFI (≥ .90) = .99					Good Fit
SRMR (≥ .05) =.53; RMSEA (≤ .08) = .77					Good Fit

Table4. Results of hypothesis testing

No	Path	T-value (≥ 1.96)	Factor Loading	Effect	Relation	Conclusion
1	X1→ Z	4.69	.27	27%	Positive	Accepted

Goodness of fit statistics are shown in Table 3. The model had p = .035 (≤ .05), SRMR = 0,053 (≥ .05), RMSEA = .077 (≤ .08), indicating good fit. Other good fit. All indicators had SFLs ≥ .50, indicating good validity. Satisfactory measurement model reliability is indicated by CR ≥ .70 and VE ≥ .50; these criteria were met in the case of all indicators are valid and reliable.

Hypotheses Testing
After confirming that the overall structural model had satisfactory fit we tested hypotheses about the causal relationships between research variables. The results are shown in Table 4.
Table 4 shows the influence of the user satisfaction on tax information systems toward willingness to pay taxes. The null hypothesis (H_0) was that user satisfaction of the tax information system does not have a positive effect on willingness to pay taxes, and this is rejected if t-value biger than 1.96. In our model t-value is 4.69, hence H_0 was rejected and we concluded that user satisfaction on the tax information increases willingness to pay taxes.

4. Discussion
We measured Indonesian taxpayers' satisfaction with the tax information systems the impact of use

fit indices (AGFI, GFI, NNFI, NFI, RFI, CFI and IFI) all had values ≥ .90, also indicating

of tax information systems on willingness to pay. Respondents were grouped according to their ratings of various aspects of the tax information system and willingness to pay taxes (measured using five-point scales; 1-1.80: very poor; 1.81-2.61 poor; 2.62-3.42: moderate; 3.43-4.23: good; 4.24-5.00: very good. these data are shown in tables 5 and 6.

Table 5 shows taxpayers' satisfaction with various aspects of their experience of tax information systems. We can see that most taxpayers were satisfied with the procedure for online registration (M = 4.19). However, there is still a GAP of 16.15% which believes that the registration process of taxpayer identification number and inauguration of Taxable Entrepreneurs online or e-registration at the West Java Regional Office was not optimal. Most taxpayers were also satisfied with procedures for online payment of taxes (M = 4.17). However, there is still a GAP of 16.67% which argues that the process of paying taxes online in the Regional

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Office West Java I tax that has not been satisfactory.

Table 6 shows that the respondents were generally willing to pay their taxes. First, taxpayers were moderately satisfied with consultations with account representatives before making tax payments in the West Java Regional Office of DGT (M = 3.88). However, there is still a GAP of 22.31% of respondents stating that this process has not been carried out optimally. Thus it can be concluded that the existence of an Account Representative is still needed by Taxpayers including in the case of consultations before the Taxpayer makes a tax payment. Second, the process of preparing the documents needed before making tax payments was rated good (M = 4.13). However, there is still a GAP of 17.44% of respondents who have not done this optimally. Overall for this indicator it can be concluded that taxpayers who will make tax payments always prepare documents before making payment. The prepared document may include tax calculations, the amount of tax to be paid, and the type of tax.

Third, respondents were generally satisfied with information about how and where to pay taxes (M = 4.09). However, there is still a GAP of 18.21% of respondents stated that this has not been maximally carried out by taxpayers. Overall it can be concluded that people who have to pay tax in the West Java Regional Office of DGT are always looking for information on how and where to pay taxes. Taxpayers need this information to avoid penalties for late payment and to ensure they follow all the relevant tax regulations. Fourth, information about the tax payment deadline attracted good ratings (M = 4.15). However, there is still a GAP of 16.92% respondents who are not satisfied with the availability of information regarding the tax payment deadline. Overall, it can be concluded that taxpayers have the awareness to pay taxes on time and to avoid sanctions due to late payment penalties. Fifth, the procedure for paying taxes was categorized as good (M = 4.10). However, there is still a GAP of 18.03%, some of respondents said that they did not do this. Overall, it can be concluded that most of the Taxpayer has allocated funds to pay taxes. This is in accordance with the tax collection system in Indonesia, which operates a self assessment system, whereby taxpayers are expected to take responsibility for calculating, reporting and paying the tax they owe.

5.   Conclusion

User satisfaction on the tax information system has a positive effect on willingness to pay taxes, increasing it by 27% based on the supply chain management strategy. These results corroborate earlier work suggesting that information technology makes it easier for taxpayers to carry out tax-related procedures and thus increases willingness to pay [1-4]. Interviews with several taxpayers found that most taxpayers consider that the tax information system and procedures for online registration, billing, invoicing and form filling make it easier for taxpayers to make payments and complete tax forms. However, the interviews found that some taxpayers experience difficulty with online billing and tax payment services, particularly in making billing codes, although the Tax Service Office provides service counters to help customers who do not have Internet access to make billing codes. Once codes have been made the taxpayer can go directly to the bank to make tax payments. In addition, various findings in this study could be used by the Indonesian government to inform development of tax administration policies and regulations in the future. In conclusion, with the registration of an online Taxpayer Identification Number, the taxpayer does not need to come to the Tax Office to register to obtain a Tax Registration Number. Furthermore, online payments of taxes using a billing code should reduce errors in payment of taxes, so there are no more differences of opinion between taxpayers and banks when paying taxes, because the bank will accept the payment of tax according to the billing code that has been made by the taxpayer and connected to bank. Online tax reporting has been shown to be easier for taxpayers, because it avoids queuing at the Tax Office. Then publishing online tax invoices protects taxpayers from fictitious tax invoices and tax invoices that are not in accordance with the actual transaction, so that administration of tax invoices becomes more orderly and orderly.

Table5. Satisfaction with aspects of the tax information system

No	Indicators	Real Score	Max Score	Mean Score	%	%Gap	Criterion
1	E-registration	981	1,170	4.19	83.85	16.15	Good
2	E-billing	975	1,170	4.17	83.33	16.67	Good
3	E-invoices	952	1,170	4.07	81.37	18.63	Good
4	E-filling	974	1,170	4.16	83.25	16.75	Good
Mean Score		3,882	4,250	4.15	82.95	Good	
Gap Score				0.85	17.05		

Table6. Willingness to pay taxes

No	Indicators	Real Score	Max Score	Mean Score	%	%Gap	Criterion
1	Consultation before making tax payments	909	1,170	3.88	77.69	22.31	Good
2	Documents required to pay taxes	966	1,170	4.13	82.56	17.44	Good
3	Information about the way and place of payment of taxes	957	1,170	4.09	81.79	18.21	Good
4	Information about the tax payment deadline	972	1,170	4.15	83.08	16.92	Good
5	Make allocation of funds to pay taxes	959	1,170	4.10	81.97	18.03	Good
Mean score		4,763	5,880	4.07	81.42	Good	
GAP score				0.93	18.58		

6.   Implication of the study

This research contributes to the development of information systems satisfaction literature [24, 25], specifically related to the impact of the use of information systems on the willingness of people to pay taxes. The findings of this study not only can be used as a premise for existing body of knowledge but also can form the basis for further research in the field of technology and tax compliance in general. Finally, recommendations made will greatly assist DGT and taxpayers in conducting cost-benefit analysis on the use of technology in order to make tax administration more efficient. These findings also could help the government in formulating tax administration policies in the future.

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