"GETTING TO DENMARK" FROM INDONESIA: STARTING FROM STATE INSTITUTIONS OR THE TAX CAPACITY?

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ABSTRACT	ARTICLE INFO

Introduction/Main Objectives: This paper is aimed at answering the following research questions: Where should Indonesia's journey toward a prosperous society start from? Should state institutions be improved first to increase the tax collection necessary to finance this journey? Or should the tax capacity be improved first to help improve the institutions? **Background Problems:** Maintaining good quality state institutions requires fiscal support and, vice versa, maintaining fiscal support through tax revenue requires the existence of good quality state institutions. This paper empirically examines which of these two aspects needs to be improved first to achieve a better society for Indonesians. **Novelty:** To the best of the author's knowledge this paper may be the first that tries to empirically explore the causal relationships between the quality of Indonesia's state institutions and its tax capacity. **Research Methods:** Answers to the research questions were approached by employing a vector error-correction model of governance indicators and tax revenue data for Indonesia, covering the period from 2002 to 2017. **Finding / Results:** It has been found that, for Indonesia, the quality of the state institutions and the tax capacity did not have a causal relationship in any direction. **Conclusion:** Indonesia seems to be caught in a dilemma: On one side, choosing the strategy of improving the quality of the institutions first may not be sustainable because it is unlikely to lead to improvements in the tax capacity, thus the prospects for sustaining good-quality institutions may be uncertain due to the possible lack of fiscal support. On the other hand, improving the tax capacity first does not seem to be a reliable strategy either because it may not result in better quality state institutions, hence revenue mobilization efforts might not be effective due to the incomplete support provided by the poor-quality institutions.

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INTRODUCTION

In social sciences, the metaphor "getting to Denmark" has been used to describe the problem of how to transform weak state institutions in developing countries into well-functioning, modern political and economic institutions commonly found in developed societies such as Denmark and other Scandinavian countries. From the point of view of people in developing countries, "Denmark" is a mythical place that is known to have high quality state institutions: it has effective, rules-based meritocratic public agencies as well as a society that is prosperous, democratic, peaceful, stable, and inclusive, with extremely low levels of political corruption (Fukuyama, 2011; Pritchett & Woolcock, 2004). Everyone who has an interest in state building tries to figure out how to transform developing, poor, or failed countries into "Denmark" and international development organizations typically try to help these countries to attain long lists of presumed Denmark-like attributes (Fukuyama, 2011).

The functioning of a society depends on a set of economic and political policies that are established and enforced by the state and its citizens collectively. Economic incentives – such as the incentives to save, invest, get an education, innovate, or adopt new technology – are shaped by the economic institutions. Further, the shape of the economic institutions depends on the political processes and the political institutions that exist in the society (Acemoglu & Robinson, 2012). Good institutions enable citizens to control the behavior of the state actors and force them to be the agents of the citizens. Vice versa, poor institutions may limit public control, thus the state actors could abuse their power and pursue their own agendas at the expense of society.

Sustaining good institutions is not cheap, however (Chang, 2011). Advanced information systems need to be installed in public offices and these systems have to be supported by up-to-date hardware and backed by capable infrastructure so they are able to provide high levels of service to the citizens. Government officials need to be adequately paid to minimize the risk of them abusing their power for financial gain, as well as to recruit and keep the best talent. The knowledge and skills of the bureaucrats need to be continuously upgraded to be able to keep up with the changing demands from society. These arrangements are costly and thus require sufficient fiscal support. Hence, for countries lacking in natural resources, taxation may be their main financial source for sustaining good institutions.

As a middle income country (World Bank, 2020a), Indonesia has also been trying to "get to Denmark." Nevertheless, creating good state institutions necessitates that Indonesia is able to provide adequate fiscal support for these institutions, so that their quality can be significantly improved and sustainably maintained. On the other hand, collecting sufficient fiscal revenues requires that Indonesia's tax administration is supported by good-quality state institutions which are able to supply valid information about the taxpayers' wealth and able to provide adequate support for the effective enforcement of the tax laws.

In these respects, one of the critical questions that need to be answered for Indonesia to arrive at "Denmark" is: Should the state institutions be developed first so that adequate tax revenue can be raised, or should the tax capacity be developed first in order to support the creation and maintenance of good institutions? This article aims to answer this question and the approach taken is empirical in nature. Statistical procedures were employed to examine the causal relationships between the quality of the institutions and the tax capacity: that is, if improvements in the state institutions cause an increase in the tax

collected; or the other way around, if the increase in the tax collected causes improvements in the institutional quality. Here, the quality of the institutions is defined as the ability of the state to implement public policies, and this ability is measured with various institutional indicators widely used in the literature as proxies for the quality of governance; whereas the tax capacity is defined as a government's ability to generate domestic revenue, and is measured as the ratio of income tax revenue to gross domestic product (GDP) (Akanbi, 2019; Rogers & Weller, 2014).

This topic is deemed important for Indonesia because, in general, the quality of its state institutions as well as its tax capacity have been suboptimal.[1] Moreover, recent research into the public institutions in Indonesia largely studied the correlation and the one-way causality relation that typically runs from state governance toward political establishments (Agus, Astuti, & Sardini, 2021; Ishak, Hasibuan, & Arbani, 2020), corruption (Ersan & Erliyana, 2018; Muktiyanto, Dwiyani, Hartati, Perdana, & Possumah, 2019) as well as local or sub-national development (Triastuti, 2021). Thus, for the particular case of Indonesia, empirical literature which explores the two-way causality relationships between the quality of its state institutions and its fiscal capacity has been scarce. Therefore, the answers to this article's research question might provide some insights on where Indonesia's journey to "Denmark" should be started. Further, this article enriches the literature on the relationship between institutions and growth, as well as filling in the gap in the literature concerning the development path of developing countries such as Indonesia. To the best of the author's knowledge this article may be the first that tries to empirically explore the causal relationships between the quality of Indonesia's state institutions and its tax capacity.

LITERATURE REVIEW

a. State institutions and tax capacity in Indonesia

As a middle-income developing country, Indonesia is faced with special challenges concerning its economic development and governance structure. More than two decades after the fall of authoritarian President Suharto in 1998, Indonesia still has some work to do to improve its democratic institutions and narrow the widening economic equality gap (Diprose, McRae, & Hadiz, 2019). Although Kapstein and Converse (2008, p. 59) found that 84 percent of democratization efforts in many countries have failed within the first 10 years, democratization in Indonesia has surpassed that time period. However, Mietzner (2020) argued that since the mid-2000s the quality of Indonesia's democracy has been stagnating, and in some areas the democratic qualities have been eroded. Although post-authoritarian Indonesian polity has achieved high levels of formal "horizontal accountability" – i.e., the "mutual checking of constitutional powers" (Merkel, 2014, p. 15) – however, its real effectiveness is poor (Aspinall, 2010; Butt & Lindsey, 2011; Slater & Simmons, 2013).

In recent years, Indonesia's capacity to collect taxes has been sub-optimal. While its neighboring countries have been able to collect taxes at levels more than 15 percent of GDP, Indonesia struggles to collect just 14 percent of its GDP (Iswahyudi, 2017). This sub-par performance has been argued to be the result of defects in the tax laws and regulations (Alm, 2019) and limitations in the administrative qualities and

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[1] It should be noted, however, that after the fall of Soeharto's regime there have been some improvements in the quality of state institutions in Indonesia although their levels may be less than satisfactory; see, for examples, in Butt (2011); Mietzner (2020).

capabilities of the tax authority (Iswahyudi, 2020a). International organizations have tried to advise the tax authority about how to enhance its performance (Brondolo, Silvani, Le Borgne, & Bosch, 2008) and although there have been some marked improvements, particularly concerning anti-corruption measures (Schreiber, 2018), there are still challenges for the tax authority in fulfilling its main task of providing financing for the government's public expenditure.

Moreover, although the word "Denmark" in this article is used as a metaphor for a society with high quality public institutions and a high quality of life, it is worth noting recent data on the differences between Indonesia and Denmark as countries. In 2020 Indonesia's GDP per capita was at U.S. $3,869 while Denmark's reached $60,908 – this data reflect how significantly more prosperous Denmark is, compared with Indonesia; further, data on the Gini index, which measures how equal a society is (the higher the number the more unequal the society), in 2018 shows that Indonesia (at 37.8) was much more unequal than Denmark (at 28.2) (World Bank, 2021).

b. Theories on state institutions and taxation

Literature on the role of the state and taxation may have a long history. It could at least be traced back to the work of Schumpeter (1918) in which he suggested that the historical origins and shapes of states could be associated with taxes. According to Schumpeter (1918), the dynamics of taxation correlate to the dynamics of other aspects of the state.

In the context of state-tax relations, one strand in the literature focuses on how the various dimensions of state institutions may influence the evolution of taxation – thus the direction is from institutions to taxes. For example, Kiser and Levi (2015) suggested that the tax capacity, or the capacity of a state to collect taxes, could be associated with the legitimacy of the government. A government with a high level of effectiveness and trust-worthiness would acquire a high level of legitimacy from the population and as such would be able to evoke a high level of compliance from its citizens – including their compliance in paying taxes – without the need for excessive monitoring or punitive actions. This social norm of compliance, however, may come at some price for the government: a society with a high degree of compliance typically demands a correspondingly high degree of transparency and accountability from its government (Kirchler, Hoelzl, & Wahl, 2008).

The degree of compliance may also relate to the degree of the citizens' participation in state affairs. In this respect, direct democracy may correlate to higher tax compliance. From a study of the democratic systems in several cantons in Switzerland, Pommerehne and Weck-Hannemann (1996) found that tax compliance tends to be relatively higher in the cantons where the citizens can directly influence budgetary policies than in the cantons without such a direct influence. In a similar vein, Fjeldstad (2004) and Torgler (2003) maintained that public trust in the political leadership and administration may positively affect tax compliance.

As tax payments could be accompanied by demands from the citizens for more transparent and accountable public institutions, developing countries that have access to sources of revenue other than taxes typically collect lower tax revenues, hence avoiding public demands for transparency and accountability. For example, Jensen (2011) found that when the share of the natural resources' rents in the total government's revenue increased by 1 percent, the country's tax-to-GDP ratio would decrease by 1.4 percent. Similarly, Benedek, Crivelli, Gupta, and Muthoora (2014) found that in low-income

countries with weak institutions, increases in foreign aid could be associated with lower tax revenues.

Besley and Persson (2013, 2014) argued that the tax capacity of a state may depend on the shape of its political institutions, the structures of political power, public demands on the roles of the state, and the level of transparency. Further, these authors maintained that efforts to improve the tax capacity also may face constraints arising from social rifts, political interests, the economic environment, as well as constraints related to sociological and cultural factors.

Another strand in the literature emphasizes the influence of taxation on the evolution of state institutions – thus the direction is from taxes to institutions. For example, Brautigam (2008) maintained that taxation may play an important role in the building and sustenance of the power of states, as well as in shaping state-society relations. Financial support provided by tax revenue may ensure the state's capacity to perform its functions. Taxation also serves as one of the central issues in the relations between a state and its society. The social character of a state, particularly the balance between wealth accumulation and redistribution, could be significantly shaped by the tax policies.

Further, a good state capacity was argued to be the result of past decisions to extract revenue from the population to finance specific public purposes, such as engaging in wars. In this line of argument, Besley and Persson (2009) suggested that a key aspect in the economic development of today's rich countries lay in their historical need to build strong state institutions, with the particular aim of collecting taxes and enforcing the contracts necessary to sustain the good in the public's common interest, such as fighting external conflicts, maintaining political stability, and upholding inclusive political institutions.

In an extended model of endogenous growth, Barro (1990) showed that the productive efficiency of an economy may be enhanced when the proceeds from taxes were spent on public goods and investment. Using empirical data from several Sub-Saharan African countries, Ebeke and Ehrhart (2012) found that volatilities in their tax revenues caused volatilities in both the governments' consumption and investment, and these uncertainties have led to low levels of overall investment. Seidel and Thum (2016) argued that corrupt officials may demand fewer bribes when there is stricter enforcement of taxation and, as a result, this lower level of bribes could increase the market entry for new businesses and enhance the economic growth.

Rogers and Weller (2014) suggested that the level of the state's capacity should be defined by the state's ability to implement its policies. Further, they maintained that this capacity could be measured by how well the state mobilizes the revenue from income taxes, or to be precise: income taxes as a percentage of the total tax revenue. This is because, although any kind of taxation requires a functional bureaucracy, differences in the levels of effort required from the state and its bureaucratic apparatus depend on the types of taxes collected. In this case, although income taxation may be a lucrative source of revenue for the state, its collection requires a higher level of effort from the state bureaucracies, relative to other tax instruments.

c. Previous empirical evidence on state institutions and taxation

To gain an understanding on the causality link between these two strands of the literature – i.e., which way does the causality run between state institutions and tax capacity – may require statistical tests. Akanbi (2019) employed a panel

dataset from 110 non-resource rich countries (Indonesia not included). The data covered the period from 1996 to 2017 and the work was aimed at investigating the causality direction between state institutions and the tax capacity. Using a panel vector error-correction model, Akanbi (2019) found a bi-directional causality between state institutions and the tax capacity. This finding may suggest that it would be best to develop both state institutions and the tax capacity simultaneously, because otherwise countries with weak institutions and a low tax capacity could be trapped in a vicious cycle with their low tax capacity thwarting institutional development and the weak institutions weakening the development of their tax capacity.

Empirical research to determine the direction of causality between institutions and the tax capacity in Indonesia, however, has been scarce. Hence, drawing from the literature, it could be inferred that there are at least two contributions by this article. First, to the best of the author's knowledge, this article may be the first which empirically examines the direction of causality between state institution and the tax capacity, for the case of Indonesia. The second novelty of this article is that instead of the ratio of income taxes to total tax revenue, it uses the ratio of income tax revenue to GDP to measure tax capacity, for reasons that will be explained in the next section.

DATA AND METHODOLOGY

a. *Research observation and data sources*

Based on the literature, the hypotheses to be tested in this article were as follows:

Hypothesis 1. Changes in the tax capacity and economic development cause a subsequent change in the quality of the state institutions.

Hypothesis 2. Changes in the quality of the state institutions and economic development cause a subsequent change in the tax capacity.

Hypothesis 3. Changes in the tax capacity and the quality of the state institutions cause a subsequent change in economic development.

The model employed in this article follows the framework developed by Akanbi (2019). To measure the quality of the state institutions, a composite institutional index was used. This index was derived from 13 institutional indicators which have been used extensively in the literature as proxies for the quality of governance and institutions. These 13 indicators were grouped into three broad sets of categories. The first set was the indicators for governance, which were derived from The World Bank's Worldwide Governance Indicators (World Bank, 2020b). The second set was the economic freedom indicators, which were derived from Fraser Institute's Economic Freedom Index (Fraser Institute, 2020). The third set was an indicator for the level of corruption, which was derived from Transparency International's Corruption Perceptions Index (Transparency International, 2020). Moreover, data on income tax revenue, GDP, and real GDP per capita (at constant 2010 U.S. dollars) were from The World Bank's World Development Indicators and yearly publications of Statistics Indonesia (Badan Pusat Statistik, Various Years; World Bank, 2020b).

The multivariate time series data examined in this article covered the period from 2002 to 2017. This period was chosen mainly due to the constraint of the data's availability. The year 2002 was selected as the starting point because complete data on governance and economic freedom indicators for Indonesia were available starting from that year. 2017 was chosen as the

end period simply because this is the most recent year that complete data were publicly available.

The reason for using a composite institutional index was to aggregate the various indices that serve as proxies for the quality of the state institutions. The principal component analysis (PCA) was used to derive this composite index since this analysis has been widely used for aggregating quantitative data that were spread in many measures (Akanbi, 2019, p. 8).

The first set of indicators used in the PCA related to the aspects of governance. This set of indicators consisted of the control of corruption, government effectiveness, political stability and the absence of violence/terrorism, the regulatory quality, the rule of law, and voice and accountability. The second set of indicators were related to the degree of economic freedom which consisted of the size of the government, the legal systems and property rights, sound money, freedom to trade internationally, and regulation. The third set of indicators was the Corruption Perceptions Index.

The model employed to derive the composite institutional index, $inst$, was as follows:

$$inst = \mathcal{X}_1 G + \mathcal{X}_2 EF + \mathcal{X}_3 CPI$$

Here $\mathcal{X}_1$, $\mathcal{X}_2$, $\mathcal{X}_3$ denote the eigenvectors from the PCA. The values of these eigenvectors were used as weights to be attributed to the variables of G (average governance indicator), EF (overall score of economic freedom indicator), and CPI (corruption perceptions index), respectively. Estimates from the PCA showed that 33 percent of the weight is attributed to governance indicators, 33 percent is attributed to economic freedom indicators, and the remaining 34 percent is attributed to the corruption perceptions index.

To measure the tax capacity, this article used the ratio of income tax revenue to GDP. The reason for choosing income tax revenue as

the benchmark for the tax capacity was that the advanced taxation of income may serve as a better indicator for assessing the capacity of a state in mobilizing revenue. Although collecting any type of tax requires a functional state bureaucracy, income taxation is a relatively more difficult type of tax to collect because it demands the highest level of effort from the bureaucracy and the apparatus of the tax administration (Atkinson & Stiglitz, 1976; Lieberman, 2002; Slemrod, 1990; Tanzi, 1991).

Collecting taxes effectively requires the existence of three conditions: information (on the economic actors), monitoring (the actors' economic activity), and the use of force (to extract payments from the economic actors) (Rogers & Weller, 2014). As such, the level of difficulty in meeting these three conditions may depend on the type of tax levied. International trade taxes, for example, could meet these three conditions with relative ease. Collecting this type of tax may only require the establishment of customs houses at borders and ports. Since international trade must flow through these customs houses, the efforts required to collect the information, for monitoring, and for using force to extract the payments may be less demanding.

On the other hand, collecting income taxes requires that the tax administration has a broad and deep reach into society, in order to gather large and extensive amount of information from the population, closely monitor the citizens' economic activities, and effectively extract tax payments. For these reasons, the ratio of income tax to GDP may provide a more precise indicator of the capacity of the state or the tax administration to collect taxes relative to the size of the economy, with a higher ratio indicating a better capacity and vice versa.

Other than the variables of the state institutions and the tax capacity, the level of real

GDP per capita was included as an additional variable in this article. This is because previous studies found that real GDP per capita was part of the determinants that could explain the quality of institutions, as well as the level of the tax capacity (Alonso & Garcimartin, 2013; Gupta, 2007). Further, empirical studies suggested that the institutions and the tax capacity may affect economic growth (Barro & Redlick, 2011; Fatas & Mihov, 2013) and that there was statistical evidence of bidirectional causality between these variables (Abdullah & Morley, 2014; Goes, 2016). Therefore the inclusion of real GDP per capita, as one of the variables in the model, made the nature of the empirical tests in this article resemble a multivariate approach, rather than the traditional bivariate approach.

b. Variables and models

The first step in the methodology was to develop and examine the vector autoregressive (VAR) model. As underlined earlier, the model used three covariance variables (quality of state institutions, tax capacity, and GDP per capita) and they can be expressed in logarithmic (log) forms as follows:

$$\log_{inst\ t} = \sum_{k=1}^{n} \gamma_e \log_{inst\ t-k} +$$

$$\sum_{k=1}^{n} \delta_e \log_{taxcap\ t-k} +$$

$$\sum_{k=1}^{n} \pi_e \log\_gdp_{t-k} + \varepsilon_{et} \qquad (1)$$

$$\log\_taxcap_t = \sum_{k=1}^{n} \gamma_y \log_{inst\ t-k} +$$

$$\sum_{k=1}^{n} \delta_y \log_{taxcap\ t-k} +$$

$$\sum_{k=1}^{n} \pi_y \log\_gdp_{t-k} + \varepsilon_{yt} \qquad (2)$$

$$\log_{gdp\ t} = \sum_{k=1}^{n} \gamma_z \log_{inst\ t-k} +$$

$$\sum_{k=1}^{n} \delta_z \log_{taxcap\ t-k} +$$

$$\sum_{k=1}^{n} \pi_z \log\_gdp_{t-k} + \varepsilon_{zt} \qquad (3)$$

In the above equations, $inst_t$ denotes the composite institutional index; $taxcap_t$ denotes tax capacity; and gdp_t denotes real GDP per capita. γ, δ, and π are the coefficients of the institutional index, tax capacity, and GDP per capita, respectively. t denotes time, k denotes the time lag, and ε is the error term.

The augmented Dickey-Fuller test was employed to test for the presence of a unit root in an individual variable. The results[2] suggested that in each variable the null hypothesis for the presence of a unit root (in levels) could not be rejected at the 5 percent level of significance. Further, to find the optimal lag lengths this article used the lag order selection statistics from the final prediction error (FPE), Akaike's information criterion (AIC), the Schwarz-Bayesian information criterion (SBIC), and the Hannan and Quinn information criterion (HQIC). The criteria with the smallest lag lengths are used and it was found that the optimal lags should be set at three.

Since all of the variables have unit roots, equations (1), (2), and (3) need to be examined for cointegration. For this, the Johansen cointegration test was conducted and the results showed the possibility of two cointegrating equations (maximum rank 2). In this case, the causality between two non-stationary variables that are cointegrated should be tested using a model which contains dynamic error-correction representations (Engle & Granger, 1987).

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[2] See Table B in Appendix

RESULTS

Table 1 presents the statistical summary of the data used in this article.[3] Table 2 presents estimates from the vector error-correction model (VECM). The results from Table 2 imply three sets of results: First, there is no causal relationship running from the tax capacity and economic development to the quality of the institutions. Second, there is no causality that runs from the institutions and economic development to the tax capacity. Third, in the short term, changes to the institutions and the tax capacity may not cause changes in the economic development, however, in the long run there seems to be a causality that runs from the institutions and the tax capacity to the economic development. Further, an examination of the results of the Wald tests seems to confirm these results.[4] Nevertheless, there are critical notes in the finding of a long-run causality from the institutions and tax capacity to the economic development. Firstly, the coefficient for the variable of the institutions shows a negative sign, thus the causality relationship from the institutions to the economic development may be asymmetric. Secondly, the magnitude for the coefficient of the tax capacity is negligible – that is, the coefficient is practically zero. Hence, although an increase in the taxes collected may have a statistically significant causal effect on economic development in the long run, this effect is practically insignificant.

Further diagnostic tests generally did not indicate that the model was mis-specified – in other words, the model seems to be robust. The result from the diagnostic test to assess the model's stability supported earlier predictions concerning the number of cointegrating equa-tions and their non-stationarity.[5] The Lagrange multiplier test revealed that there was no auto-correlation in the residuals.[6] A test conducted to diagnose the normal distribution of the residuals found that the statistics of each equation, and all the equations jointly, did not reject the null of normality.[7]

DISCUSSION

One of the empirical findings in this article suggests that there is no causal relationship running from the tax capacity to the institutions. In other words, increases in the taxes collected do not seem to cause improvements in the quality of the state institutions. Although this outcome might be unprecedented, nevertheless, some of the plausible explanations for this lack of causality might relate to how the state taxes its citizens, or the manner in which the tax officers implement the tax laws.

Except in countries with large revenues from natural resources, or those that rely heavily on foreign aid, public institutions generally depend on the revenue provided from taxation as their source of financial support while, on the other hand, effective enforcement of taxation depends on the support of various public organizations, for example to supply the tax administration with accurate information on the taxpayers' wealth or businesses (such as property regis-trations, vehicle registrations, licenses and permits). Hence, theoretically, states have incentives to improve their bureaucratic qualities since this would serve two purposes. First, their citizens would perceive that the state is responsive and accountable toward the public by bettering the institutions' qualities. Second, since effective enforcement of taxation requires support from wide ranging public organizations,

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[3] See Table A in Appendix for explanation for each indicator.
[4] See Table C in Appendix

[5] See Figure A in Appendix
[6] See Table D in Appendix
[7] See Table E in Appendix

Table 1. Data Summary

Indicator	Mean	Median	Std. Deviation	Minimum	Maximum	Observation
Tax Capacity						
Income Tax Revenue/GDP	5.61	5.45	0.54	4.76	6.60	16
Governance						
Control of Corruption	3.60	3.66	0.46	2.71	4.49	16
Government Effectiveness	4.49	4.47	0.31	4.03	5.08	16
Political Stability and Absence of Violence/Terrorism	2.98	3.38	1.10	0.81	4.25	16
Regulatory Quality	4.25	4.30	0.43	3.41	4.79	16
Rule of Law	3.77	3.76	0.36	3.17	4.32	16
Voice and Accountability	4.95	4.98	0.31	4.40	5.37	16
Economic Freedom						
Size of Government	7.98	7.98	0.27	7.28	8.37	16
Legal Systems and Property Rights	4.12	4.30	0.56	3.17	4.94	16
Sound Money	8.27	8.31	1.09	6.21	9.68	16
Freedom to Trade Internationally	6.98	6.98	0.17	6.77	7.36	16
Regulation	6.17	6.34	0.37	5.33	6.47	16
Corruption Perceptions Index	2.80	2.80	0.64	1.90	3.70	16
Real GDP per capita	3,110.81	3,050.68	605.62	2,259.31	4,120.43	16

Sources: Badan Pusat Statistik (Various Years); Fraser Institute (2020); Transparency International (2020); World Bank (2020b); Author's calculations.

Table 2. VECM Estimates

Regressand	Regressors				
	$\Delta \log\_inst_{t-k}$	$\Delta \log\_taxcap_{t-k}$	$\Delta \log\_gdp_{t-k}$	σ	ECT_{t-1}
$\Delta \log\_inst_t$	0.321 (0.584)	-0.054 (0.550)	0.748 (0.465)	0.021 (0.246)	-0.707 (0.276)
$\Delta \log\_taxcap_t$	2.372 (0.515)	-0.600 (0.289)	4.929 (0.439)	-0.005 (0.967)	-2.886 (0.475)
$\Delta \log\_gdp_t$	-0.115 (0.453)	0.000 (1.000)	0.007 (0.979)	0.004 (0.433)	0.381 (0.025) **

Notes: σ = constant; ECT= error correction term; ** significant at 5 percent level.
Source: Author's calculations.

good institutional quality would enhance the revenue mobilization capacity and in turn would ensure the financial sustainability of the state.

However, these conditions cannot be taken for granted. In practice, how taxes are assessed and collected may affect the dynamics of state-society relations. In this respect, Moore (2007) argued that coercive methods of taxation may exacerbate the problem of the poor quality of the state institutions. Tax administrations in developing countries often find it hard to tax the informal sector and the politically-connected very wealthy class, hence their only option is to focus their collection efforts on the medium and larger businesses operating in the formal sector that are already registered in their tax nets, but who possess no (or little) political protection. In

this situation the tax base tends to be narrow, thus in order to meet their collection quotas tax officers may resort to coercive tactics.

The practice of coercive taxation – i.e. tax assessment and collection that is perceived by taxpayers as arbitrary, extractive, unfair, or brutal (Moore, 2007, p. 25) – may damage the relations between the state and its citizens. In coercive taxation the attitude between the tax officers and the taxpayers might best be represented as "cops" and "robbers." Tax officers regard taxpayers as would-be "robbers" who will evade taxes when not constantly held in check while, on the other hand, taxpayers view the tax officers as "cops" who always harass and persecute them, hence the taxpayers feel that evading taxes is the right thing to do (Kirchler et al., 2008).[8]

In this unconstructive environment, the citizens' trust toward the government is likely to be significantly low. Moreover, since the citizens/taxpayers in this environment tend to evade their tax obligations they may be indifferent toward the quality of the public institutions, because they do not feel responsible for financing these institutions. As a result, the public demand for good institutions may not be strong, thus any pressure for better state institutions may not be significant. Sensing the citizens' indifference, the government may not have the incentive to improve the quality of the state institutions since the government would think (rightly) that improved institutions could result in increased political checks and balances. When programs directed toward institutional betterment are enacted, they typically serve only for publicity purposes and rarely touch the root causes of the problems. Since the general society feels apathy and pessimism toward the govern-

ment and its institutions, these practices rarely result in a political backlash. In sum, these conditions might partially explain why the empirical evidence failed to find a causal relationship from the tax capacity to the institutions.

Another plausible explanation for the lack of impact of the tax capacity toward the institutions may relate to the inability of the taxation system to redistribute wealth. A society with a more equal wealth distribution generally serves as a fertile ground for good institutions. On the contrary, a society with an unequal distribution of income may be unconducive for good institutions to flourish (Chong & Gradstein, 2019; Mizuno, Naito, & Okazawa, 2017). In an unequal society, the wealthy – with their ample resources – may benefit from shaping the state institutions in their favor. The economically elite class would have the incentive to deliberately lower the quality of the public institutions for their benefit, or deter any effort to improve the institutional quality at the expense of the lower classes. For example, rich agents could expropriate other (poorer) agents' properties by exploiting the imperfect quality of the public institution tasked with protecting property rights. Thus, when the poor institutional quality enables the wealthy to exercise their rent-seeking behavior, they would resist grass-roots demands for better quality institutions (Sonin, 2003).

One of the main roles of tax is to redistribute society's wealth, in order to lessen economic inequality. A poor tax capacity – either due to defects in the fiscal system, or due to an incompetent tax administration or both – may impede the efforts to build an equal society or worsen the already severe problem of inequality. There is an indication that taxation in Indonesia has failed to reduce the inequality. Perhaps the most prominent indicator to measure how equally society's wealth is distributed among its members is the Gini index. This indicator has

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[8] See studies by Deloitte (2014, 2017) for some insights into how taxpayers view the taxation environment in Indonesia.

been widely used to measure income or wealth inequality, with a higher index value representing greater inequality. The data show that inequality in Indonesia is getting worse. Publicly available data from the Gini index (World Bank, 2020b) for Indonesia can be found from 1984 onwards (coincidentally, this is the same year that the first comprehensive tax reform was enacted) and the index for that year was 32.4. In 2018, which is the latest data that are available, this index had increased to 39.0.

The next finding that can be inferred from the empirical tests is that there is no statistical evidence of a causal relationship running from the quality of the institutions to the tax capacity. This result may in part be explained from the perspective of the resource dependence theory. The general proposition of the resource dependence theory is that organizations tend to be more responsive toward parties that control resources which are critical for the organizations' survival (Pfeffer & Salancik, 2003). In the context of public finance, this translates into the proposition that governments with poor institutions, which lack the capital needed to develop their economies and provide employment opportunities for their citizens, may be more responsive to capitalists' demands. Since the poor quality of the institutions may increase the business costs and reduce the returns on investment, governments offer fiscal incentives such as reductions in tax rates and exemptions from taxes to the owners of capital, as compensation for the low quality of the state institutions (Moore, 2015).[9]

This strategy may be preferable to a government since, on the one hand, the necessary investment might be lured in to develop the economy whereas, on the other hand, the government would be freed from the hard, arduous tasks of improving the quality of the public institutions and thus may avoid the risks of offending the interests of elite state actors who benefit from the existence of the poor-quality institutions. As a result, the quality of the institutions may be left untouched, stagnating without any attempt at their betterment. The government might speculate that its tax revenue would still be able to be maintained, or may even be increased, although it grants various fiscal incentives because these incentives are expected to expand the tax base through increases in investments and expansions in the economy.[10] In these settings, the institutional quality might not matter for taxation – hence it may explain the finding of the lack of impact of the institutional quality on the fiscal capacity.

Another possible explanation for this lack of a causal relationship from the quality of the institutions to the tax capacity may relate to the limitations of the tax administration. Better public institutions may not guarantee a better tax capacity. Enhancing the quality of the institutions does not automatically translate into increases in the taxes collected because increasing the tax collection also depend on the capability to administer the taxes effectively and efficiently. In other words, besides depending on the support provided by other public institutions, the level of the tax capacity may also depend on how well the tax administration performs its main jobs: i.e., to detect, deter, and punish non-compliance. Hence, even if there were improvements in the quality of the institutions in general, the tax administration might not be able to take advantage of these improvements due to its limited administrative capabilities. For example, even after the issuance of a law that obligates the

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[9] It also is likely that investors – particularly those with significant capital – would demand certain fiscal concessions to compensate for the poor quality of state institutions.

[10] It should be noted that in practice tax incentives may not always result in increased investment and higher economic growth, however, that discussion is beyond the scope of this paper.

banking sector to supply data to the tax administration, the capability of the latter in mobilizing revenue has not significantly improved.

Before the banking crisis of 1997/1998, one of the problems plaguing the Indonesian banking sector was inadequate supervision by the central bank (Enoch, Fre´ caut, & Kovanen, 2003). After the crisis, a new supervisory institution was created and the Indonesian banking sector, in general, has been better supervised, it is more stable now and better regulated – in other words, the institutional quality of the banking sector is better than before. Realizing the persistent declines in tax revenue, since 2018 the govern-ment has mandated the banking sector to routinely submit customers' financial data to the tax administration, to improve the tax adminis-tration's capability in detecting non-compliance.

However, it seems that even opening taxpayers' banking data could not significantly improve the collection capacity. An examination of the ratio of income tax revenue (excluding revenue from the oil and gas sector) to GDP in the period before and after this mandatory banking report might provide preliminary views of this limited capacity. In the period from 2011 to 2017[11] the ratio was, on average, 4.6 percent (Badan Pusat Statistik, Various Years). After the mandatory reporting of banking records, in 2019 the ratio (4.5 percent[12] of GDP) was not significantly different from the previous average.

The next important finding in this article is the lack of empirical evidence on the causal relationship that runs from the GDP per capita to the tax capacity. This outcome might naturally raise the question: How is it possible that

increases in economic welfare do not cause increases in the tax revenue?

Part of the answer to this question may relate to the possibility that Indonesia's tax system and administration may not have the capability to extract extra revenue from the expansion in the economy. To understand this inability, however, one might have to examine the historical accounts of Indonesian tax reforms, because this lack of capacity does not happen overnight but evolves over several decades. The first compre-hensive tax reform in Indonesia was enacted in the mid-1980s. One of the backgrounds to this reform was that the previous tax system was inundated with defects. Decades of amendments, decrees, and regulations made the tax system extraordinarily complex, unintelligible, and practically unenforceable. These defects were compounded with weaknesses in the tax admi-nistration. As a result, the revenue yield from taxation at the time was extremely low. With this background, the goals of the reform of the 1980s were set as follows: revenue enhancement, income distribution, economic efficiency, and tax administration and compliance (Gillis, 1989).

History seems to repeat itself, however. Decades after the reform of the 1980s the tax system seems to be plagued by the same problems as the previous one. Amendments, decrees, and regulations are creeping back and eroding the tax base as well as making the tax system more complex and unequal (Iswahyudi, 2018, 2020b). Deliberate decisions to alter the tax structure and the extensive system of fiscal incentives and exemptions have partly contri-buted to the gradual decline in revenue. In line with this, after examining the problems of Indonesian taxation, Alm (2019) concluded that "[i]ndeed, the system has evolved over time in a piecemeal, ad hoc manner with little apparent thought given to the ways in which the pieces of the system need to fit together."

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[11] The latest tax reform in Indonesia was in 2010, hence the period 2011-2017 was chosen as the benchmark.
[12] Ministry of Finance press conference, https://news.ddtc.co.id/penerimaan-pajak-2019-capai--844-dari-target-ini-data-lengkapnya-18309 (accessed July 30, 2020).

Besides the defects in the tax system, the way taxes are administered has also added to the problem. A recent survey conducted by Deloitte (2017) found increasing inconsistencies in Indonesia's tax administration. This finding highlights shortcomings in the uniformity and transparency of the implementation and enforcement of tax laws by Indonesian tax officers. The survey also found that in matters related to audits and disputes, Indonesia was seen as having the worst tax environment among the Asia-Pacific countries surveyed. The respondents pointed to the problem of trust toward the tax administration, due to the high frequency of audits, low level of fairness in these audits, and the taxpayers' lack of confidence in the appeal system. As a result, these issues have led to poor relationships between taxpayers and tax officers (Deloitte, 2017, p. 18). A large strand of literature has examined the dynamic associations between trust and tax evasion – see, for recent examples, in Kanagaretnam, Lee, Lim, and Lobo (2018); Siglé, Goslinga, Speklé, van der Hel, and Veldhuizen (2018) – with results which generally supported the notion that a low level of trust tends to encourage tax evasion.

While on the one hand there are indications of a not insignificant amount of tax evasion in Indonesia (see Alm and Embaye (2013); Schneider (2005); Schneider, Buehn, and Montenegro (2010)); on the other hand, there are limits to the capability of the tax administration to enforce compliance. In 2000, the International Monetary Fund (IMF) provided financial and technical assistance for economic reform programs which included, among others, efforts to reform the tax administration. In this project, several areas in the tax administration were identified as needing improvement, such as the audit quality, arrears' collection, refund process, and the information system (Brondolo et al., 2008).

After two decades, however, improvements in these areas have been limited and thus they continue to constrain revenue mobilization (Alm, 2019). A further source of significant concern is that there is an indication that the tax administration has been operating with diminishing returns to scale (Iswahyudi, 2020a). These diminishing returns to scale imply that the marginal revenue collected by the tax administration is less than the marginal inputs of labor and capital stock put into the tax administration's operations. To put it another way, the operations of the tax administration may be inefficient or unproductive. This condition also may pose limits to the capability of the tax administration to sustain growth in its revenue collection.

The next implication of the finding in this article is that the quality of the institutions might not be one of the determinants of Indonesia's economic growth. In the economic development literature, the theoretical support for this finding may not be new – see, for example, in Chang (2011); Jameson (2011); Ros (2013). Institutions may encourage productive activities (Van den Berg, 2012) and although productivity may hold the key to long-run economic growth, expansion in the economy may also be achieved (though it may not be sustained) through labor and capital stock accumulation (Solow, 1956; Swan, 1956). With this approach, even an autocratic political system with poor quality institutions may be able to stimulate economic growth by accumulating the required quantity of workers and the physical capital (Djankov, Glaeser, La Porta, Lopez-de-Silanes, & Shleifer, 2003; Glaeser, La Porta, Lopez-de-Silanes, & Shleifer, 2004).

In practice, this approach may not be new for Indonesia: rapid economic development during the Soeharto administration occurred despite the poor quality of the institutions. In this period (1966 to 1996) high levels of economic growth

were achieved although there were limited institutional reforms. Soeharto's regime emphasized that a strong state, with limited democracy and accountability, was essential for rapid industrialization. In this era, economic development was mainly supported by labor and capital stock accumulation, while public institutions were primarily directed toward suppressing antagonism toward the government (see Hofman, Rodrick-Jones, & Thee, 2004). This episode of Indonesia's history may serve as an example to explain why the institutional quality may not always be a crucial factor for economic development – that is, when economic growth depends mainly on the accumulation of labor and capital stock, rather than on productivity (which needs to be supported by the existence of good institutions).

Further, the empirical evidence implies that the tax capacity may not affect Indonesia's economic growth. This result may partially be explained from the point of view of the design of the tax system. For an economy to be efficient, the relative prices of goods and the way businesses choose to organize themselves should be determined by market forces, not by the peculiarities of the tax code. For this reason, a good tax system should be designed to be as neutral as possible: i.e., the tax system should avoid distorting the economic agents' choices away from those they would have made in the absence of taxes (Chamberlain & Fleenor, 2007).

Poorly designed tax systems may impose efficiency costs on the economy because the taxes may alter the relative prices. Differences in prices due to taxation may affect the economic agents' decisions regarding savings and effort. Hence, in the long run the patterns of investment and industrial structures may be shaped mainly by taxation, not by economic efficiency or productivity considerations. On the other hand,

well-designed tax systems would minimize the efficiency loss from taxation, improve economic productivity, and even raise the rate of economic growth (Barro & Sala-i-Martin, 1992). Hence, it is possible that the finding of the lack of impact of the tax capacity toward economic growth may reflect the poor design of Indonesia's tax system.

One of the limitations of this study, however, concerns the relatively limited period it covers due to the constraint of data availability. Hence, when more data are available, future studies could be directed toward addressing this issue. The other limitation is that this study aggregates the various aspects of governance into one composite index, therefore future studies could be directed toward assessing how each aspect of governance impacts the tax capacity and, vice versa, how the tax capacity may affect each aspect of governance.

CONCLUSION

Back to the research question of this article: Should Indonesia's journey to "Denmark" start from the state institutions or the tax capacity? The answer, however, appears to be neither one of them. To put it bluntly, Indonesia seems to be stuck between a rock and a hard place. On one side, choosing the strategy of improving the quality of its institutions first may be unsustainable because this strategy is unlikely to lead to improvements in the tax capacity, thus the prospects for sustaining good-quality institutions may be uncertain due to the possible lack of fiscal support. On the other hand, improving the tax capacity first does not seem to be a reliable strategy either because it may not result in better quality public institutions, hence the revenue mobilization efforts might not be effective due to the incomplete support provided by the poor-quality state institutions.

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APPENDIX

Table A. Indicators Used in the Study

Indicators	Note	Source
Income Tax Revenue/GDP	This variable measures the extractive capacity of the government in collecting revenue from income taxation as a share of aggregate economic output	Statistics Indonesia, World Bank
Control of Corruption	This variable captures perceptions of the extent to which public power is exercised for private gain as well as the "capture" of the state by elites and private interests.	World Bank
Government Effectiveness	This variable captures perceptions of the quality of public services and the civil service, the degree of independence from political pressures, the quality of policy formulation and implementation, and the commitment to such policies.	World Bank
Political Stability and Absence of Violence/Terrorism	This variable measures perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism.	World Bank
Regulatory Quality	This variable captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.	World Bank
Rule of Law	This variable captures perceptions of the extent to which agents have confidence in and abide by rules, the quality of contract enforcement, property rights, the police, and the courts.	World Bank
Voice and Accountability	This variable captures the perceptions of the ability to participate in selecting the government, freedom of expression, freedom of association, and a free media.	World Bank
Size of Government	This variable measures the degree to which a country relies on personal choice and markets rather than government budgets and political decision-making. Lower levels of government spending, lower marginal tax rates, and less government investment and state ownership of assets earn the highest ratings in this area.	Fraser Institute
Legal Systems and Property Rights	This variable measures the effectiveness of the rule of law, the security of property rights, an independent and unbiased judiciary, and impartial and effective enforcement of the law.	Fraser Institute
Sound Money	This variable measures the stability of the purchasing power of money across time. A relatively stable purchasing power reduces transaction costs and facilitates exchange, thereby promoting economic freedom.	Fraser Institute
Freedom to Trade Internationally	This variable measures the extent of exchange across national boundaries, restrictions in cross-border exchange diminished economic freedom.	Fraser Institute
Regulation	This variable measures the extent in which regulations restrict entry into markets and interfere with the freedom to engage in voluntary exchange.	Fraser Institute
Corruption Perceptions Index	This variable captures perceptions on the level of public sector corruption.	Transparency International
Real GDP per capita	This variable measures the economic output per person, adjusted for inflation. In this article, this variable is used as a proxy for the level of economic development, the higher the real GDP per capita, the higher the economic development.	Statistics Indonesia, World Bank

Table B. Unit Root Test Results

| Variable	p-value
Log Composite Institutional Index (log_*inst*)	0.59
Log Tax Capacity (log_*taxcap*)	0.59
Log Real GDP Per Capita (log_*gdp*)	0.93

Note: p-value for individual variable was based on MacKinnon approximation.
Source: Author's calculations.

Table C: Wald Test Results

Regressor	Regressand	chi2	Prob > chi2
log_*taxcap*	log_*inst*	0.36	0.5497
log_*gdp*	log_*inst*	0.53	0.4649
log_*inst*	log_*taxcap*	0.42	0.5154
log_*gdp*	log_*taxcap*	0.60	0.4390
log_*inst*	log_*gdp*	0.56	0.4526
log_*taxcap*	log_*gdp*	0.00	1.0000

Source: Author's calculations.

Figure A: Stability Test
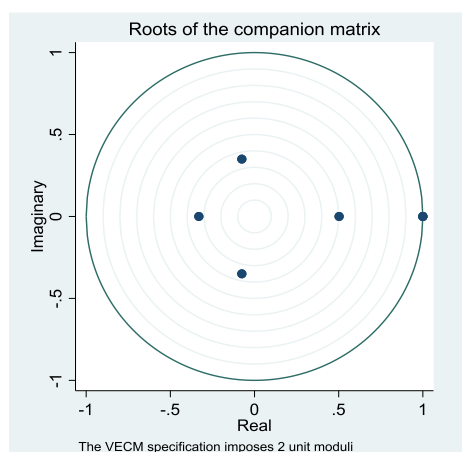
Source: Author's calculations.

Table D: Lagrange Multiplier Test

lag	chi2	df	Prob > chi2
1	3.5754	9	0.93707
2	16.9567	9	0.04940

Source: Author's calculations.

Table E: Jarque-Bera Test

Equation	chi2	df	Prob > chi2
D_log_*inst*	1.612	2	0.447
D_log_*taxcap*	1.877	2	0.391
D_log_*gdp*	2.139	2	0.343
All	5.628	6	0.466

Source: Author's calculations.