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Article

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Cogent Business & Management

Provided in Cooperation with:

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Suggested Citation: Nurkholis, Nurkholis; Dularif, Muh; Rustiarini, Ni Wayan; Ntim, Collins G. (2020) : Tax evasion and service-trust paradigm: A meta-analysis, Cogent Business & Management, ISSN 2331-1975, Taylor & Francis, Abingdon, Vol. 7, Iss. 1, pp. 1-20, <https://doi.org/10.1080/23311975.2020.1827699>

This Version is available at:

<https://hdl.handle.net/10419/244969>

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To cite this article: Nurkholis Nurkholis, Muh Dularif & Ni Wayan Rustiarini | (2020) Tax evasion and service-trust paradigm: A meta-analysis, Cogent Business & Management, 7:1, 1827699, DOI: [10.1080/23311975.2020.1827699](https://doi.org/10.1080/23311975.2020.1827699)

To link to this article: <https://doi.org/10.1080/23311975.2020.1827699>



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Cogent Business & Management (2020), 7: 1827699



Received: 30 July 2020
Accepted: 21 September 2020

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ACCOUNTING, CORPORATE GOVERNANCE & BUSINESS ETHICS | RESEARCH ARTICLE

Tax evasion and service-trust paradigm: A meta-analysis

Nurkholis Nurkholis^{1*}, Muh Dularif² and Ni Wayan Rustiarini³

Abstract: The purpose of this research is to present the results of meta-analysis on the relationship between the determinant factors against tax evasion based on service and trust paradigm. This research synthesized 102 results of 33 individual articles within a period of 1978–2017. There is a robust conclusion that the improving service quality and increasing public trust are two effective instruments in fighting against the tax evasion. As implied in the Social Contract Theory, the effect of service quality in decreasing the tax evasion is greater than that of public trust level. Considering the national culture as one potential moderating variable, the results of heterogeneity analysis suggested that the cultural aspect represented in the Hofstede's cultural dimension had an important role as the moderating variable between service and tax evasion. This finding should be interesting for the policymakers in some points. First, the tax authorities should considerably improve



Muh Dularif



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PUBLIC INTEREST STATEMENT

This research presents the results of meta-analysis on factors possibly reducing the tax evasion, using the service and trust paradigm-based approach. This research synthesized 102 results within a period of 1978–2017. This study began with the phenomena showing low tax compliance levels in various countries. Various empirical studies had been conducted for the last 40 years, yet there were many contrasting research results. This research used a meta-analysis to obtain the robust conclusions related to the effect of service quality and public trust on tax evasion. This research also considered the Hofstede's national cultural aspects (masculinity, power distance, individualism, and uncertainty avoidance) presumably affecting the taxation behaviors in each country. As revealed by the Social Contract Theory, the authorities should focus more on the service quality improvement. Besides, the cultural aspect should also be well considered in preparing the taxation programs to effectively reduce the tax evasion.

the service quality to reduce the non-compliance behaviors. Second, by considering the moderating variable which influences the impact of service quality and public trust on tax evasion, each country should consider its unique national cultural values when designing the tax policies and programs.

Subjects: Accounting, Corporate Governance & Business Ethics

Keywords: tax evasion; service quality; public trust; national culture

JEL Classification: H23; K42

1. Introduction

Tax evasion is one illegal action made to reduce the tax payments (Franzoni, 1998). This action does not only paralyze the function of government in providing public services (Khuong et al., 2020) but also leads to the sense of injustice for those obediently paying the taxes (Green, 2008). Two dominant players in the tax evasion arena are tax authorities and taxpayers. On one hand, the tax authorities have tried to collect the taxes and encourage people to obey the taxation rules. On the other hand, the taxpayers have made many efforts to minimize the tax payments for selfishness, political, or social reasons (Alm et al., 2012). In general, various factors determining the tax evasion level are categorized into three groups. The first group consists of audits, tax rates, and penalties. The second group consists of service quality and public trust in government. The third group consists of personal norms, social norms, and religiosity. These three groups are connected to the enforcement (Alm et al., 2012), service and trust paradigm (Alm et al., 2012), as well as fiscal psychological paradigm (Schmolders, 1959).

The research in the area of tax evasion was initially dominated by the enforcement paradigm, a law-based approach creating a deterrence effect on the taxpayers (Dularif et al., 2019). This approach used the Expected Utility Theory (EUT), developed by Allingham and Sandmo (1972) or known as the EUT-US model. The EUT-US model definitely eases the authorities to understand the mindset of taxpayers in making decisions to fulfill their tax obligations (Peprah et al., 2020). However, this model still has some weaknesses. When referring to the mathematical calculation of EUT-AS model, the taxpayers tend to involve in tax evasion due to the expected return of above 90%. In other words, when referring to the theory, most taxpayers will perform the tax evasion (Dhami & Al-Nowaihi, 2007). However, the tax compliance data from various countries contradicted the theory. For example, the compliance rates in the USA always show the figure of above 80% (IRS, 2017). Similarly, the value of tax ratio in various countries ranges from 10% to 40% (Cobham, 2017). Empirically, the research results also showed inconsistencies. Several studies supported this assumption (Bayer & Cowell, 2016; Kogler et al., 2015), while others showed contradicting results (Alm et al., 2012; Torgler, 2003a, 2003b).

Due to the EUT-US model limitations, some other factors may be controlled by the tax authorities to motivate the taxpayers to obediently pay the taxes. One determining factor to minimize the tax evasion is by improving the service quality and public trust to the government. Those two determinants are service and trust paradigm group. The Social Contract Theory reveals that the government and public have one social agreement. The government has the obligation to provide good taxation services, while the citizens entrusts their property (tax) to the tax authority. The commitment of government and citizens to comply with the social contract may increase the tax compliance (Makovicky & Smith, 2020; Mangoting et al., 2015; Umar et al., 2017), and reduce opportunities to perform the tax evasion.

2. Background

Service and trust paradigm is a concept based on the Social Contract Theory. These factors are created to avoid the coercive relationship between a country and its citizens, specifically in fulfilling the tax obligations. In this case, the tax authority serves the taxpayers by providing a simpler

administrative system to facilitate the taxpayers in making their tax payments. In addition, the government's seriousness in allocating the taxes for the development of infrastructure and public facilities will encourage the taxpayers to obediently fulfill their obligations. Thus, the taxpayers will feel that the tax money they have paid will eventually return to themselves (Alabede et al., 2011; Castañeda et al., 2019; Mangoting et al., 2015).

Several researchers have identified the relationship of service quality and public trust level with tax evasion (Castro & Rizzo, 2014; DeBacker et al., 2015; Forest & Sheffrin, 2002; Kafkalas et al., 2014; Kastlunger et al., 2013; Khlif et al., 2016; Richardson, 2006; Sebele-Mpofu, 2020; Sinnasamy & Bidin, 2017; Williams & Horodnic, 2017). However, the results of these studies have not shown consistent conclusions. Since there is no synthesizing research focusing on factors possibly reducing the tax evasion, the researchers try to bridge the research gap, by employing a meta-analysis to synthesize the research results (experiments, surveys, and secondary data) due to the relationship of service and public trust with tax evasion.

This research aims at obtaining the robust conclusions related to the effect of service level and public trust on tax evasion. This research also found the moderating variable affecting the relationship of service level and public trust on tax evasion using a heterogeneity analysis. As reflected in the Hofstede's cultural dimensions, cultural variable may become one potential variable moderating the relationship (Hofstede & Minkov, 2010). This research synthesized 102 findings from 33 individual articles that a robust conclusion was obtained saying that improving service quality and increasing public trust in government had an essential role in reducing the tax evasion. Thus, the findings of this research are in line with those predicted in the Social Contract Theory. When referring to the magnitude of effect size, better services may greater reduce the tax evasion than public trust. Besides, the heterogeneity analysis shows that masculinity is a moderating variable in the relationship between two factors (tax service and public trust) on tax evasion. The other national cultural factors, such as power distance, individualism, and uncertainty avoidance only act as the moderating variables for the tax service variable, but failed as a moderating variable in the public trust variable. Thus, the cultural aspect is an absolute thing that must be considered by each country in formulating effective programs to reduce tax evasion.

The contribution of this research is theoretically in line with the validity of Social Contract Theory as one appropriate theory to study the tax evasion phenomena. The results show that there is a robust conclusion saying that service and public trust are important factors to reduce the tax evasion. The results of this meta-analysis also practically show that the tax apparatus (officers) should focus more on the cooperative approach than the coercive one. The increasing service quality, such as easiness in paying the taxes, may even more effectively encourage the taxpayers to fulfill their obligations. The results of this research also indicate that culture has an important role to potentially reduce the tax evasion. Thus, the regulators should consider the culture of local people if they want to implement the collaborative-based approach programs. Since each country has different cultures, there is a possibility that one policy may become effective in one country but not in the others.

In the next section, this paper will explain the background theory and literature review related to the tax evasion based on service and trust paradigm. Section 3 will describe the research methodology. The results of this research will be then presented and continued with discussion and analysis. Finally, the conclusions will be presented in section 5.

3. Theoretical literature review

3.1. Social contract theory

One important theoretical basis underlying the role of service and trust paradigm in reducing the tax evasion is the Social Contract Theory popularized by Locke (1679) and Rossouw (2000). The government provides services and protection as well as goods and services for the citizens that

they are obliged to entrust a part of their assets (in the form of taxes) to the authorities. To make sure that the citizens will meet the agreement, the government then implements the law enforcement mechanisms for violators (Castañeda et al., 2019; Tuck et al., 2016). This process is called social contract which still become an important discussion until now (Laskar, 2013; Makovicky & Smith, 2020; Umar et al., 2017).

Referring to the Social Contract Theory, tax authorities consider the taxpayers as subjects, not objects (Alabede et al., 2011; Calvet Christian & Alm, 2014; Mangoting et al., 2015). In this case, the government will provide good taxation services and use the tax payments to improve the people's welfare. If the government seriously improves the service functions, the citizens will willingly fulfill their tax obligations that the government and people's commitment to comply with the social contract will increase the tax compliance (Laskar, 2013; Mangoting et al., 2015), and reduce the opportunities of doing the tax evasion. Thus, two important factors influencing the tax compliance level are quality of services provided by the state (government) and public trust to the government.

4. Empirical literature review and hypotheses development

4.1. Tax service

Based on the Social Contract Theory, the taxpayers perceive that the government has a positive attitude to the tax services. This assumption eases the taxpayers to fulfill their obligations and always encourage them to comply with the tax payment obligations. During this time, many people perceive that the tax authorities often treat the taxpayers like criminals who must be monitored and punished when violating the taxation rules (Alm, 2012). Thus, various countries prioritize the law enforcement paradigm to reduce the tax evasion level. However, there is a positive trend that some countries have recently realized that the taxpayers should not be suspected as criminals (Alm, 2012). One significant effort made by the government is to improve the service quality. Through its employees and information systems, the tax service offices also guide the taxpayers to comfortably and efficiently fulfill their obligations. This service paradigm treats the taxpayers as partners to serve (Alm, 2012).

The recent research conducted by Ayuba et al. (2015) in Nigeria as one developing country shows that excellent services made by the government may create high levels of tax compliance. Similarly, the research conducted in the AS, as a developed country, shows that the improving services through providing information and guidance can significantly increase the tax compliance (Vossler et al., 2011). In short, when the tax authorities give more precise information to the taxpayers with a low cost or even no cost, it can reduce the tendency of taxpayers to do underreporting (Alm et al., 2010).

There are five categories to measure the service quality provided by the tax offices or officials (services). The first category is general service levels (Miskam et al., 2013; Williams et al., 2016). The second category is in the form of cooperation, information, and socialization conducted by the tax offices to help the taxpayers fulfill their obligations (Alm et al., 2017; Hasseldine et al., 2007; Lefebvre et al., 2015; Murphy & Helmer, 2013). The third category is related to the taxation system (Khelif et al., 2016; Marriott et al., 2013). The fourth category is related to the taxpayers' justice in association with the treatments made by the tax offices or employees (Pui Yee et al., 2017; Sinnasamy & Bidin, 2017). The fifth category concerns on the satisfaction related to the tax offices' services, bureaucracies, and costs incurred when dealing with the tax issues (De Mello, 2009; Picur & Riahi-Belkaoui, 2006). Based on the above descriptions, the hypothesis is then formulated as follows:

H1: The better the service is provided, the lower the tax evasion rate will be.

Although the tax services tend to reduce individuals to perform the tax evasion, yet the relationship has different effects in different countries. One factor causing specific behavioral differences is the cultures between nations, as described in the Hofstede's cultural dimension (Hofstede, 1980). This

study describes that the cultures have four dimensions consisting of power distance, individualism, masculinity, and uncertainty avoidance. One more dimension is the long-term orientation which is not discussed in this study due to its poor relevancy to this research topic. Thus, cultures not only influence the individuals' daily behaviors but also the relationship between citizens and government in the context of tax payments (Richardson, 2008; Sutrisno & Dularif, 2020; Tsakumis et al., 2007).

Related to the cultural influences, countries with a high power distance tend to have a high dependence on the authorities (Hofstede & Minkov, 2010). However, the improving tax services may indeed increase the public compliance to pay the taxes. In fact, the taxation system in countries with a high power distance index tends to favor the reliable and productive people and certainly causes injustice to the lower social classes (Richardson, 2008). There is a possibility that the improving services will be directed to provide benefits for certain parties. Consequently, the program fails to reduce the tax evasion level.

Similarly, the countries with a high individualism index tend to prioritize personal interests of certain communities (Hofstede et al., 2010). When tax services improve, the taxpayers will feel benefited and motivated to comply with tax obligations and avoid involving in the tax evasion. However, there is a possibility that opportunistic taxpayers will utilize the hospitality and kindness of the tax offices for their own interests to hide more significant taxes.

Regarding to the masculinity index, Hofstede et al. (2010) state that countries with high masculinity indexes have tighter competition levels and more oriented to the tangible goals. A better service level is indicated by the taxpayers' satisfaction shown by the collaborative efforts and the provision of information that the taxpayers become comfortable (De Simone et al., 2013). This service orientation factor has two different impacts which encourage the taxpayers to become more obedient, yet provides opportunities for certain parties to pursue the material interests. This condition certainly offers the taxpayers opportunities to perform the tax evasion without fearing to the law enforcement.

The national last cultural factor is uncertainty avoidance. High uncertainty avoidance index shows high public concern on the threat of uncertainty. In general, countries with a high uncertainty avoidance index are characterized by the high level of public distrust to the government (Hofstede et al., 2010). As a result, the level of tax non-compliance will tend to increase (Richardson, 2008; Tsakumis et al., 2007). However, as the government services improve, the initially low level of trust will gradually increase. Thus, the tax evasion rate may decrease. Based on the descriptions above, some hypotheses are formulated as follows:

H1a: Power distance moderates the relationship between tax service and tax evasion.

H1b: Individualism moderates the relationship between tax service and tax evasion.

H1c: Masculinity moderates the relationship between tax service and tax evasion

H1d: Uncertainty avoidance moderates the relationship between tax service and tax evasion.

4.2. Public trust

Based on the Social Contract Theory and Slippery Slope Framework, the voluntary tax compliance plays an essential role in the success of tax collection (Benk & Budak, 2012; Gangl et al., 2015; Ritsatos, 2014; Wahl et al., 2010) in countries using a self-assessment system. In this case, taxpayers are trusted to count, calculate, pay, and report their payable tax. Trust is a critical factor to improve the tax compliance and reduce the tax evasion efforts (Damayanti et al., 2015; Gobena & Van Dijke, 2016; Kastlunger et al., 2013; Kogler et al., 2013). There are seven essential categories to define the public trust in government. The first category is the generally trust in government (Cebula & Feige, 2012; Jimenez & Iyer, 2016; Torgler & Schneider, 2005). The second category is public trust level in government institutions or

bureaucracy's effectiveness (Brink & Porcano, 2016; Murphy et al., 2016; Sebele-Mpofu, 2020; Williams, 2015). The third category is related to the public trust to the law enforcement and justice (Evertsson, 2016; De Mello, 2009). The fourth category refers to the government's ability to provide goods and services for the public interest (Alasfour et al., 2016; Rustiarini et al., 2019; Wu & Teng, 2005). The fifth category is public trust in the government apparatus not to corrupt or misuse the taxes paid by the citizens (DeBacker et al., 2015; Picur & Riahi-Belkaoui, 2006). The sixth category is related to the democracy and political aspects (Ibrahim et al., 2015; Richardson, 2006; Saud, 2020). The seventh category describes those six types, such as the citizens' pride of their country. Based on the descriptions above, a hypothesis is formulated as follows:

H2: Increasing trust in the government will reduce tax evasion.

Referring to the cultural aspects as a moderating variable, countries with a high power distance index tend to become unjust and potentially increase the non-compliance taxes. The national culture which has a high individualism level was also characterized with the individuals' high self-ishness on their personal interests (Hofstede, 1991; Hofstede et al., 2010). Thus, increasing public trust may better encourage the tax compliance. However, the taxpayers' high opportunistic nature poses new risks, which may reduce the tax compliance level. The masculinity aspect is characterized by a high material importance level. This attitude may potentially increase the tax evasion. However, high masculinity index may increase the frequency of communal offenders' punishments. In a country with high masculinity index, high public trust may significantly reduce the tax evasion. Due to the uncertainty avoidance culture, people who live in countries with high uncertainty avoidance tend to distrust the government policies, increase the tax evasion efforts, and vice versa (Richardson, 2008; Tsakumis et al., 2007). Based on the descriptions above, some hypotheses are formulated as follows:

H2a: Power distance moderates the relationship between public trust and tax evasion.

H2b: Individualism moderates the relationship between public trust and tax evasion.

H2c: Masculinity moderates the relationship between public trust and tax evasion.

H2d: Uncertainty avoidance moderates the relationship between public trust and tax evasion.

5. Research design

5.1. Research criteria

The initial step was collecting articles by listing the keywords representing both dependent and independent variables. The next step was maximizing the use of electronic databases, such as EBSCO, Elsevier, Emerald, JSTOR, Proquest, Science Direct, Wiley, and Gale. By using those keywords, the researchers systematically downloaded the related articles. For instance, to get the articles on relationship between service and tax evasion, the keywords used were "tax service or tax system" and "tax evasion". To easily identify and process the data, the researchers grouped the articles in a file compiled using a specific systematical method. The data showed the journal names, years of publication, volumes and issues, authors, and article titles.

The research objects were the results of previous studies (1978–2017), which examined the effect of tax services and the level of trust in tax evasion. This study used a judgment sampling technique to determine which reviews were included in the meta-analysis. Using inclusion criteria (in Table 1), the requirements for the research objects in this meta-analysis are as follows:

- (1) The study uses tax evasion as the dependent variable.
- (2) The research uses service or public trust as an independent variable.

Table 1. Inclusion criteria for tax evasion-meta analysis

Inclusion criteria	Rationale
The focus of the paper is related to tax evasion.	Many papers with the same topic may use either tax compliance or tax evasion. Although the tax compliance and tax evasion is relatively the same thing, they have opposite direction. The papers with tax compliance as dependent variable are excluded to avoid the error in the direction of research result, especially statistic result.
Consider paper in empirical method	Meta analysis method uses r-pearson as a key to determine the robust conclusion concerning the relationship between independent variable and dependent variable. Empirical research with statistical data must be included in the paper to calculate r-pearson. Therefore, the paper without statistical data must be excluded.

Table 2. The Screening Process

Criteria	Variable		Total
	Service	Public Trust	
Initial paper	112	82	194
Excluded tax compliance as dependent variable	(14)	(23)	(37)
Excluded non empirical method	(65)	(14)	(79)
Excluded double publication (duplicates)	(15)	(24)	(39)
Final paper	18	21	39

(3) The research was based on the quantitative empirical data and research results displayed in the statistical figures converted into the correlational coefficients (r-Pearson).

Based on the inclusion criteria, the obtained 18 papers were examined based on the aspects of service, 21 papers discussed the issues on public trust. There are 39 papers as a initial paper (see Table 2). About six papers discussed the relationship between service and public trust (joint paper). Thus, there were 33 final papers used in this meta-analysis.

5.2. Coding procedure

Referring to Lipsey and Wilson (2001), the information included in coding includes general identity, information on both dependent and independent variables. Collective identities include study identity, researcher, type and year of publication, total sample size, type of tax, unit of analysis, object of the study, and the represented population. The dependent variable information includes the variables used and how they are measured. For each independent variable, the researcher coded the information related to the measurements used, the type of effect size published in the article, the samples used to test the independent variable, and the magnitude of effect size reported in the original article.

5.3. Overview of meta-analyses procedures

This study used meta-analysis to review and synthesize the results of previous studies (Card, 2015; Hunter & Schmidt, 2004; Littell et al., 2008). After collecting, selecting, and coding the articles for the research samples, the proposed steps are as follows (Ellis, 2010; Hunter & Schmidt, 2004):

(1) Transforming and translating relevant statistical results from each study to the effect size. At this stage, the effect size is frequently known as the Pearson coefficient (r-Pearson) (Card, 2015; Hunter & Schmidt, 2004; Littell et al., 2008). For those not presenting the Pearson coefficients, the researchers used the other statistical measurements, in the form of t, F, p, or others. If this happens, the first step taken is converting the statistical data to the r-Pearson (Borenstein et al., 2009; Card, 2015).

- (2) Determining the population mean of correlation (\bar{r}) by using the formula utilized by previous researchers (Ellis, 2010),

$$\bar{r} = \frac{\sum n_i r_i}{\sum n_i}$$

where n_i shows number of samples, and r_i shows r-Pearson from study i.

- (3) Calculating the statistical significance of the mean, by calculating the variance of the sample of correlations (V_r), standard error (SE_r), and Z score using the following formula:

$$V_r = \frac{\sum n_i (r_i - \bar{r})^2}{\sum n_i}; SE_r = \sqrt{\frac{V_r}{k}}; Z = \frac{|\bar{r}|}{SE_r}$$

- (4) Testing the hypothesis. If the probability of obtaining this Z score is less than 0.05 (using the excel formula “ = NORM.S.DIST (Z, FALSE)”) and within 95% confidence intervals calculated by the formula:

$$[\bar{r} \mp Z_{\alpha/2} SE_r]$$

does not contain zero; the mean effect size is statistically significant.

- (5) Examine the heterogeneity using the Q-Statistic test (Ellis, 2010) with the formula:

$$Q = \sum \frac{[(n_i - 1)(r_i - \bar{r})^2]}{(1 - \bar{r}^2)^2}$$

If the Q value is more than the critical importance of χ^2_{k-1} , where k is number of articles in study, it can be concluded that the distribution of effect sizes is heterogeneous. The existence of this heterogeneity encourages the researchers to find the moderator variables.

$$r_i = \alpha_0 + \sum_n \alpha_n X_{in} + \sum_m \delta_m CV_{im} + \gamma_0 SE_i + \varepsilon_i$$

- (6) Identify moderating variables. Following Laroche and Soulez (2012), potential candidates from the moderating variables may be obtained based on the theoretical justification. In this study, one important factor assumed to influence the taxpayers' involvement in tax evasion is the cultural aspect (Richardson, 2008; Tsakumis et al., 2007). To examine whether the cultural factor have a significant role as moderator, following the previous studies (Anderson et al., 2018; Card, 2015; Hedges & Pigott, 2004), a regression will be performed using OLS from the r-Pearson of each finding with a candidate moderating variable using the econometric model as follows:

where r shows r-Pearson coefficient of each finding, x shows a set of continuous variables based on the theoretical justification which possibly cause the variability of research results, such as cultural aspects in Hofstede's theory. The CV representing the control variable includes the tax type, different measurement variables, or performed research methodology. As stated by Borenstein et al. (2009) and strengthened by Anderson et al. (2018) and Abdullah et al. (2015), there is a tendency of publication bias in which studies with significant conclusions have higher possibility to be accepted and published in journals. Thus, Anderson et al. (2018) have proposed to include the standard error (SE) obtained from each finding as a precision adjustment instrument. Significant regression results may become a clue that relevant variable may also become a moderating variable (Anderson et al., 2018).

Table 3. The Paper Composition

	Service	Public Trust	Total	Joint Paper	Net-Paper
Paper	18	21	39	6	33
Finding	48	54	102		

Source: researcher calculation.

6. Empirical results and discussion

6.1. Data

One commonly involved in research related to the tax compliance and tax evasion is that most papers have multi-independent variables and multiple findings. Following Dochy et al. (2003), if one study contains more than one finding, then they will be considered as the separated research findings. The details of each paper used along with the number of conclusions are listed in Table 3.

Based on the year of publication, there was an increase in the number of publications in 2016 (see Figure 1).

6.2. Meta-analysis result

The meta-analysis results on the relationship between service, trust, and tax evasion were presented in Tables 4 and 5.

Table 4 shows that the relationship between service and tax evasion was significantly negative ($r = -0.1352$; $p(Z) = 0.0000$; 95% CI = $(-0.1173; -0.0932)$). In other words, H1 hypothesis gained a quite convincing (robust) support from the meta-analysis results of this study. Thus, improving the service quality for taxpayers was effective to reduce the tax evasion level. Table 4 also shows that the influence of public trust and tax evasion was significantly negative although the magnitude of service factor was smaller ($r = -0.1072$; $p(Z) = 0.0021$; 95% CI = $(-0.1772; -0.0423)$). The synthesis results showed a quite convincing (robust) support to hypothesis H2. Thus, it can be concluded that increasing public trust to the government may become an effective instrument to inhibit the tax evasion.

6.3. Heterogeneity analysis

The calculation results of Q statistics as shown in Tables 4 and 5 indicated that the heterogeneity existence, both related to service ($Q = 1,765.56$; $X^2 = 64$; $p < 0.001$), and public trust ($Q = 21,382.05$; $X^2 = 70.99$; $p < 0.001$). In other words, there are variables moderating the relationship variability of service and public trust with tax evasion. For further examination on the probability of potential

Figure 1. Publication year of synthesized papers.

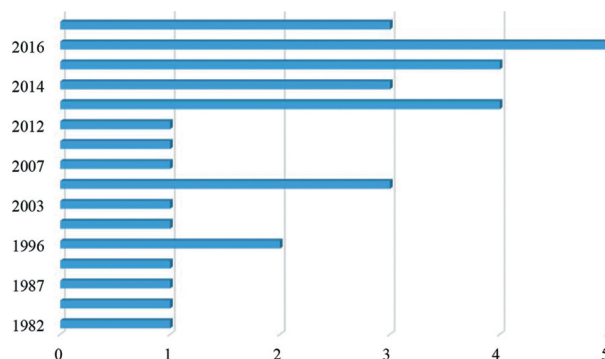


Table 4. Hypothetical Testing—Meta-Analysis

Independent Variable	Total Sample	K	r [^]	SE(r)	Z = r [^] /SE	p(Z)	Significance*)
Tax service	77.250	48	(0.1352)	0,0214	6,31	0,000	Yes
Public trust	352.551	54	(0.1072)	0,0331	3,24	0,002	Yes

Source: researcher calculation.

Table 5. Heterogeneity Testing—Meta-Analysis

Independent Variable	95% CI Lower	95% CI Upper	Q-r	χ^2	Heterogeneity
Tax service	(0.1772)	(0.0932)	1.765,56	64.00	Yes
Public trust	(0.1721)	(0.0422)	21.382,05	70.99	Yes

Source: researcher calculation.

Table 6. Heterogeneity Analysis—Regression—Tax Service

Variable	Coefficient	t	P> t	Hypothesis	Support
Power Distance—Hofstede	0.138	7.450	0.000	H1a	Yes
Individualism—Hofstede	(0.194)	(6.410)	0.000	H1b	Yes
Masculinity—Hofstede	0.366	6.820	0.000	H1c	Yes
Uncertainty Avoidance—Hofstede	(0.465)	(7.170)	0.000	H1d	Yes
Number of Studies	31				
F-Value	27.370				
R-Squared	0.979				

Source: researcher calculation.

Table 7. Heterogeneity Analysis—Regression—Public Trust

Variable	Coefficient	t	P> t	Hypothesis	Support
Power Distance—Hofstede	0.008	0.820	0.422	H2a	No
Individualism—Hofstede	0.006	1.960	0.065	H2b	No
Masculinity—Hofstede	(0.016)	(2.910)	0.009	H2c	Yes
Uncertainty Avoidance—Hofstede	0.009	1.760	0.094	H2d	No
Number of Studies	34				
F-Value	45.480				
R-Squared	0.971				

Source: researcher calculation.

moderating variables, the r-Pearson of each finding will be regressed with the potential variables. The regression results related to the cultural aspects were presented in Tables 6 and 7.

Table 6 shows that all coefficients of power distance, individualism, masculinity, and uncertainty avoidance variable have significant values. Thus, the results of this meta-analysis-supported hypothesis H1a, H1b, H1c, and H1d. In other words, four dimensions of Hofstede's culture which have become the moderating variables influenced the relationship between tax service and tax evasion. Meanwhile, Table 7 shows that of those four dimensions, only masculinity had a significant coefficient (at significance level 5%) which influenced the trust variable. Thus, the results of meta-analysis only supported H2c instead of H2a, H2b, and H2d. Thus, only masculinity becomes the moderating variable in the relationship between public trust and tax evasion.

6.4. Discussion

The effect of service and public trust on tax evasion is not only following what is predicted by the Social Contract Theory, but its role is also quite significant when considering to the magnitude effect size shown by the r-Pearson absolute value.

6.4.1. Tax service

The data presented in Table 4 related to the effect of tax service level on tax evasion showed some interesting points. First, the results of meta-analysis showed that better service strongly influenced the efforts to reduce the tax evasion. Based on Doucouliagos (2011) criteria, the r-Pearson value of the effect size was classified into moderate category. The effect size value of -0.1352 indicated that the improving service might have a significant influence. It is concluded that the meta-analysis results have provided a robust support that the increasing service level may reduce the tax evasion efforts.

The results of this study provided supports to predict the Social Contract Theory. Excellent tax services indicated that the government complied with the obligations related to the agreements between the state and its citizens. Thus, there is no reason for citizens not to perform their responsibilities in accordance with the applicable regulations (Daude et al., 2013; Tengs, 2016). This study also showed that services, both in the form of simpler systems or information assistance needed by the community, had an important role to encourage compliance and reduce the desire of taxpayers to involve in the tax evasion. As emphasized by Vossler et al. (2011), high rate of tax evasion is not only due to the desire of taxpayers, but also the unintentional mistakes against the poorly understood rules and systems. Therefore, making a more straightforward system, as well as providing better information, may reduce the unnecessary mistakes and facilitate the taxpayers to fulfill their obligations. This action is great essential to reduce the tax evasion. Similarly, the previous studies (Alm, 2012; Alm et al., 2010) showed that service in the form of information assistance might increase the taxpayers' certainty and prevent them from committing the tax evasion as also emphasized by Alm (2012), Alm et al. (2012), and Vossler et al. (2011). This result was supported by the regression data related to the heterogeneity and moderating variables.

Table 6 shows that the Hofstede's four cultural aspects in the form of power distance, individualism, masculinity, and uncertainty avoidance were the important moderating variables in the relationship between service and tax evasion. As described by Hofstede et al. (2010) and Richardson (2008), a high power distance index was characterized by the ruling party's possibility in to prioritize its interests that the tax system was made in such a way to benefit the ruling party. Even the services were improved; there was a tendency that the benefits or interests were directed to the ruling party. On the other hand, as reminded by Vossler et al. (2011), the improving services may reduce the tax evasion if directed to the possibly complying parties. Lack of understanding makes them involved in the tax evasion. Thus, it is not surprising that the coefficient of power distance in Table 6 was significantly positive. In other words, improving service might even increase the tax evasion in countries with high power distance index.

Countries with a high individualism index are characterized with greater demands that rules or systems are applicable to anyone (Moon & Choi, 2001; Richardson, 2008; Trompenaars & Hampden-Turner, 2011). Thus, it is not surprising that the individualism coefficient is significantly negative. With the increasing service equally applicable to anyone, countries with high individualism tend to have the increasing tax evasion rate. This result also confirms the result of research conducted by Vossler et al. (2011) emphasizing that providing better guidance and service for the taxpayers will be highly beneficial in reducing the previously non-intended tax evasion.

High masculinity index was also characterized with high competition and material-interest orientation levels. Meanwhile, better service level was characterized by the taxpayers' satisfaction directions through collaborative, information provision, and other efforts aiming at comforting the taxpayers (De Simone et al., 2013). This service orientation encourages the taxpayers to become more obedient, yet certain people have the intention to pursue their personal interests as reflected in their high masculinity index that opportunities to perform the tax evasion without fearing to the law enforcement. Thus, it is not surprising that, in general, the relationship between service and tax evasion is negative. However, in countries with high masculinity index, the coefficient is significantly positive.

Besides those three other cultural dimensions, uncertainty avoidance has also become a vital moderating variable. Uncertainty avoidance in Table 6 shows a moderating role which is significantly negative. High uncertainty avoidance index also shows high public anxiety level to the uncertainty threat. In countries with a high uncertainty avoidance index, the uncertainty is also characterized with high distrust level to the government in general (Hofstede et al., 2010). Thus, the tax non-compliance level tends to increase (Richardson, 2008; Tsakumis et al., 2007). Since the government has improved its services, the trust level which was initially low, gradually increases higher and uncertainty threat was eventually reduced. When this happens, the tax evasion may decrease as predicted by Tsakumis et al. (2007). Thus, it is understood that in countries with high

uncertainty avoidance index, better service improvement is characterized with lower tax evasion level, as reflected in the coefficient of negative uncertainty avoidance moderating variable.

6.4.2. Public trust

The data presented in Tables 4 and 5 related to the influence of public trust level on tax evasion showed some essential points. First, when viewed from the efforts to synthesize the existing studies, the meta-analysis results showed that the increasing public trust to the government has a significant influence in reducing the tax evasion. Moreover, the size magnitude had not only significant but also adequate influence level proven by the *r*-Pearson's absolute value ranging between 0.07 and 0.33. the analysis conducted using the Doucouliagos (2011) showed that the *r*-Pearson value of -0.1072 was classified into moderate category. It is concluded that the increasing public trust may greatly reduce the tax evasion efforts.

The results of this research have also provided additional supports to the Social Contract Theory. The government's attitudes have shown its responsibility to the mandate given by the citizens, both in the form of goods and services availability for public, legal protection, and efficient bureaucratic system, which might increase the public participations in democracy and minimize the corruptions. This result also indicated that that the government had complied its obligations to the citizens. Thus, there is no reason for citizens not to perform their responsibilities in the form of tax compliance (Daude et al., 2013; Tengs, 2016).

Besides showing positive feedbacks as emphasized in the Social Contract Theory, the results of this study also supported those of research conducted by Gobena and Van Dijke (2016) stating that the government's trust level might increase the voluntary tax compliance. Jimenez and Iyer (2016) also noted that public trust might affect the tax compliance by forming the justice perceptions. In the context of Social Contract Theory, the citizens will be willing to sacrifice a part of their ownership assuming that the government had equally fulfilled its obligations in taxation. Trust was measured using the indicators of efficient bureaucratic system, low corruption level, and fair legal systems which are essential predators to increase the public trust to the government. These positive actions eventually increased the compliance and reduced the tax evasion level.

Based on heterogeneity, the results of analysis presented in Table 7 showed that of four dimensions of national culture, only masculinity may become the moderating variable in the relationship between trust and tax evasion. Public trust has generally increased in various countries, although each state has different cultural characteristics. Meanwhile, the masculinity coefficient in the heterogeneity analysis was significantly negative. This result indicated that in countries with high masculinity index, the increasing trust might reduce the tax evasion. This finding also confirmed that of the previous studies conducted by (Hoftede et al., 2010; Tsakumis et al., 2007), stating that people in countries with high masculinity tended not to break the laws. One important factor encouraging high public trust is the existence of strong law enforcement against those trying to violate laws, including tax evasion.

7. Summary and conclusion

This meta-analysis research investigated the effect of factors including service and trust paradigm on tax evasion. The Social Contract Theory indicated that the better the taxation service quality, the higher the public's trust to the government in reducing the tax evasion. By reviewing and synthesizing 102 findings of 33 individual articles, this research eventually produced a robust conclusion that improving service and public trust might reduce the tax evasion. Thus, the results of this meta-analysis supported the Social Contract Theory. The results of heterogeneity analysis showed that cultural factors, as reflected in Hofstede's cultural dimensions, had an important role as the moderating variables affecting the relationship between services and tax evasion. Of four cultural dimensions affecting the relationship between service and tax evasion, only masculinity might become the moderating variable. In other words, there was a tendency that the role of public trust in reducing taxes was universal.

The results of this research theoretically implied that citizens will be willing to pay the taxes if the government has fulfilled its obligations. The existence of good tax services may increase the public trust to the government. The results of this research also confirmed that the role of Social Contract Theory might increase the tax compliance and reduce the tax evasion. The analysis on national culture implied that the cultural aspects influenced the efforts to improve services, yet not affect the public trust on tax evasion. This finding practically implied several points. First, the results of this research related to the magnitude of effect indicated by the *r*-Pearson's absolute value showed that service improvement had a greater effect than trust level. Thus, the government should focus more on service than trust improvement programs. Besides requiring efforts and sacrificing more resources, increasing trust is relatively harder than improving service, because its success depends on the conditions of taxpayers and society. Second, considering that the cultural aspect may become a moderating variable, the government must pay more attention to the cultures and values existing in society when designing policies and programs to improve service and increase public trust.

The findings of this meta-analysis study should be of concern to policymakers. First, the research results related to the magnitude of influence (absolute value of *r*-Pearson) indicate that increasing the quality of tax services has a more significant effect than the level of public trust. Therefore, the government should focus more on efforts to improve services rather than trust improvement programs. Efforts to increase public trust are relatively more substantial than efforts to improve services. The success of efforts to increase public trust is not only determined by the effort and sacrifice of considerable resources but also depends on the conditions of the taxpayer and the community itself. Second, considering that the cultural aspect becomes one of the moderation variables to reduce tax evasion when designing policies and programs to improve services and increase public trust, the government should always consider the culture and local values that still live in the community.

Some limitations of this research should also be considered. First, this research only focuses on service and trust as the determining factors against tax evasion. To complete a full picture related to the tax evasion, the further research should investigate the other aspects both in the form of law enforcement and social aspects. Second, when discussing the cultural issues as the moderating variables, this research was based on the concept of Hofstede's cultural dimensions first emerging in 1980 or approximately 39 years ago. Although some researchers have concluded that the idea is still relevant (Eringa et al., 2015; Merritt, 2000; Minkov, 2018), there is a possibility that these concepts need to be adjusted in accordance with the current conditions.

Funding

The authors received no direct funding for this research.

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Cover image

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Citation information

Cite this article as: Tax evasion and service-trust paradigm: A meta-analysis, Nurkholis Nurkholis, Muh Dularif & Ni Wayan Rustiarini, *Cogent Business & Management* (2020), 7: 1827699.

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