Unclassified **ECO/WKP(2012)75**

Organisation de Coopération et de Développement Économiques
Organisation for Economic Co-operation and Development **30-Oct-2012**

English - Or. English

ECONOMICS DEPARTMENT

ECO/WKP(2012)75
Unclassified

IMPROVING THE TAX SYSTEM IN INDONESIA

ECONOMICS DEPARTMENT WORKING PAPERS No. 998

By Jens Arnold

All OECD Economics Department Working Papers are available through OECD's Internet website at http://www.oecd.org/eco/Workingpapers

JT03329829

Complete document available on OLIS in its original format
This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

English - Or. English

ABSTRACT/RESUME

Improving the tax system in Indonesia

Indonesia has come a long way in improving its tax system over the last decade, both in terms of revenues raised and administrative efficiency. Nonetheless, the tax take is still low, given the need for more spending on infrastructure and social protection. With the exception of the natural resources sector, increasing tax revenues would be best achieved through broadening tax bases and improving tax administration, rather than changes in the tax schedule that seems broadly in line with international practice. Possible measures to broaden the tax base include bringing more of the self-employed into the tax system, subjecting employer-provided fringe benefits and allowances to personal income taxation and reducing the exemptions from value-added taxes. Similarly, broad-based investment credits would be a less distortive way to enhance investment incentives than selective tax holidays. Introducing a targeted, simplified tax regime for small and medium-sized enterprises, as currently planned by the government, could foster their integration into the tax system in the longer run, even if its short-run revenue potential is limited.

Upgrading tax administration has made substantial progress in Indonesia since 2002, although there is still scope to improve the training of tax officers and the administration's audit and litigation capacities, while strengthening internal control systems and enhancing the transparency of administrative decisions. The audit system could be further improved by allocating more tax audits on the basis of compliance risks.

In the natural resources sector, particularly in mining, there is a case for increasing the government's share of resource rents through higher tax rates imposed on these rents, as opposed to taxing revenues. This would imply a willingness of the government to bear a larger share of the exploration and development risk than heretofore, which Indonesia, with its improved access to international financial markets and a diversified resource portfolio, is now well placed to do. In the mining sector, a powerful rent tax regime with a large government take would serve the country better than export taxes and ownership restrictions that have been decided recently.

This Working Paper relates to the 2012 *OECD Economic Review of Indonesia* (www.oecd.org/eco/surveys/Indonesia).

JEL classification codes: F13, H21, H23, H24, H25, H26, H27, L78, O17, O23, O24, O25

Keywords: Indonesia, tax systems, tax administration, natural resource taxation, export taxes, tax exemptions, industrial policy

*****

Améliorer le système fiscal en Indonésie

L'Indonésie a beaucoup amélioré son système fiscal au cours de la dernière décennie, tant en ce qui concerne le montant des recettes collectées que l'efficience administrative. Néanmoins, les recettes fiscales restent faibles au regard de la nécessité d'accroître les dépenses consacrées aux infrastructures et à la protection sociale. À l'exception du secteur des ressources naturelles, l'augmentation des recettes fiscales doit passer avant tout par l'élargissement de l'assiette et l'amélioration de l'administration fiscale, plutôt que par une révision du barème d'imposition qui semble globalement conforme à la pratique internationale. Parmi les mesures possibles pour élargir l'assiette figurent l'intégration des travailleurs non salariés dans le système fiscal, l'assujettissement à l'impôt sur le revenu des personnes physiques des biens en nature et des indemnités versés par l'employeur, et la réduction des exemptions à la TVA. Dans le même ordre d'idées, l'introduction de crédits d'impôt généreux en faveur de l'investissement serait un moyen de stimuler l'investissement qui induirait moins de distorsions que des exonérations fiscales sélectives. La mise en place d'un régime simplifié et ciblé pour les petites et moyennes entreprises, actuellement envisagé par les pouvoirs publics, pourrait favoriser leur intégration dans le système fiscal à plus long terme, même si l'effet à court terme sur les recettes est limité.

La modernisation de l'administration fiscale a beaucoup progressé en Indonésie depuis 2002, bien qu'il soit encore possible d'améliorer la formation des agents des impôts et de renforcer les capacités de l'administration à mener des vérifications et à agir en justice, tout en consolidant les systèmes de contrôle interne et en accroissant la transparence des décisions administratives. Le système de vérification pourrait être perfectionné en fondant les décisions de contrôle fiscal sur les risques de non paiement.

Dans le secteur des ressources naturelles, et notamment les industries extractives, il y a lieu d'accroître la part des rentes de ressources revenant à l'État en relevant les taux d'imposition de ces rentes, au lieu de taxer les recettes. Une telle mesure impliquerait la volonté des pouvoirs publics de prendre à leur charge une partie des risques d'exploration et de mise en valeur plus importante qu'auparavant, ce qui est tout à fait à la portée de l'Indonésie, qui bénéficie aujourd'hui d'un meilleur accès aux marchés internationaux de capitaux et d'un portefeuille de ressources diversifié. Dans le secteur minier, un régime performant d'imposition des rentes, qui permette à l'État de percevoir une fraction élevée des recettes, servirait davantage les intérêts du pays que les taxes à l'exportation et les restrictions à la propriété qui ont été décidées récemment.

Ce Document de travail se rapporte à l'*Étude économique de l'OCDE de l'Indonésie 2012* (www.oecd.org/eco/etudes/indonesie).

Classification JEL : F13, H21, H23, H24, H25, H26, H27, L78, O17, O23, O24, O25

Mots clefs : Indonésie, système fiscal, administration fiscale, ressources naturelles, taxes à l'exportation, exonérations fiscales, politique industrielle

© OECD (2012)

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for commercial use and translation rights should be submitted to *rights@oecd.org***.**

Table of contents

Achievements and challenges for Indonesia's tax system 5
Getting the tax mix right 7
Improving the performance of individual tax instruments 8
Personal income taxes 8
Corporate income taxes 12
Resource taxes and royalties 16
Taxes on international trade 21
Consumption taxes 22
Property taxes 25
Improving the efficiency of tax administration 27
Bibliography 30

Boxes

1. Brazil's S*imples Nacional* tax regime 15
2. Taxation of natural resource extraction 16
3. Summary of recommendations: tax reform 29

Figures

1. Indonesia's tax revenues and GDP per capita 6
2. Indonesia's tax structure compared to OECD and ASEAN countries 7
3. Indonesia's tax rates in a regional comparison 9
4. Number of taxpayers over time 11
5. Corporate tax rates in regional comparison 13
6. FDI net inflows 14
7. Receipts from petroleum and minerals 17
8. Gas and oil versus mining value added 17
9. Average government take in oil and gas fiscal regimes 18
10. VAT revenue ratios, 2010 24
11. CO_2 emissions intensity by country, 2008 25

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

Improving the tax system in Indonesia

By

Jens Arnold[1]

Tax systems vary substantially across countries, and there is no clear guidance from the literature as to what constitutes an ideal set of taxes. The challenge is to design a tax system that keeps welfare- and growth-reducing distortions to a minimum, while achieving the desired revenue and social objectives. In this context a number of general lessons have emerged from the experience of countries in the OECD and beyond. Besides assessing the performance of Indonesia's tax system, one of the objectives of this paper is to draw on these lessons to point to ways in which it can be improved. The following sections will review the achievements of Indonesia's tax system and view the country's tax mix in international comparison, before discussing in turn taxes on personal and corporate income, resource sectors, consumption, property and international trade. A final section reviews ways to improve the efficiency of tax administration.

Achievements and challenges for Indonesia's tax system

Indonesia has come a long way in improving its tax system over the last decade, both in terms of revenues raised and administrative efficiency. This has improved the economy's performance by increasing the funds available for urgently needed public expenditure items and by easing the compliance burden on taxpayers. Going forward, the Indonesian authorities have formulated ambitious development targets, especially for enhancing the nation's infrastructure and expanding the social safety net, which imply significant financing needs. At the same time, the rapidly growing middle class will surely create a political demand for improvements in both social security programmes and public goods provision. Moving towards a greener economy will also add to expenditure needs. Financing the measures that will meet these objectives will require more public revenues, and this will be one of the principal challenges for the tax system in the years to come.

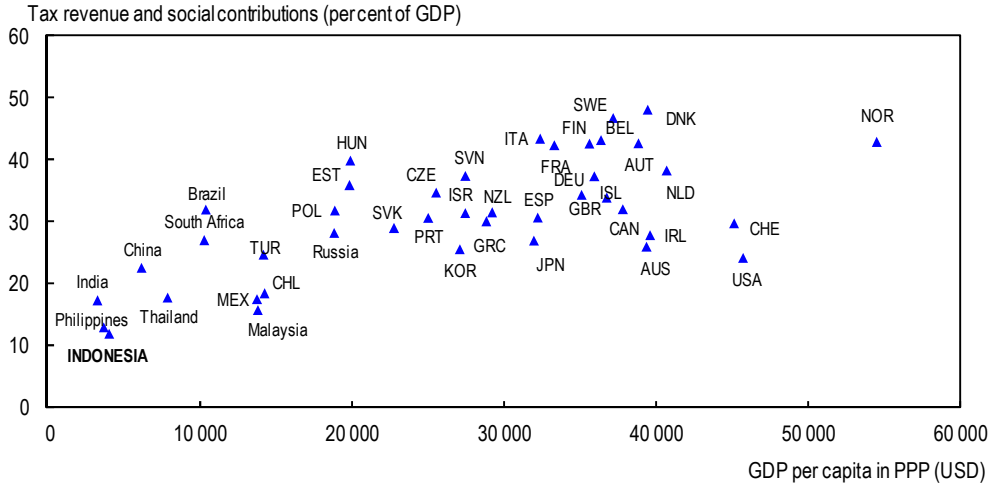
Indonesia's tax take is low compared to both regional and OECD peers: the ratio of general government tax revenues to GDP was 12.6% in 2011, slightly lower than in 2008, and one of the lowest in the G20. According to the 2013 draft Budget, the tax to GDP ratio is expected to remain broadly stable, despite an increase in VAT revenues. For comparison, several of the more developed ASEAN countries collected more than 15% of GDP in tax revenues in 2009, and the OECD average was at 33.8% of GDP excluding non-tax revenues (Figure 1). The IMF estimate of the maximum tax revenue that Indonesia

1. Senior Economist, OECD Economics Department. This paper is based on work originally produced for the OECD *Economic Survey of Indonesia* published in September 2012 under the authority of the Economic and Development Review Committee. The author thanks Andrew Dean, Robert Ford, Peter Jarrett, Annabelle Mourougane, Alistair Thomas, as well as officials from the Indonesian government, for their helpful comments and contributions to this paper. Anne Legendre and Mee-Lan Frank provided excellent research assistance and technical preparation.

could achieve by broadening the tax base and enhancing compliance at current rates is 21.5% of GDP (IMF, 2011a).

Figure 1. **Indonesia's tax revenues and GDP per capita**

2009



Note: Non-tax revenues are not included. Data are for 2008 for India and central government only for Malaysia.

Source: OECD Revenue Statistics, IMF Government Finance Statistics, Indonesia Ministry of Finance, Philippines Department of Finance.

Raising the tax take will involve substantial effort, especially in the context of widespread informality. But the experience of a number of countries has shown that substantial revenue increases are feasible with strong political will and an appropriate policy design. For example, in Peru the ratio of tax revenues to GDP rose from 13 to 17% over the last decade, while in Vietnam it rose from 19 to 24% over a similar period.

The challenge of mobilising additional tax revenues is not the same as raising tax rates. Simply increasing the burden on the current set of taxpayers may exacerbate existing distortions and perceived inequalities. As the tax take rises, further improvements in the efficiency of taxation become more pressing. There are three dimensions to this, which will be dealt with in the subsequent sections of this paper. First, the authorities should ensure that the tax mix, *i.e.* the distribution of tax revenues over different tax instruments, strikes a reasonable balance. Second, the design of each of the major tax instruments provides scope for efficiency-enhancing reforms, such as broadening the base and simplifying schedules. And last, but not least, it is important to look at the performance of the tax administration as a crucial determinant of the gap between tax policy and implementation.

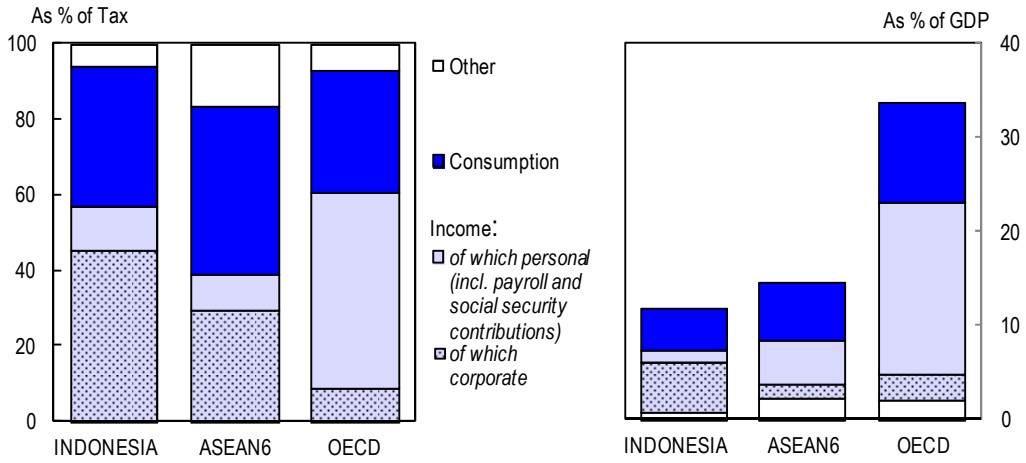
Fiscal decentralisation has been an important issue in Indonesia since the return to democracy in 1998. However, with the exception of property taxes, whose collection will move to the local level in 2014, fiscal decentralisation has been mostly accomplished through the expenditure side and a system of intergovernmental transfers, and will therefore not be dealt with here. Local taxes currently account for only 0.8% of GDP, with the remaining tax revenue being collected by the central government.

Getting the tax mix right

Governments have a wide variety of taxes at their disposal, with varying impacts on income distribution and the extent of growth-reducing distortions, through different effects on the drivers of growth. For example, labour taxes can influence labour force participation decisions, in particular for second earners, while investment decisions are affected by taxes to the extent that these change their after-tax returns, and even productivity can be affected (Arnold *et al.*, 2011). Different tax instruments are also more or less sensitive to increasing mobility of some kinds of capital and labour. Given the present trends of trade liberalisation, tax competition and regional integration, relatively immobile bases present greater potential for generating additional revenues, most prominently consumption, real estate and labour, although the top skill segment of labour may in fact also be highly mobile.

Key differences between Indonesia's tax structure and those of OECD countries – and to a lesser degree also those of ASEAN countries – include a strong reliance on corporate tax revenues and low personal income tax revenues (Figure 2). The preponderance of corporate income taxes is particularly visible when considered as a share of total income taxes; but even relative to GDP, Indonesia manages to raise almost twice as much corporate tax revenues as OECD countries. One possible explanation for this could be its natural resource wealth, for which the resulting rents generate higher corporate profits than elsewhere. Indeed, the oil and gas sector alone accounts for almost 20% of corporate tax revenues. No recent figures are available for other resource sectors, but assuming that the mining sector accounts for roughly another 5% of corporate tax revenues, as survey evidence from 2007 suggests, the adjusted revenue share from corporate income taxes would be close to the level prevalent in the other six ASEAN countries in Figure 2 (PWC, 2008).

Figure 2. **Indonesia's tax structure compared to OECD and ASEAN countries in 2010**



Note: ASEAN6 includes Cambodia, Laos, Malaysia, Philippines, Thailand and Vietnam. Australia, Japan and Poland are not included in the OECD average due to missing 2010 data.

Source: OECD Revenue Statistics, IMF WEO database, Indonesia Directorate General of Tax.

As regards taxes and levies on personal income, other countries in the region manage to raise a share of GDP three times higher than Indonesia. One reason for Indonesia's particularly large discrepancy with respect to OECD countries is the tiny role of social security contributions, a large item that has been steadily increasing in OECD countries, where they finance a strong degree of social protection including old-age pensions, publicly organised health-care systems, unemployment compensation and other social benefits. Another marked difference is with respect to trade taxes, which have constituted a fairly stable

4% of tax revenues (now 0.5% of GDP) in Indonesia in recent years. This is over four times the OECD average in GDP terms, although lower than for the six other ASEAN countries for which data are available.

The experience of OECD countries over the last three decades provides lessons regarding the link between taxes and growth. Empirical evidence suggests that some tax instruments are more harmful to economic growth than others, allowing the establishment of a ranking according to their "growth-friendliness" (Johansson *et al.*, 2008; Arnold *et al.*, 2011). This evidence is based on panel growth regressions at the aggregate level of OECD economies but is also confirmed by more micro-based analysis at the level of both industries and firms (Arnold *et al.,* 2011). The findings point to the comparatively benign effects of property and consumption taxes on economic growth, while, at the other end of the spectrum, corporate income taxes are typically less growth-friendly than personal income taxes. Potential explanations for these heterogeneous growth effects could be differences in mobility of the respective tax bases, although this conjecture cannot be tested with the available data.

Improving the performance of individual tax instruments

While choosing the right tax mix is important, it is also crucial to optimise each individual tax instrument given policy objectives. In fact, the relative merit of different taxes will in practice depend to a large degree on how well these are designed and implemented, and the OECD evidence on the growth ranking of different taxes should be interpreted as conditional on the average situation in OECD countries. Country characteristics such as institutional development matters for how well a given tax instrument will work in practice, and tax policy design should take such characteristics into account. A focus on taxes that are easy to administer, for example, is likely to be more relevant for Indonesia than for many OECD countries. Aiming for a tax system with few rates and few exemptions, and exploiting tax bases that are easy to observe may help in this regard.

Personal income taxes

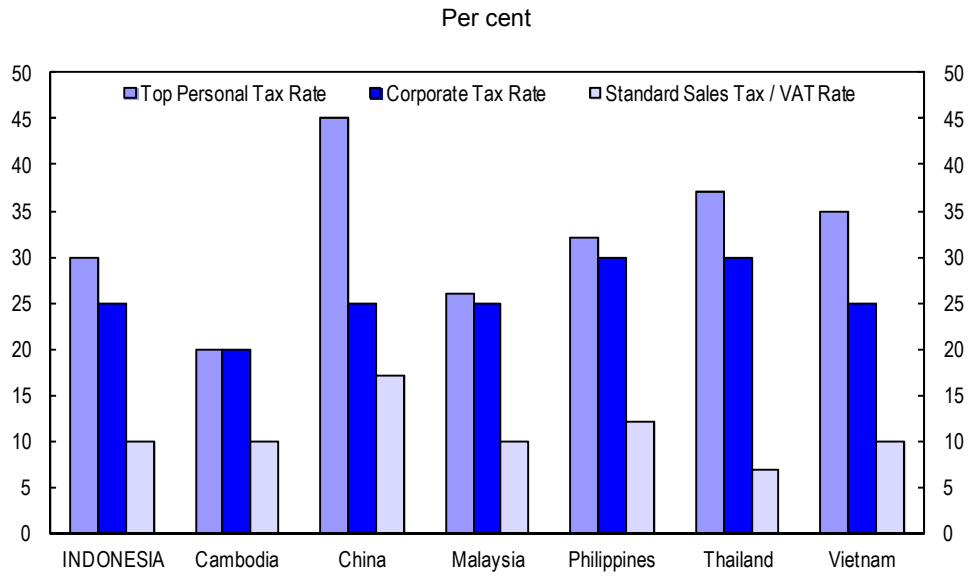
Indonesia generates low levels of revenues from personal income tax (PIT), which is to some degree a common feature among emerging-market economies. At 1.4% of GDP, however, Indonesia raises less than a third of the revenues that other ASEAN countries do and also less than the 1.9% average of lower-middle income countries. Given these low levels, personal income taxes, though in principle less growth-friendly than consumption taxes, provide scope to enhance tax revenues. To the extent that this can be achieved by broadening the tax base, the distortive effects of additional PIT revenues could be limited.

Indonesia operates a PIT system with a threshold income level and progressive rates. For a family with two working adults and two children, no taxes are due below an annual income of around IDR 40 million (currently around USD 4 300); for families with only one earner the threshold is IDR 26 million (currently around USD 2 800). Since annual market incomes of the top income quintile begin at around USD 3 500, personal income taxes concern less than 20% of all Indonesians (Nugraha and Lewis, 2011). For example, a married couple with two children and earnings of 100 and 67% of the average wage, which is a typical example used in the OECD's *Taxing Wages* publication (Gandullia *et al.*, 2012; OECD, 2012), the income tax rate is zero, although they are subject to social security contributions of 2% of wages for the workers' old-age compensation fund, JAMSOSTEK. PIT rates begin at only 5% for the first IDR 50 million of taxable income and move up progressively to a top rate of 30% for taxable income above IDR 500 million (about USD 44 000).

The rate schedule seems broadly appropriate. The fairly high threshold is reasonable as it avoids spending valuable administrative resources on enforcement activities concerning low-income individuals with low taxpaying potential and reduces the tax burden on households with unsatisfied basic needs. At the

same time, after having been reduced to 5%, the entry tax rate is low, which avoids creating strong disincentives to formalise and keeps the tax system progressive. At the other end of the spectrum, the 30% top marginal income tax is broadly in line with current practice in the region (Figure 3). There are good reasons to avoid high top marginal rates. Incentives to report income would be weakened. Empirical estimates based on Indonesian household surveys suggest that the declared income of higher-income groups is more responsive to changes in tax policy than is the case for low-income taxpayers, and that lower top marginal rates may lead to more income being reported to tax authorities (Yuwono, 2009). In addition, high top marginal rates are widely found to reduce risk taking and entrepreneurship.

Figure 3. **Indonesia's tax rates in a regional comparison**



Source: www.taxrates.cc.

Recent tax policy changes have increased progressivity for lower taxable incomes and reduced it at the top. Despite significant progressivity in the rate schedule, however, the only available empirical evidence suggests that the contribution of the tax system to reducing income inequality in Indonesia is only marginal (Nugraha and Lewis, 2011). This contrasts with the tax systems of 10 OECD countries for which relevant data are available, where taxes reduce income inequality considerably. In addition, OECD countries have more developed transfer systems, which further improve the distribution of disposable income. Why personal income taxes in Indonesia do so little to reduce income inequality despite a progressive rate schedule is hard to ascertain. One explanation may be tax exemptions that benefit the better-off, such as the fact that fringe benefits and allowances provided by employers are not treated as income and thus not subject to personal income taxation. These can amount to a non-negligible share of compensation packages, and their tax exemption creates incentives to over-exploit their use. Given that fringe benefits are typically more common for employees with higher incomes, taxing these allowances would help to increase the redistributive effect of personal income taxes and broaden the tax base. At the same time, given that the recipients of such benefits often have a marginal tax rate above the corporate tax rate of 25%, overall tax revenues would rise by taxing allowances at the personal level, even if this would imply the deductibility of fringe benefits from the corporate tax base. With regard to tax administration, there might also be differences in the effectiveness of tax enforcement across different income groups, but there is no consistent empirical evidence available to confirm this conjecture.

Indonesia operates a system of withholding taxes at various sources, notably for salaries, interest and dividend incomes, and some inter-company payments for royalties, rentals and services. Taxes withheld at source constitute prepaid tax for the income recipients that are credited against taxes due in the annual tax return. The exception is taxes withheld on interest income, including from listed bonds, where the 15% withholding tax for residents is deemed the final tax. Effectively, this means that Indonesia operates a sort of dual income tax system where interest income is taxed at a fixed rate regardless of the individual's marginal tax rate. Such explicitly schedular tax systems make progressivity harder to implement, but they have in practice proven more effective in securing tax revenues and making use of third-party information, such as information provided by financial institutions (IMF, 2011).

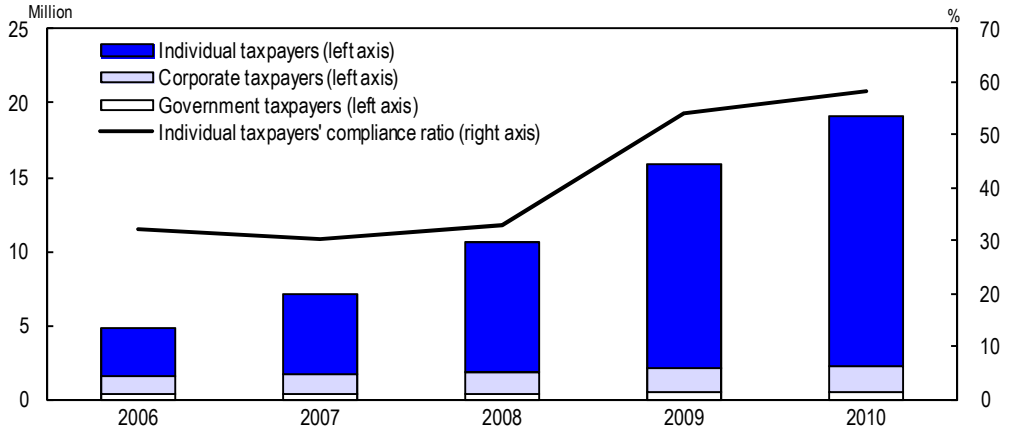
In light of the need to focus on administrative ease, Indonesia's system of withholding taxes seems useful in principle. However, the differential treatment of interest and dividend income for individuals whose marginal tax rate exceeds 15% distorts the asset-allocation choice between fixed income instruments and stocks, without any obvious corresponding benefit. Considering the withholding tax final for dividends, just as for interest income, would reduce this difference, although it would not fully eliminate it due to the double taxation of equity returns at the corporate and shareholder levels. In addition, it would make both administration and compliance easier. The alternative way to reduce the distortions in portfolio choice would be to require full accounting for both interest and dividend incomes in annual tax returns and taxing them at regular PIT rates. This would make it possible to tax the capital income of high-income individuals at higher rates and would even allow the elimination of the differential tax treatment of interest and dividend income through a full imputation system of corporate taxes paid at the shareholder level. However, the cost would be significantly increasing the complexity of the PIT system. An additional drawback of this approach would be that higher taxes on interest income for high-income individuals would increase the incentives for residents to move fixed-income investments abroad, where they may prove difficult to tax at all, even though they would in principle be subject to income taxation in Indonesia.

Broadening the tax base of personal income taxes

More than rethinking tax *policy*, Indonesia's efforts to increase PIT revenues should focus on tax *administration*. The principal challenge here is to expand the effective tax base, which is a declared objective of the Indonesian government. Survey data suggest that PIT revenues amounted to only 43% of the potential revenues that would be collected from a full enforcement of current tax rules (Yuwono, 2009). Fewer than 60% of taxpayers who are required to file an annual income tax return actually do so, and more than 80% of revenues are paid by 3% of households (Nugraha and Lewis, 2011). Yet, the tax authority (Directorate General of Tax, DGT) has made progress over the last few years in increasing the number of individual taxpayers and their compliance ratio for filing annual returns. These have increased from 3.25 million as recently as 2006 to almost 17 million in 2010 (Figure 4).

For dependent employees, the withholding system seems to perform well in collecting revenues, although less so in providing information to the tax administration, which often receives lump-sum payments from employers without a detailed breakdown of the taxpayers from whom these taxes were withheld. Tax administration could be simplified by lifting the requirement to file an annual tax return for employees with a single source of income and relying solely on the withholding system to assess their tax liabilities. This would reduce both the compliance burden for such employees and the workload of the tax administration. At the same time, employers should be encouraged to provide tax authorities with detailed accounts.

Figure 4. **Number of taxpayers over time**



Source: Indonesia Directorate General of Tax, Annual Report 2010.

Self-employed individuals, in contrast, are not captured by the withholding system, and no systematic approach exists for assessing their tax liabilities. As a result, a self-employed person may generate income for years without ever drawing the attention of tax officials, and this seems to be an area where there is substantial scope for broadening the base. Efforts are currently underway to bring such activities into the tax net through a census to be completed by November 2012, which effectively involves tax officials going from door to door to detect currently undeclared economic activities. These efforts seem useful, although it remains to be seen how well they perform in practice. They should, however, be supported by measures to make voluntary compliance easier, including the introduction of a single personal taxpayer number, possibly linked to an already existing number that individuals use on a regular basis. One such number is the single identity number (*Nomor Induk Kependudukan*) used on national identity cards issued to all Indonesian residents. At present, potential taxpayers need to take pro-active steps to apply for a tax identification number, and entrepreneurs that never do so are likely to remain outside the system.

An additional useful measure could be to make it easier for the self-employed to become taxpayers by reducing the penalties for past non-compliance of first-time taxpayers for a limited period. Currently, a flat penalty interest rate of 2% per month is charged on all unpaid taxes. This high rate may create strong incentives to remain undeclared for fear of being subject to large penalties on past due taxes if the first filing of a tax return may reveal a previously undeclared activity. For first-time tax filers only, explicit limitations on the penalties for past undeclared activities could be set. At the same time, increasing the incentives for voluntary compliance should not result in regular large-scale amnesty schemes that may cause moral hazard and keenly felt injustice to the compliant.

Another group of income earners that are hard to capture for the tax system are informal-sector employees. Since their income is often not declared to tax authorities by their employers, none of their salaries can be withheld at source. The size of the revenue losses from such workers is hard to estimate, but the high threshold for income taxation in Indonesia means that only informal workers earning substantially more than the average wage would be taxpayers if their employment status were formalised. Tackling informality is a long-standing issue in Indonesia, but the largest obstacles to formalising do not seem to come from the tax system. As discussed in the 2010 *Economic Survey*, generous severance payments, cumbersome business and dismissal procedures and high minimum wages are the principal deterrents to hiring workers on formal contracts. Tax wedges play a comparatively minor role in this context. Averaging 8.2% for a family of four at average wages in 2009, they consist only of social security contributions and compare favourably to the average of almost 30% in OECD economies (Gandullia *et al.*, 2012).

Expanding the PIT tax base involves not only an expansion in the number of taxpayers but also in revenues collected from current taxpayers. Evidence suggests substantial underreporting of taxable income, and the most significant revenue losses are likely to come from higher- and middle-income households. Reducing the scope of tax evasion and avoidance by affluent individuals should therefore be a high priority in improving PIT administration. A failure of elites to pay taxes may not only result in large revenue losses but also undermines the legitimacy of the tax system. In this context, the tax administration should consider making greater use of third-party information and employing indirect ways of assessing tax liabilities. The use of third-party information may include utilising data on assets from stock exchanges, customs administrators, the central bank or anti-money-laundering institutions. At a minimum, information on large assets or consumption items could be used as signals that can trigger tax audits even for individuals who are not registered taxpayers. The tax authorities have recently been authorised to use such information, although implementation is still pending. Deterrence also has a role to play, and a few high-profile cases with heavy sentences could send a clear signal. Indonesian tax authorities recently chose to denounce tax evaders publicly by communicating their names to the media, in addition to imposing legal sanctions including travel bans and prison sentences. The particular relevance of high-income individuals for both tax revenues and the perceived justice of the tax system also warrants setting up dedicated units within the tax administration, which Indonesia has successfully implemented through the establishment of a High Wealth Individuals unit, with technical assistance from the Australian Taxation Office. Establishing additional offices focused on affluent individuals beyond Jakarta should be considered.

Corporate income taxes

Indonesia currently generates around 45% of its tax revenues from corporate income tax (CIT). Assuming that a generalisation of empirical results on the "growth-friendliness" of different tax instruments to an economy like Indonesia's is valid, there may be reasons to be concerned about its comparatively large share of CIT. Indeed, CIT can curb firms' investment and productivity by reducing the after-tax profitability of investment projects and entrepreneurial risk-taking (Schwellnus and Arnold, 2010). As a result, they have been called "success taxes" (Gentry and Hubbard, 2006).

At the same time, two considerations are important to put the high share of corporate tax revenues in Indonesia into perspective. One is that the definition of CIT revenues in Indonesia includes a significant share of revenues from natural resources sectors, whose growth effects are quite different from taxes on other corporate profits, as will be discussed in the next section. Second, expanding alternative revenue sources, including from PIT, is likely to be more difficult in Indonesia than in the average OECD country with a more advanced tax administration. Indeed, the relative administrative ease of corporate taxation is a strong argument for not eroding CIT revenues until further progress has been made with other tax instruments. Even then it may turn out that, following the two recent statutory rate reductions from 30% in 2008 to a current level of 25%,[2] there may be no need to go lower.

Attracting foreign direct investment

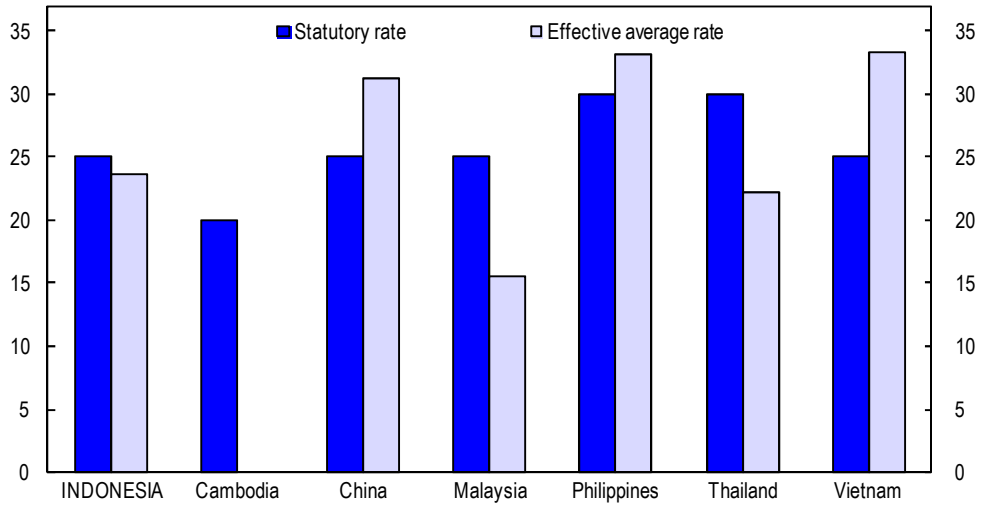
An argument to avoid a higher corporate tax burden than other countries in the region is potential competition for inbound foreign direct investment (FDI), which may have positive effects on productivity and wages in the domestic economy (Arnold and Javorcik, 2009; Sjöholm and Lipsey, 2006). There is little evidence, however, that Indonesia's corporate tax burden is much different from other countries' in the region. Its 25% statutory rate is well in line with that of neighbouring countries, although Thailand and

2. An additional 5 percentage points reduction is available under certain conditions through a provision that aims at fostering local capital market development. These conditions include at least 40% local listing and dispersed ownership for a number of years, but few firms seem to take advantage of this provision.

Malaysia have lower effective average tax rates (Figure 5). Effective tax rate calculations take into account differences in rates, bases (including depreciation allowances) and special regimes.[3]

Figure 5. **Corporate tax rates in regional comparison**

Statutory rates and effective average rates, 2012



Note: Data on the effective average tax rate in Cambodia are not available.

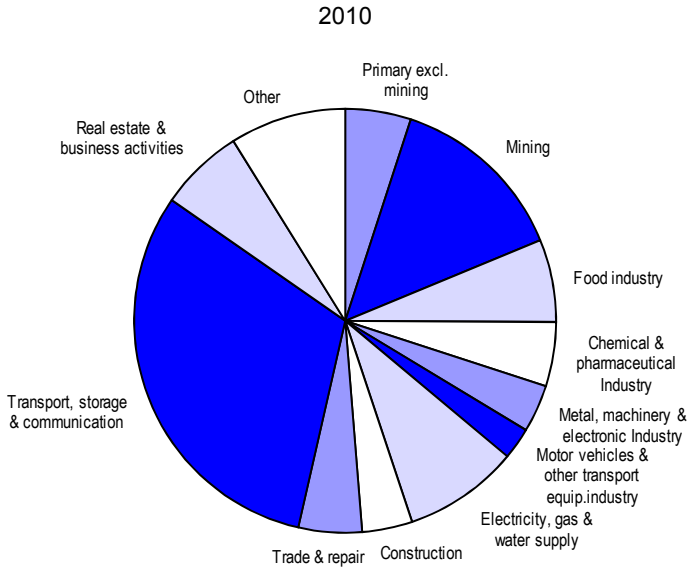
Source: Abbas, S., A. Klemm, J. Park and S. Bedi (2012), "A Partial Race to the Bottom: Corporate Tax Developments in Emerging and Developing Economies", *IMF Working Papers*, No. WP/12/28, International Monetary Fund, Washington, D.C. and www.taxrates.cc.

Indonesia's FDI inflows of almost 2% of GDP are only about half the level in the other six ASEAN economies in Figure 5. However, their increase between 2006 and 2011 compares well to this group, second only to Vietnam. This suggests that Indonesia is catching up with respect to its attractiveness for FDI. In 2011, Indonesia attracted nearly USD 19 billion in FDI inflows, which are spread across a number of sectors (Figure 6).

Tax rates are only one element in foreign investors' location decisions. Lipsey and Sjöholm (2011) mention difficulties in the business environment, government institutions, skills and infrastructure as the principal impediments to stronger FDI inflows to Indonesia, and empirical evidence suggests a generally lower elasticity of investment to taxes in developing countries than in developed economies (Klemm and van Parys, 2009). Most importantly, lowering taxes should not be misunderstood as a possible way to compensate mobile foreign investors for shortcomings in other areas because this may risk removing one source of political pressure from necessary policy reforms in those areas while at the same time reducing tax revenues.

3. The effective tax rates in Abbas *et al.* (2012) are calculated as the average effective corporate income tax rates paid by a hypothetical equity-financed investment in plant and machinery, assuming a pre-tax rate of return of 20%.

Figure 6. **FDI net inflows by sector**



Source: Bank Indonesia.

Tax incentives to foster investment

Following consultations with a number of industries, the Indonesian government has recently approved a number of corporate tax incentives aimed at supporting "cluster" industries deemed to have a strategic role for the national economy and fostering local development. These incentives are available in principle to 16 sectors, but individual projects become eligible only after receiving the approval of the chairman of the investment board BKPM (PWC, 2011). In addition, the government has announced a new set of temporary corporate income tax holidays over three years for new corporate taxpayers investing at least IDR 1 trillion (USD 105 million) in so-called "pioneer industries", including base metals, oil refining, textile machinery, alternative energy and telecommunications equipment.

Such measures erode corporate tax revenues, distort corporate taxation and create opportunities for policy capture. To ensure the transparency of tax policy, a public reporting of tax expenditure estimates should be introduced as a routine exercise, supplemented by periodic evaluations of particular measures. In addition, allowing discretionary decisions by government officials for specific projects on a case-by-case basis should best be avoided, as it creates incentives for policy capture and hence a particular challenge for institutional capacities. If investment promotion through tax incentives is considered necessary, this is typically better achieved by offering investment tax credits rather than exempting profits, and by doing so on a broad basis to tie tax expenditures tightly to the policy objective of raising investment. Investment tax credits are currently available for any business activity in any of 25 designated economic development zones (*Kawasan Pengembangan Ekonomi Terpadu*, KAPET). By contrast, outright tax holidays are generally viewed as the worst form of incentive, as they run the risk of entrenching corruption in the tax administration and may make it difficult for the tax authorities to evaluate the foregone revenues (IMF, 2011). Therefore, the Indonesian government should reconsider the recent set of incentives and tax holidays for selected sectors and investment projects.

A specific tax regime for small and medium-sized enterprises

The Indonesian authorities are planning to offer simplified tax treatment for small and medium-sized enterprises (SMEs). Currently, most SMEs are informal and do not pay any corporate taxes. Many keep no formal accounts. Enforcing SME tax payments runs the risk of placing a significant burden on local tax authorities without much revenue potential. At the same time, small enterprises often become bigger over the years, and from a longer-term perspective there may be a case for integrating them into a simplified targeted tax system early on. Given the need to allocate scarce enforcement capacities wisely, voluntary compliance will have to be the main pillar of such attempts, whence the need to reduce the high compliance burden faced by SMEs through simplified procedures and tax schedules. Many countries have designed simplified tax regimes for SMEs. One example of such a scheme is Brazil's *Simples Nacional* regime (Box 1). It should be kept in mind, however, that simplified SME tax regimes have a tendency to create additional distortions as they are often based on revenues or presumptive income, causing disincentives for using intermediate inputs, and they discourage firms from growing above the threshold for graduating into the regular tax system.

Box 1. **Brazil's *Simples Nacional* tax regime**

In 2006, the Brazilian government introduced a simplified tax and regulation system for micro and small companies, called *Simples Nacional*. The legislation was revised in 2008 to further simplify the process. The rationale was to lower tax compliance costs for small firms and encourage them to move into the formal sector.

The *Simples Nacional* combines a range of taxes in a single monthly collection. Taxes that are included are the most important federal taxes and contributions. Micro businesses are defined as individuals or corporations with gross revenue less than or equal to BRL 240 000 (USD 120 000) in each calendar year. Between BRL 240 000 and BRL 2.4 million, the firm is considered small. Firms also have to comply with certain features regarding their ownership of other companies and the activities they are engaged in. Participation in the system is optional, and firms have to apply through a website. All states and municipalities must offer *Simples Nacional*. However, small states can adopt a different enrolment threshold for local tax collection. Municipalities must adopt the same threshold as their state.

In addition to *Simples Nacional*, a special programme encourages individual entrepreneurs (IEs) to become formal. IEs must first register with *Simples Nacional*. They cannot earn more than BRL 36 000 (USD 18 000) per year, must work alone or have only one employee, and cannot own or be a partner or manager of another company. They can work in most sectors, including trade, industry and a range of services. The programme grants a number of advantages. IEs are recorded in the National Register of Legal Entities, which facilitates the opening of a bank account, loan applications and issuance of invoices. IEs benefit from a simplified tax system. They are exempt from federal taxes and pay only a fixed monthly amount. These revenues are revised annually in line with changes in the minimum wage. In return, IEs have access to benefits such as a retirement pension, sickness and maternity leave and insurance for workplace accidents.

Since its inception, participation in *Simples Nacional* has been steadily increasing. Because the threshold for enrolment is fairly high, around 70% of all firms pay tax under this regime. Tax collection through the simplified tax system has displayed a similar upward trend, except during the global financial crisis.

Simples Nacional is reported to have contributed to the observed decline in informality. According to official data, the size of informal labour markets declined steadily to 49% of total employment in 2010, compared with 52% in 2006. However, it remains hard to disentangle the effect of *Simples Nacional* from that of buoyant economic performance. There is also evidence that the IE programme has encouraged unregistered workers to become entrepreneurs.

Source: *Simples Nacional*'s website: http://www8.receita.fazenda.gov.br/SimplesNacional.

The government's current plans include imposing a 2% annual turnover tax for businesses with revenues of between IDR 300 million and IDR 4.8 billion, in addition to establishing a 0.5% tax on

enterprises that have monthly revenues below IDR 300 million. As regards enforcement, these plans are going to be supported by the currently ongoing tax census. The combination of a low tax rate, simplified procedures and decisive action to enforce compliance seems a reasonable way forward, even if it is clear that the implementation challenges ahead are still substantial.

Resource taxes and royalties

One of Indonesia's particular characteristics is its rich endowment of natural resources, and the rents associated with the extraction of exhaustible resources are an obvious tax base. Taxes on natural resource extraction stand apart from all other tax instruments for a variety of reasons (Box 2). In Indonesia, the aggregate oil, gas and minerals sector generates approximately 30% of government revenues, summing both tax and non-tax revenues, which is very significant from a revenue perspective, although far from the maximum in international comparison (Figure 7).

Box 2. **Taxation of natural resource extraction**

Extraction of natural resources typically generates economic rents in the form of returns that far exceed the remuneration of capital and risk-taking in other sectors. These excess returns represent a unique case of a tax base that can be taxed without generating distortions. The extensive literature on the topic is mostly centred on issues of how to implement such taxes in the face of a number of specific sector characteristics, including significant uncertainty, high sunk costs, long payback periods and high output price volatility (Daniel *et al.*, 2009).

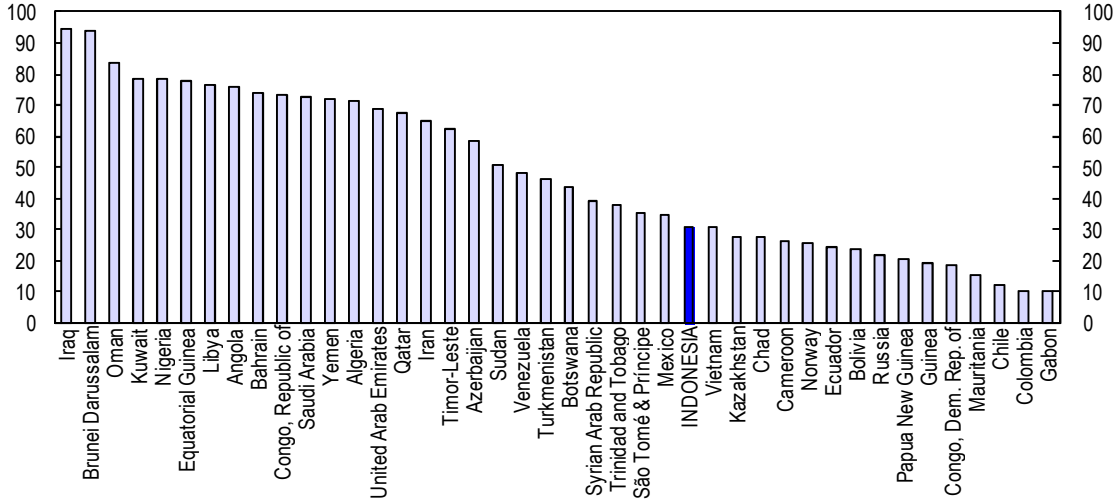
Two of the most commonly used approaches to natural resource taxation include output-based tax instruments such as royalties, and resource rent taxes on profits. The principal difference is that rent taxes take the costs of the extracting companies into account, while royalties do not. Since a significant part of the risk in resource extraction is related to costs, a rent tax means that the government accepts a larger share of the risk, in return for a potentially larger government take. The base for levying royalties is typically either production revenues (in the case of Indonesian schemes) or quantities. Royalties generally do not take into account the cost of exploration and may thus discourage investment in exploration and development of new mineral deposits. As compared to rent taxes, royalties are more likely to influence the decision to produce or not, because they are insensitive (or less sensitive) to costs. As a result, royalties have a tendency to deter investment in marginal projects and to encourage early abandonment of those at the end of their productive lives. Royalties have also been criticised for their regressive character: they tend to overtax projects with high costs and accordingly low profitability.

In contrast, a rent tax attempts to set the tax base as closely as possible to the resource rent. In one theoretically clean form, called a Brown tax, this would effectively make the state a silent partner in the project (Brown, 1948). The state would pay out cash to the private company in years of negative profits and get a positive profit share in years of positive profits. The idea of the government paying out cash in the early years when expected profits are naturally negative has been unpopular in most countries (with the exception of Norway). Therefore, a modified version of a rent tax typically eliminates the cash payout from the government in the early years in return for tax revenues kicking in only once a cumulated threshold rate of return has been met. Israel's recent offshore gas regime is such a scheme (OECD, 2011b). The threshold rate in Australia's petroleum resource rent tax is calculated as a risk-free rate of return plus a risk premium. This approach tends to make a warranted separation between the profits that result from capital and "normal" entrepreneurial risk, which should be taxed at rates close to the standard corporate tax rate, and the economic rent that should be taxed at higher rates.

There is a growing consensus in favour of rent taxes rather than royalties, which are typically treated as non-tax revenues in national accounts. Alaska, China and Algeria have introduced profit-based taxes in recent years (van Meurs, 2009; Johnston, 2008). Australia's new mineral resource rent tax (MRRT) on coal and iron ore operations, along with the extension of the petroleum resource rent tax, are further examples.

Figure 7. **Receipts from petroleum and minerals**

Per cent of government revenues (average 2000-07)

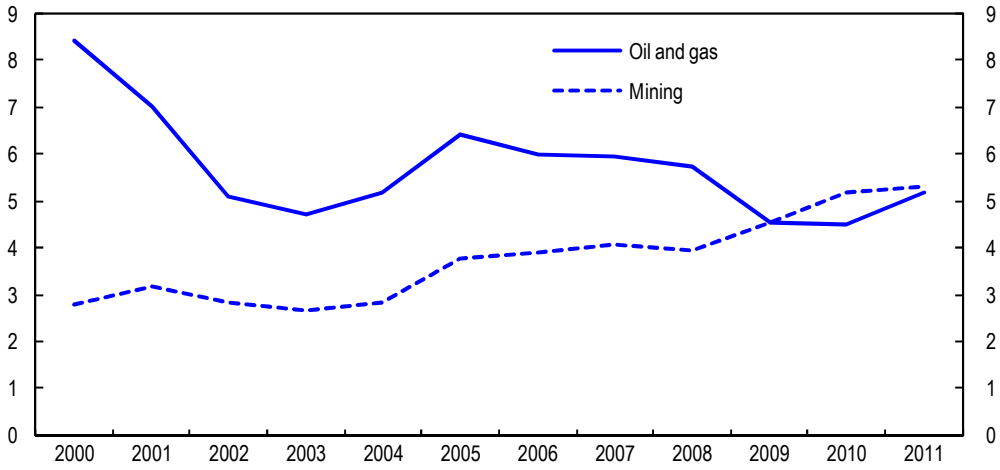


Source: International Monetary Fund (2011), "Revenue Mobilization in Developing Countries", *Policy Paper*, Fiscal Affairs Department, International Monetary Fund, Washington, D.C.

Indonesia is one of few countries where both oil and gas and also mining contribute significantly to GDP. Currently their relative importance for the national economy is about equal at slightly above 5% of GDP each. The trend over the last decade points to oil and gas losing and to the mining sector gaining weight (Figure 8). The two broad sectors have separate and quite distinct fiscal regimes. In addition, there are considerable differences in the tax treatment of different projects even within these sectors.

Figure 8. **Oil and gas *versus* mining value added**

Per cent of GDP



Source: Statistics Indonesia.

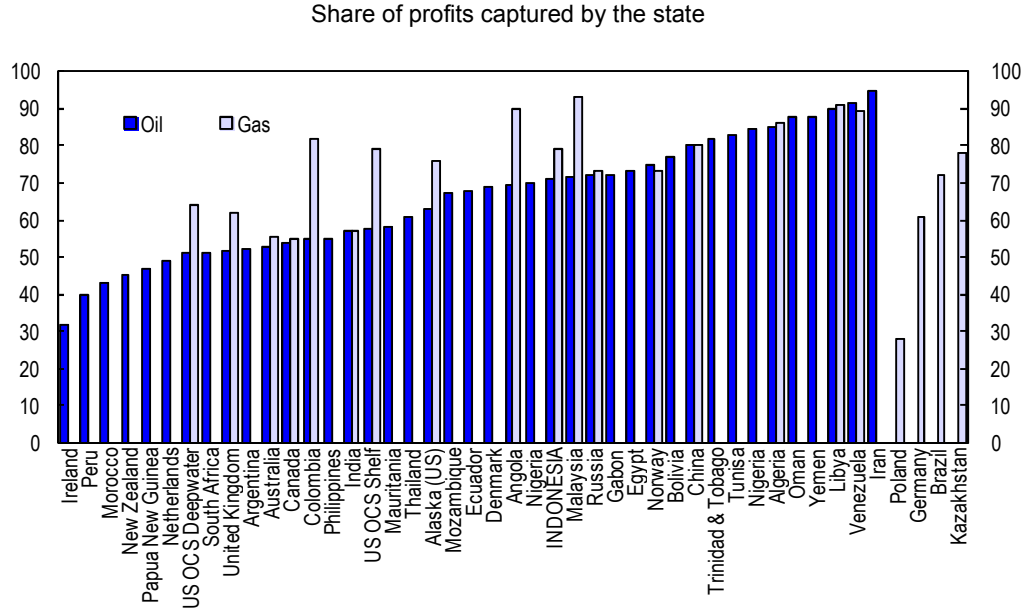
Oil and gas sector

In the oil and gas sector, Indonesia's fiscal regime is largely based on production-sharing contracts (PSCs). These split the extracted oil between the government and the contractor according to an after-tax

share, typically around 85/15 or 65/35 for marginal oil fields. Gas PSCs usually involve a 70/30 split but are otherwise similar to oil PSCs. Under this kind of arrangement, the contractor bears the entire risk of discovery and development, and no costs are recoverable if a project turns out unsuccessful. In the production years, the contractor has the right to claim reimbursement for certain current-year operating costs, depreciation of capital equipment and losses carried forward, although some contract elements put an effective limit on cost recovery (so-called first-tranche oil). In 2008 and 2009, the government set an additional global ceiling to cost recovery across all projects in the national budget, which was widely blamed for poor results in the 2008 and 2009 bid rounds and was later abandoned. However, a number of items were explicitly labelled non-recoverable in a 2010 regulation, and costs for exploration and development incurred before the beginning of production continue to be entirely non-recoverable. Specific investment credits are available as incentives for marginal fields with a rate of return below 15%.

Assessing the exact split in profits that the different and complex oil and gas tax regimes generate is not a straightforward task. Available estimates of the average government take (GT) of Indonesian PSCs vary, and not all are in the public domain. Johnston (2008) estimates Indonesia's average GT at 72% for the petroleum sector, noting that it has declined by more than 10 percentage points over 1998-2007. This places Indonesia 26th of the 45 petroleum tax regimes examined in his study, ordered by increasing GT (Figure 9). The average GT in the Indonesian gas sector is estimated at around 82% (Agalliu, 2011). Given that some countries have higher government takes than Indonesia, there may be some scope for increasing it, although there is much uncertainty surrounding these comparisons.

Figure 9. **Average government take in oil and gas fiscal regimes**



Source: Agalliu, I. (2011), "Comparative Assessment of the Federal Oil and Gas Fiscal Systems", U.S. Department of the Interior, Bureau of Ocean Energy Management, Herndon, VA, for oil, and Johnston, D. (2008), "Changing Fiscal Landscape", *Journal of World Energy Law & Business*, Vol. 1, Iss. 1, pp. 31-54, (by permission of Oxford University Press) for gas.

It is questionable whether the Indonesian government would be able to raise its take without greater recognition of the costs involved in exploration and development. Two countries that persistently rank higher than Indonesia with respect to the GT in both oil and gas, Libya and Algeria, have made steps towards reducing the risks to the private sector by moving towards a rent tax (Box 2). Given the declining trend of oil production in Indonesia, the exploitation of marginal fields is likely to become more important in the future, and these fields involve more risk than those already exploited.

At the time when the current PSC scheme was developed, reasons for the state's reluctance to take into account exploration and development costs may have included a desire to smooth revenue streams in the light of financing constraints. Today, however, Indonesia's solid and diversified economy, and constantly improving access to international financial markets may be sufficient reason to rethink some of these choices. Indonesia is better placed to bear fiscal risk than in the past, and its ample portfolio of natural resource projects presents scope to diversify such risks. Financial markets present an alternative way to smooth revenue streams. The cost is most likely lower than the tax revenue that the country currently loses for its reluctance to recognise costs and risks of exploration and development. The Indonesian government should consider allowing for recovery of exploration and development costs in future PSCs and investigate partial cost recovery even in the case of unsuccessful drillings. While remaining within the current PSC framework, this would move the fiscal regime closer to a taxation of rents and strengthen incentives for exploration and development at the same time, consistent with the government's declared goal to raise the lifting targets for petroleum and natural gas. The amount of risk that has to be assumed by contractors could also be reduced if the government commissioned and published basic geological and seismic data on new acreage before offering it for development (Collier, 2009).

Current PSCs also have provisions for one-off bonuses to be paid upon signature, the start of production or above certain threshold levels of accumulated production. Such contract elements effectively amount to borrowing against future resources and usually offer fairly unfavourable terms of borrowing (Collier, 2009), which creates a strong case for not including such clauses in future PSCs.

Libya – which also uses PSCs – has had positive experiences with "Dutch auction" bidding processes in which companies presented sealed-envelope bids of how small a share of production they would accept. This has resulted in government takes of around 95% (Johnston, 2008). Auctions are particularly helpful to mitigate the acute asymmetry of information and can help to limit the scope for corruption that exists in negotiated deals (Collier, 2009). Indonesia should consider using "Dutch auctions" as an allocation mechanism for future PSCs to raise the government take.

Mining sector

The fiscal regime facing the mining sector is governed mostly by provisions in individual mining contracts and licenses that override current law, although a new mining law was implemented in 2009 with the intention of improving the transparency of rules governing the sector. Under current practice, holders of mining licenses (IUPs) are typically required to pay *ad valorem* royalties, with rates varying between 2 and 7% of revenue, according to the mineral produced. In addition, there are land taxes based on the surface area mined. Royalties and land taxes are deductible from taxable income, which is subject to the standard 25% corporate income tax. For licenses in state reserve areas (IUPK), an additional 10% tax is levied on net profit, which is not deductible from taxable income. Operating expenses can be deducted from taxable income with a five-year loss carry-forward provision, while exploration and mine development expenses can be capitalised and are subject to depreciation.

Given that royalties and land taxes are credited against taxes due, the effective income tax burden is determined by either the corporate tax rate of 25% or by the royalties based on turnover, whichever is higher. Some additional levies, local taxes and indirect taxes have to be paid by mining companies. In 2010, the effective tax rate on profits of 25 large mining companies for which annual accounts are publicly available was only 40%.[4] The mining sector contributed around 6% to total tax revenues in 2010, which is only slightly above its share in GDP. Adding non-tax revenues to this calculation, the ratio rises to 6.3%. In other words, the fiscal burden on the mining sector is not far from the average burden paid by all other

4. This information was extracted from the ORBIS database published by Bureau van Dijk.

sectors, which seems too low given that this is a sector where resource rents accrue. Yet, due to a lack of internationally comparable data for the government take in mining activities, it is difficult to put the tax burden on Indonesian mining activities into international perspective.

In the early years of a project when profits are negative or the five-year loss carry-forward rules apply, royalties are due despite the absence of a positive rent. As in the case of oil and gas bonuses, these early royalties amount to government borrowing against future profit shares, and the implicit interest charged on such deals is likely to be higher than the terms available on financial markets. In order to shift towards taxation of rents, turnover-based royalties should be reduced or abandoned. Once the corporate tax base turns positive and resource rents accrue, such rents should be taxed at a higher rate than the standard corporate tax rate (Box 2). One fairly easy step in this direction would be to extend the non-deductible 10% net profits tax on mining activities in state reserve areas (*IUPK*) to the standard mining licenses (*IUP*), with loss carry-forward extended to recognise all exploration and development expenses. If deemed necessary, this rate could be raised later.

Moving towards a mining tax regime based on taxing resource rents could be achieved in several ways. The cleanest and most complete overhaul would include doing away with the current royalty system altogether, and moving instead towards taxing profits at a high rate, possibly once a threshold level of accumulated profitability is reached. This would get the incentives right by ensuring full consideration of costs, including those for exploration and development. Implementing such a shift may involve challenges, as the recent experience of Australia has demonstrated, but these challenges are more severe for smaller companies than for the large mining companies that account for the bulk of public revenues from the sector. Alternatively, if abandoning the current royalty system is deemed difficult to implement, there may still be scope to improve both the current system and in particular to raise the government take in the mining sector. Israel, for example, has opted to maintain an existing royalty system and complemented it with a threshold-based rent tax for which all project costs are taken into account. Such a system would maintain the borrowing feature of royalties being due while rents are negative, which may be sub-optimal, but it would shift the tax base onto rents once these accrue. Royalty payments should be taken into account for calculating the accumulated profitability threshold, so that *ex post* taxes paid will depend fully on the size of the resource rent.

Political pressure for bringing more of the benefits of Indonesia's resource wealth to the population at large is visibly on the rise. Talk of benefit-sharing intensified last year in parliament during a three-month strike at a large foreign-owned gold and copper mine, which ended with a 37% pay hike for workers. The existence of such political pressure is understandable and justified, given the evidence of low effective tax burdens on Indonesian mining operations, but the instrument to improve the benefit-sharing should be carefully chosen. Taxing the economic rent at higher rates than at present would be the most efficient way to achieve this, while turnover-based royalties and export taxes distort efficient resource allocation and hamper long-term productivity growth (see section on international trade taxes below). The export ban of selected raw minerals which became effective in May 2012, with an exception for miners that plan to build local processing facilities, is economically akin to an infinitely high export tax rate and is undesirable. The recent debate about export taxes and bans also highlights a significant degree of regulatory uncertainty, which is not conducive to extracting higher tax revenues from mine operators while continuing to attract foreign investors and expertise. The public at large would probably be best served by an efficient tax regime for resource sectors to ensure that the largest part of resource proceeds accrues to the state, while otherwise creating as little distortion as possible in resource-based activities. A shift towards rent-based taxes would bring sufficient flexibility to the system that there would be no need to revisit the tax regime in the case of unexpected profit increases.

Taxes on international trade

In comparison with OECD economies, Indonesia's revenues from taxes on international trade transactions, which amount to 0.5% of GDP, stand out as very high, although lower than in many countries in the region. Traditionally, developing economies have relied to a greater degree on taxing international trade than developed economies, not least because cross border flows are comparatively easy to tax. The global trend towards trade liberalisation has therefore presented challenges for public finances in many developing countries, as tariff revenues have had to be replaced by alternative sources. In this respect, Indonesia and other ASEAN countries have come further than developing economies in other regions of the world. For the average developing economy, trade taxes still constituted around 16% of tax revenues between 2005 and 2009, as compared to 4% for Indonesia. The rates of import duties have fallen in Indonesia, conferring benefits on consumers as well as on firms relying on imported intermediate inputs. Amiti and Konings (2007) estimate that a 10 percentage points reduction in input tariffs has raised the productivity of Indonesian firms that use imported inputs by as much as 12%.

At the same time, almost half of Indonesia's trade taxes are levied on exports. The government plans to make further use of export taxes, as evidenced by the recent decision to levy a 20% tax on selected mineral ore exports, and the introduction of export taxes on crude palm oil and cocoa. Indonesia's export taxes on commodities have been designed with several objectives in mind, including price stabilisation, food security and fostering the development of downstream processing industries. In the case of mining, an additional objective is also to slow the pace of depleting non-renewable resources and polluting extractive activities. Although compliant with multilateral trade agreements, export taxes typically divert trade and have therefore been prohibited in many regional trade agreements (Piermartini, 2004). On the other hand, from the perspective of an individual country that has market power in a given export good, as in the case of Indonesian palm oil exports, export taxes may generate terms-of-trade gains and thus higher real incomes at the expense of foreign buyers.

Export taxes confer a competitive advantage to domestic processing activities by keeping the domestic price of the taxed good below the world price. This comes at the expense of the upstream commodity producers, who receive the lower price. As a result, downstream processing industries can develop even when their costs are otherwise higher than in other countries. By moving production away from the lowest-cost location, export taxes reduce overall economic efficiency at a given point in time. From a dynamic perspective, this picture may change if there are learning effects, meaning that the downstream activity reaches competitive levels of productivity after some time. Under the assumption that such dynamic effects exist, export taxes can enhance economic efficiency when used as a temporary measure.

A number of countries have pursued development strategies whose underlying economic rationale included infant-industry arguments. While these strategies have occasionally succeeded, the overall evidence is rather disappointing. Where they have worked, the basic framework conditions for the industries concerned were typically favourable – including the quality of infrastructure, access to other inputs such as reliable energy supplies, skilled labour or the quality of public governance. Some of these features, however, may well explain why processing industries are currently not located in Indonesia, and addressing these issues will be a precondition for the development of a successful and efficient processing industry – with or without an export tax. While the payoff from policies aiming to improve these structural conditions is high and qualitatively certain, a strategy based on granting a temporary cost advantage is risky – and may well fail unless the deeper structural weaknesses are resolved. Levying export taxes runs the risk of creating an inefficient processing industry whose survival is contingent on making the export taxes permanent, resulting in rent-seeking and obvious costs for economic efficiency.

Since export taxes are levied on export revenues, they also distort production decisions in the affected commodity sectors, just as revenue-based royalties do in the case of natural resource sectors. For the mining sector, an alternative strategy to the use of export taxes would be to minimise the policy-induced distortions and levy a high tax on the resource rents instead. The benefits of such a strategy are likely to exceed the uncertain dynamic benefits of an export tax. For other commodity sectors like cocoa and crude palm oil, the possible downstream benefits of an export tax should be weighed against the expected revenue losses inflicted on the two commodity sectors themselves. Whether the net benefit of such a shift is positive should not be taken for granted. Merely observing increased output in processing industries is not sufficient evidence for judging the success of the overall strategy. At the same time, it should be acknowledged that making progress on the structural deficiencies is harder and takes more time, a consideration that may open the door to temporary export taxes as an alternative second-best instrument to be used in the meantime. If this is the strategy to be pursued, however, the cost effectiveness and the economy-wide effects of export taxes will need to be carefully monitored while at the same time pushing forward with urgently needed structural policy changes.

Consumption taxes

Consumption taxes, and in particular a well implemented value added tax (VAT), usually create far less distortions than taxes on factors of production like the PIT and CIT. Consumption is typically a less mobile tax base than labour and capital, and consumption taxes are neutral to saving as long as tax rates are expected to remain constant over time. Many developing countries that have in the past relied strongly on import taxes have replaced them by consumption taxes over recent decades. While consumption taxes have often been criticised for their regressive effects on income distribution, the debate on this issue has not reached a clear conclusion. Zolt and Bird (2005) note that in developing countries "the evidence is...that the VAT is likely on the whole to be less regressive than the trade and excise taxes it has replaced", a finding that is also supported by Gemmell and Morrissey (2003). At the same time, much of the regressive effect of a VAT disappears if one takes a life-cycle view rather than looking at a snapshot of the income distribution (Caspersen and Metcalf, 1994). Given the substantial revenue potential of a VAT, its distributional impact should be assessed jointly with the expenditure side, because, if coupled with higher social expenditures, the redistributive effects of VAT-financed spending increases may be progressive.

Indonesia has two kinds of consumption tax: a general VAT that accounts for about 80% of consumption tax revenues; and a number of specific excise taxes on consumption items considered luxury goods. VAT revenues relative to GDP have been fairly stable over the last decade and stood at about 3.4% of GDP in 2010. This is more than in Malaysia and the Philippines and similar to the situation in Thailand; Vietnam and China raise substantially more revenues from VAT (5.8 and 7.1% of GDP, respectively).

Value-added taxes

Indonesia's VAT seems well designed in general, combining a number of desirable features. It is levied at a single rate of 10% on domestically added value and on imports. Taxing value added is – unlike a sales tax – in principle neutral with respect to the organisation of the value chain, because it taxes only the additional value created at each step. A single rate facilitates administration and avoids distorting individual consumption decisions. Many OECD countries apply lower tax rates to consumption items that are considered basic and therefore more likely to be consumed by low-income households, but such differentiated VAT rates have generally proven to be rather poor redistribution tools because low-rated goods are often consumed heavily by high-income households as well, thereby creating extensive leakage.

Indonesia applies fairly high exemption thresholds for SMEs (IDR 600 million annually, equivalent to USD 65 000), which may be justified on the grounds of the high compliance costs they face and because it allows the tax administration to concentrate its efforts on taxpayers with higher revenue potential. High

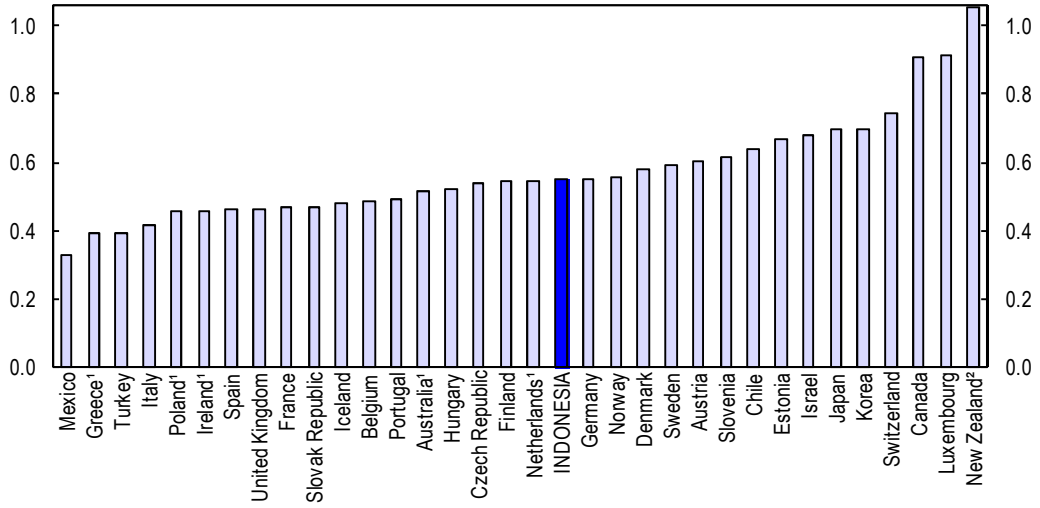
thresholds are also an effective way to increase the progressivity of VAT because they confer a competitive advantage on small retailers and their customers, who are likely to be less well off. High thresholds also reduce the incentives for SMEs to remain informal. At the same time voluntary registering should always be easy for SMEs with a high intermediate input content that wish to opt into the VAT system. In fact, trade in intermediate goods may create virtuous circles if a trader's customers are registered for VAT, thus making it advantageous for the trader to register as well (de Paula and Scheinkman, 2006).

How efficient a VAT is in reality depends crucially on whether the tax base is broad, including all consumption, and whether the administration is efficient. VAT bases are often narrowed by exemptions, which create a break in the credit chain because the producers of VAT-exempt goods and services – and hence also all downstream activities – are unable to claim refunds on VAT paid at earlier production stages. Exemptions go against the spirit of a VAT by taxing intermediate transactions rather than just value added and create distortions that may go well beyond the exempt sectors themselves. They also take away the mutual interest of transacting parties for the other party to comply with VAT, which further reduces compliance incentives. Indonesia has exempted a considerable number of activities from VAT, including many food items and farm products, animal feed, coal and other minerals and electricity consumption at quantities usually demanded by residential consumers. Hotels, restaurants and entertainment services are also VAT exempt but subject to specific local sales taxes, which are often higher than VAT rates. In addition, Indonesia excludes a number of sectors entirely from VAT, like many other countries, on the grounds that taxing them would be difficult to administer (financial services) or that they are meritorious (education, health and cultural services). Postal services, broadcast advertising, public transportation, employment and training services are also exempt, and in June 2012, the government further exempted public transportation services from VAT. In the oil sector, contractors are typically exempt from VAT on approved capital items and cannot claim VAT reimbursements on inputs (PWC, 2011). This favours the use of imported intermediate inputs on which no VAT is levied in the exporting country and hampers the integration of the oil sector into the domestic economy. The same holds for mining activities (whose output is VAT exempt), with the exception of capital equipment in those cases where firm-specific contracts provide VAT exemptions that override general tax law. Finally, all economic activity on the island of Batam is VAT exempt. This island with 1 million inhabitants acts as an offshore manufacturing centre for Singapore, which is only 20 kilometres away. There have been repeated reports that this exemption is difficult to administer and creates leakage, although the extent of this is hard to evaluate (Brondolo *et al.*, 2008).

As in most other countries that apply a VAT, exports are subject to a zero rating, but exporters can claim refunds for VAT paid at earlier stages of production. This is what makes a zero rating fundamentally different from an exemption. The zero rating of exports is in line with the destination principle according to which VAT is applied to goods and services according to the tax schedule of the destination country.

One way of gauging VAT efficiency is a measure called the VAT revenue ratio or C-efficiency, which compares actual VAT revenues to those that would be obtained by applying the standard rate on all domestic consumption. While this measure is not perfectly correlated with the quality of implementation of a VAT – it would rise if refunds to exporters are incomplete, for example – it is nonetheless a useful simple way of comparing VAT systems internationally. This comparison reveals that Indonesia is situated in the upper-middle range of OECD countries (Figure 10). This is in line with the observation by IMF (2010) that VAT revenue ratios are not systematically much better in developed economies, although the reasons for low efficiency tend to be different between these groups. Low VAT revenue ratios tend to reflect low compliance in emerging-market economies, as opposed to a greater degree of imperfection in policy design, including different rates, in developed countries (IMF, 2010).

Figure 10. **VAT revenue ratios, 2010**



1. Data for 2009.
2. New Zealand raised its VAT rate from 12.5% to 15% on 1 October 2010, which raises its ratio above 1.

Source: OECD calculations.

In Indonesia, the principal ways through which VAT revenue ratio could be raised would be by reducing the number of exemptions and enhancing compliance, both of which should be priorities in order to exploit the VAT's full revenue-raising potential. IMF estimates suggest that improving Indonesia's VAT revenue ratio to the level of Thailand's could increase VAT revenue by 1.8% of GDP without raising the rate (IMF, 2011a). Part of Vietnam's successful efforts to raise the tax take over the last decade involved a reduction in the number of VAT exemptions.

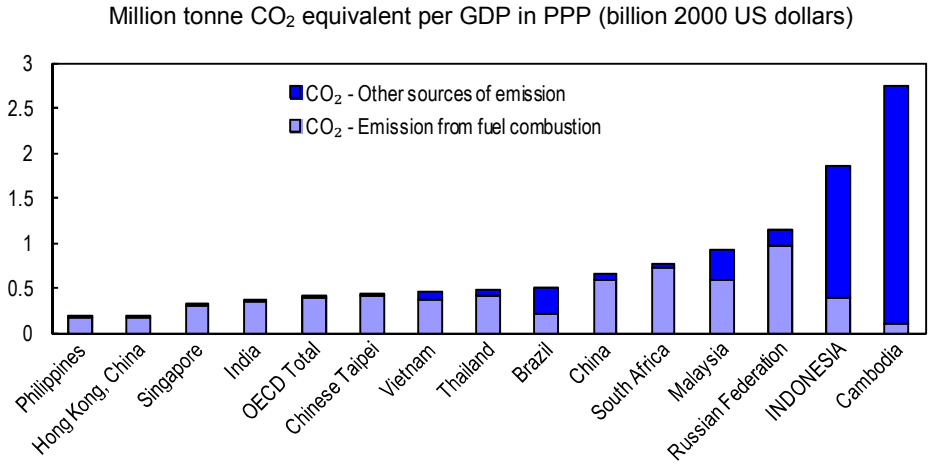
Improving VAT compliance requires measures to strengthen the incentives for voluntary compliance, in addition to stricter controls in case of suspected non-compliance. Voluntary compliance could be enhanced by simplifying a number of procedures, including not requiring an original invoice for every single transaction, faster processing of refund claims and a reduction in the number of VAT audits. At present, every small VAT refund claim automatically triggers a tax audit, which makes participation in the VAT system onerous and puts a heavy burden on the limited resources of the tax administration.

Specific excise taxes and carbon taxes

The system of specific excise taxes applied in Indonesia is less neutral than the VAT in the sense that it distorts consumption decisions away from items subject to these taxes. Of course, there may be a number of valid reasons for accepting or even seeking such shifts. Many countries levy specific excise taxes on goods with negative externalities, including alcohol, cigarettes and automotive fuel. At the same time, even where there are no externalities at work, specific taxes on luxury items may be useful because they are fairly easy to administer and for their distributional impact. In the context of Indonesia's skewed income distribution, identifying goods that are mainly consumed by affluent individuals may be considerably easier than in more egalitarian societies. The authorities raised the tobacco excise tax in January 2012 from 12.6% to 15% and have plans to raise it further. In May 2012, the government decided to reduce the luxury goods sales tax for small environmentally friendly cars, although some of the details are yet to be decided. This may be a useful way to lower the emission intensity of car transportation in Indonesia, although not necessarily of overall emissions. However, making the incentive dependent on the amount of locally sourced inputs, as has been discussed, adds a protectionist element to the scheme and should be avoided.

One case of a tax that can be justified on externality grounds is a carbon tax. Energy demand in Indonesia is growing by around 7% annually, and the externalities caused by the resulting carbon emissions are not reflected in current market prices, which embody fuel and electricity subsidies, resulting in energy use above optimal levels. In fact, Indonesia is one of the most CO_2-emission-intensive economies in the world, although most of its emissions result from deforestation, rather than from energy combustion (Figure 11). Electricity generation is based to an increasing extent on coal in order to reduce the reliance on oil imports, although a proper accounting of the economic externalities of coal firing would make the choice of coal look less beneficial than portrayed by current price signals.

Figure 11. **CO_2 emissions intensity by country, 2008**



Source: International Energy Agency (2011), *CO_2 Emissions from Fuel Combustion*, Paris.

Carbon taxes are under consideration but do not yet exist in Indonesia, while at the same time the subsidies on fuel and electricity are akin to taxes applied at negative rates. Raising the price of carbon emissions would raise the price of activities that are heavy carbon emitters relative to low-emission alternatives, and a carbon tax would be an effective instrument of environmental cost internalisation that would help rebalance growth towards lower carbon intensity. A Green Paper by the Ministry of Finance has suggested to "work towards the implementation of a carbon tax on fossil fuel combustion, in parallel with a removal over time of energy subsidies" (Ministry of Finance, 2009). This strategy is a promising way forward and should be put into practice. While lowering fossil fuel subsidies would be a strong contribution towards reducing the carbon footprint of the economy, their reduction should not be seen as a precondition for introducing a carbon tax. Fossil fuel subsidies are currently affecting consumption choices of final fuel consumers, but the introduction of a carbon tax would provide an immediate price signal to reduce the emission-intensity in power supply and industry, in particular with respect to future investment decisions. Introducing a carbon tax at an initially relatively modest level might help to reduce the political resistance towards such taxes.

Property taxes

Property taxes, in particular recurrent taxes on immovable property, are generally considered to have more favourable growth effects than other tax instruments (Arnold *et al.*, 2011). Even though their incidence is not fully understood (Sennoga *et al.*, 2008), the positive correlation between real estate values and the wealth or incomes of their owners suggests that this tax will be heavily borne by the well-off, in particular when levied at progressive rates, as is the case in Indonesia. Since the value of real estate is often enhanced by public expenditure on infrastructure in the surrounding area, property taxes may also serve as a way to recoup some of the costs thereby incurred (Trinh and McCluskey, 2012). Even from an

administrative point of view, property taxes compare fairly well, because real estate is easy to observe. These features can make property taxes an attractive tax instrument that should be part of any strategy to increase tax revenues, although the revenue potential of even a well designed and administered property tax has its limits. In Indonesia, property taxes amounted to less than half a percent of GDP in 2011. Among ASEAN countries, property taxes usually also account for a very small fraction of revenues. The average OECD country raises around 1.8% of GDP from property taxes, although in several OECD countries property taxes account for over 3% of GDP. In some countries, these figures include taxes on financial wealth, which Indonesia does not have. Such taxes can escalate to high rates on capital returns, and the case that financial wealth is easier to observe than the income derived from it is rather weak.

Land and buildings are currently taxed at a rate of 0.5% of the taxable sale value, where the latter is set at either 20% of the estimated resale value for properties below IDR 1 billion or 40% otherwise. Hence, the effective property tax rate is progressive, at 0.1% or 0.2% of the assumed resale values. The main challenge in designing property taxes lies in evaluating the assumed resale values, especially for properties that have not been on the market for many years. As a result, many countries apply property taxes on the basis of outdated property values that are below market values, a problem that is also severe in Indonesia. Some estimates suggest that only 40% of potential revenues are collected due to the undervaluation of properties. In order to increase property tax revenues, assumed resale values should be brought up to date and re-evaluated regularly. If such regular updates turn out difficult in the current setup, the tax authorities should consider moving towards simpler forms of assessing the tax base for property taxes.

Real estate values depend on the size and location of the land and the buildings on it. In light of administrative constraints, Vietnam, for example, has successfully implemented a simple property tax by focusing only on the former element in assessing property values. Location within an urban area is assessed through an adjustment coefficient that reflects the type of urban area and the overall quality of the street that the land fronts. Such area-based property taxes are commonly used to assess property in the absence of a well developed real estate market in developing economies (Rao, 2008). In addition, some countries also factor in an assessment of the value of a property based on the constructed surface area of the buildings on the property. In this simple form, the administration of property taxes requires mostly surface-area measurement and avoids the need for costly collection and analysis of detailed market data (Bing *et al.*, 2009). Several countries in Central and Eastern Europe (Czech Republic, Hungary, Poland, Slovak Republic) have implemented new area-based property tax systems, and there is evidence that these work well in these transition economies (McCluskey and Plimmer, 2011). Maintaining Indonesia's progressive effective tax rate would be compatible with assessing property values on such a simplified basis. Given that Indonesia has decided to delegate the administration of property taxes to the municipal level, where administrative capacities are likely to be more limited, a simplified way of assessing property values that can be easily updated may be a useful step towards increasing property tax revenues.

Property taxes also include transaction-based taxes such as stamp duties or transfer fees. The distortions resulting from such non-recurrent property taxes are far greater than those of recurrent taxes on real estate because they reduce the liquidity of real estate markets. This may result in reduced geographic mobility for households, thereby hampering labour-market adjustment to local shocks, and adds to the burden of registering business property for enterprises. In Indonesia, stamp duties are set by provincial governments. According to World Bank (2012), the average cost to register property is about 11% of the property value. This is almost triple the average cost in its neighbours in the region. Reducing the tax burden on property transactions and shifting it towards recurrent property taxes would cut the cost of doing business and reduce distortions on real estate markets without any harm to the budget.

Improving the efficiency of tax administration

Indonesia embarked on a complete overhaul of its DGT in 2002 with support from international donors including the World Bank. The principal challenges that the reform aimed to deal with included weak organisational structures, poorly trained tax officials, significant integrity issues and extensive non-compliance. The reform package was designed around four main pillars. First, through a re-organisation of tax offices DGT has moved away from duplicative and narrowly focused tax-by-tax approaches towards function-based structures and taxpayer segmentation based on size. This has resulted in the creation of special large taxpayers' offices. Headquarters organisations have been established to guide these function-based structures. Second, human resource management has been modernised, including by reviewing remuneration policy. Third, a more intensive use of information technology has led to an updating of administrative processes, including the introduction of electronic filing and registration, and risk analysis. Fourth, a focus on better governance and integrity through codes of conduct, internal control units and whistleblower protection has improved the tax authorities' reputation. DGT has also started to provide a wide range of informative tax publications and conducted various active tax education programmes. These substantial efforts have borne fruit in the form of an estimated 1.2% of GDP in additional revenues due to improved tax collection, which should provide encouragement for further progress in this area (IMF, 2011b). Indeed, a number of challenges remain for tax administration, as evidenced first and foremost by Indonesia's low tax take despite a tax policy design that is broadly reasonable and not as far from international best practice as the low level of revenues might suggest.

A key element of the success of Indonesia's tax administration reform so far has been the establishment of large taxpayers' offices, which have allowed the administration to devote more attention and resources to those taxpayers with the largest potential for increasing public revenues. With only four such tax offices for the entire country, however, there seems to be scope to take this strategy further by rolling out more of them across the country, while ensuring that they implement a robust overall strategy in a consistent manner. Besides dealing with the 700 largest companies on matters related to CIT and VAT, these offices should devote more resources to high-wealth and high-income individuals, especially after a number of cases of tax avoidance by members of the country's elite have attracted much public attention and eroded the public trust in the legitimacy of the tax system. A natural next step is to devote more attention to medium-sized taxpayers, as Indonesia has started to do by creating 28 medium-sized taxpayers' offices. The focus of the approximately 300 small taxpayer offices – resulting from merging former Tax District Offices, Tax Audit Offices and Property Tax Offices – should be a thorough implementation of the tax census that the government has initiated in order to expand the number of taxpayers at the local level. In the course of the delegation of property tax collection to the municipal level, these local tax offices will be formally responsible for administering property taxes as of 2014. Given that their capacities are typically lower than in other parts of the tax administration, the DGT headquarters has recognised the need to provide them with continued assistance in administering these taxes. A simplification of the assessment of the tax basis for property taxes, as recommended in the previous section, may also help to ease the burden on these field offices.

Improving the tax administration's institutional capacity will also require better training of tax officials. Taxpayers frequently report significant variance in their capabilities both across regions and within the same tax office. Currently more than half of DGT staff have not completed more than secondary education, while 16% have not even completed secondary education (DGT, 2011). Improving remuneration policies and internal training programmes that would allow an increased share of highly qualified officials is likely to pay off in terms of raising tax revenues. Enhancing the flexibility of employment contracts would also make it easier for DGT to dispose of officials with poor performance while hiring more educated new people. The pool of human resources with which DGT operates has been very stable over the last few years, which seems atypical for an institution undergoing such fundamental changes. This is one area where DGT is constrained by government regulations that apply to all public

institutions and which can stand in the way of applying modern human-resource-management practices that would provide incentives for high performance and non-corrupt behaviour by tax officials as well as develop their skills and professionalism.

One particular area where the tax authorities may wish to consider improving their capacities is the appeal system. Once a tax dispute is taken to court, private parties are often able to outspend the authorities on procuring legal advice, resulting in an uneven playing field. In 2010, over 70% of appeal cases were partially or fully granted. Allowing the tax authorities to have recourse to external legal advice in appeal cases where substantial public revenues are at stake may be a useful way to compensate for limited internal capacities. Negotiated settlements can also be a way to reduce the costs of litigation, and tax authorities should be given the authority to use this tool. Currently all tax appeals must be handled by a single tax court in the capital. In order to speed up the appeal system, the announced plan to establish five additional tax courts outside Jakarta is welcome. In addition, further increasing the authorities' capacity to avoid profit-shifting and transfer pricing in the case of multinational enterprises would be useful.

Integrity is also an essential element of good institutional performance. Despite an increased focus on integrity issues, there still seems to be room for improvement, not least because of events in 2010 and 2012 when several tax-related cases involving DGT personnel undermined the level of public trust. These events have led some to question the implementation of a tax administration reform that had been widely accepted previously. Stronger internal control systems and disciplinary actions may be helpful to reach this objective. The transparency of administrative decisions is one factor of integrity as perceived by taxpayers. This could be enhanced by making it easier for the public to access their tax-related information and by establishing precedent-setting rulings that are publicly accessible and binding for future decisions in comparable cases. In the same vein, all decrees and implementing regulations on tax matters should be made easily available to the public. This has been achieved in Vietnam, where all administrative procedures were collected into one single law in 2006.

Easing tax procedures – where Indonesia compares poorly with most other countries in international comparison – would strengthen the incentives for compliance and correct self-assessment. The World Bank's Paying Taxes survey ranks Indonesia at position 131 out of 183 jurisdictions with respect to the ease of paying taxes, although it has moved up 3 spots over the last year (World Bank, 2012).

The use of electronic interactions between taxpayers and the authorities presents significant scope for improving tax procedures at the stages of registering, filing and paying taxes. DGT has begun to allow electronic filing, and this has cut the time required to pay taxes by more than half – from 560 hours in 2006 to 266 hours in 2011 (World Bank, 2012). However, despite a five-fold increase in the number of electronically filed returns, they still account for less than 1% of the total. In a pilot programme, DGT has begun to make electronic filing easier for Jakarta and Bandung residents, with full deployment across the country planned by the end of 2012. DGT objectives also include offering several payment channels, including through internet banking and ATM machines. These are steps in the right direction and should be pursued further. Better use of information technology should also include ensuring a linkage between computer software used by the tax and customs administrations, as well as linking to databases used by other public agencies.

Although they are not the only tool to improve tax compliance, tax audits constitute an integral part of any tax system based on self-assessment. Given that the tax administration has limited resources to conduct tax audits, these should be allocated in a way to maximise expected revenue collection. This implies a risk-based audit procedure, sparing taxpayers with a good compliance record, while focusing on those where there is evidence of non-compliance, possibly on the basis of earlier non-compliance or external data sources. Although tax audits in Indonesia have become more risk-focused, DGT still has to commit valuable resources to automatically triggered tax audits of taxpayers with a low risk profile. Any tax return

showing an overpayment of tax and including a refund claim is subject to a compulsory tax audit, for example. Since this happens most often in the application of VAT, excessive staff resources are devoted to auditing VAT returns, while the prospects for enhancing revenue collection would be larger in the area of income taxes. In the future, automatic audit requirements should be abolished, while strengthening the risk focus of tax audits. The fact that the 65 000 audits conducted in 2010 resulted on average in additional revenue collection that was 16 times larger than audit costs suggests that DGT may be well advised to continue increasing the number of tax auditors. This would also reduce the currently long delays to obtain a tax audit where it is required to receive a refund and speed up the reimbursement of tax refunds.

Finally, tax administration reform should be accompanied by reforms in other areas, particularly law enforcement. In March 2012, DGT signed an agreement with the National Police to guarantee closer surveillance to prevent tax fraud. This includes providing security and oversight of tax officials as they go about their work and assistance in locating missing persons and assets, following a number of high-profile graft cases involving tax officials. Such co-operation among different public agencies seems promising.

Box 3. **Summary of recommendations: tax reform**

In order to raise the tax take and the efficiency of the tax system, the government should consider undertaking the following measures:

Personal income taxes

- Continue efforts to expand the number of taxpayers, in particular among the self-employed. Adopt a single taxpayer number for individuals, and eliminate the need to apply for one, *e.g.* by using the national identity card number. Consider removing the need to file a tax return for employees with a single source of income. Temporarily reduce penalties for previous non-compliance for first-time taxpayers only.

- Subject employer-provided fringe benefits and allowances to personal income taxation, and move towards equal tax treatment of interest and dividend incomes, for example by considering the withholding tax on dividends as final, as is the case for interest.

Corporate income taxes

- Reconsider tax incentives and in particular tax holidays for specific sectors or investment projects. If investment incentives are granted, make them broadly available to all companies, and give preference to investment tax credits over tax holidays.

- Publish estimates of tax expenditures, including investment incentives, on a routine basis to enhance their transparency, and conduct periodic evaluations of all of them.

- Reduce the compliance burden for small firms by introducing a specific tax system, combining simplified procedures with a low tax rate and decisive action to enforce compliance, as planned by the government.

Oil and gas and mining royalties and taxes

- Take exploration and development risks into account by allowing full recovery of the associated costs from production revenues.

- Move away from revenue-based royalties and give greater weight to taxing economic rents, at higher rates than at present.

- Reconsider local processing requirements and local ownership requirements in the mining sector, and focus on raising the government's tax take instead.

Taxes on international trade

- Review export taxes, considering their implication for the whole economy, including international trade.

Consumption taxes and carbon tax

- Reduce the number of activities that are exempt from VAT to a minimum.
- Introduce a carbon tax at an initially low rate.

Recurring taxes on immobile property

- Update the property value registry to increase the tax take from recurrent taxes on immovable property. Consider moving towards a simplified area-based assessment of tax liabilities.

Tax administration

- Allocate more tax audits on the basis of risk assessments, and eliminate automatic audit requirements. Increase the number of government auditors.
- Make greater use of third-party information and indirect ways of assessing tax liabilities, *e.g.* by using information on assets or consumption items to trigger tax audits even for those not registered as taxpayers.
- Move forward with the planned tax census to expand the tax base beyond current taxpayers, and establish additional tax offices specialised in affluent individuals beyond Jakarta.
- Continue efforts to improve the human resource management of the tax authorities by reducing disparities in training across tax offices and officials. Enhance the administration's litigation capacity, and consider the use of external legal services in important appeal cases, while moving forward with plans to establish tax courts outside of Jakarta.
- Strengthen internal control systems and disciplinary action within the tax administration. Improve the transparency of administrative decisions by allowing taxpayers access to their tax-related information, publishing all decrees and implementing regulations and using publicly accessible precedent rulings.

Bibliography

Abbas, S., A. Klemm, J. Park and S. Bedi (2012), "A Partial Race to the Bottom: Corporate Tax Developments in Emerging and Developing Economies", *IMF Working Papers,* No. WP/12/28, International Monetary Fund, Washington, D.C.

Agalliu, I. (2011), "Comparative Assessment of the Federal Oil and Gas Fiscal Systems", U.S. Department of the Interior, Bureau of Ocean Energy Management, Herndon, VA.

Amiti, M. and J. Konings (2007), Trade Liberalization, Intermediate Inputs and Productivity: Evidence from Indonesia", *American Economic* Review, Vol. 97, pp. 1611-1638.

Arnold, J., B. Brys, C. Heady, Å. Johansson, C. Schwellnus and L. Vartia (2011), "Tax Policy for Economic Recovery and Growth", *Economic Journal*, Vol. 121, pp. F59–F80.

Arnold, J. and B. Javorcik (2009), "Gifted Kids or Pushy Parents? Foreign Acquisitions and Plant Productivity in Indonesia", *Journal of International Economics*, Vol. 79, pp. 42-53.

Bing, Y., K. Connolly and M. Bell (2009), "A Compendium of Countries with an Area Based Property Tax", *Working Paper*, No. WP09BY1, Lincoln Institute of Land Policy, Cambridge, MA.

Brondolo, J., C. Silvani, E. Le Borgne and F. Bosch (2008), "Tax Administration Reform and Fiscal Adjustment: The Case of Indonesia (2001-07)", *IMF Working Papers*, No. WP/08/129, International Monetary Fund, Washington, D.C.

Brown, E.C. (1948), "Business Income Taxation and Investment Incentives", in Metzler, L. (ed.), *Income, Employment and Public Policy: Essay in Honor of Alvin Hansen*, W.W. Norton, New York.

Caspersen, E. and G. Metcalf (1994), "Is a Value-Added Tax Regressive? Annual versus Lifetime Incidence Measures", *National Tax Journal*, Vol. 47, pp. 731-46.

Collier, P. (2009), "Principles of Resource Taxation for Low-income Countries", in P. Daniel, M. Keen and C. McPherson (eds.), *The Taxation of Petroleum and Minerals: Principles, Problems and Practice*, Routledge, New York.

Daniel, P., M. Keen and C. McPherson (eds.) (2009), *The Taxation of Petroleum and Minerals: Principles, Problems and Practice*, Routledge, New York.

de Paula, A. and J. Scheinkman (2010), "Value-Added Taxes, Chain Effects, and Informality", *American Economic Journal: Macroeconomics*, Vol. 2, pp. 195-221.

Gandullia, L., N. Iacobone and A. Thomas (2012) "Modelling the Tax Burden on Labour Income in Brazil, China, India, Indonesia, and South Africa", *OECD Economics Department Working Papers,* OECD Publishing, forthcoming.

Gemmell, N. and O. Morrissey (2003), "Tax Structure and the Incidence on the Poor in Developing Countries," *CREDIT Research Paper*s, No. 03/18, Centre for Research in Economic Development and International Trade, University of Nottingham.

Gentry, W. and G. Hubbard (2004), "Success Taxes, Entrepreneurial Entry, and Innovation", *NBER Working Paper,* No. 10551, National Bureau of Economic Research, Cambridge, MA.

IMF (2010). "From Stimulus to Consolidation: Revenue and Expenditure Policies in Advanced and Emerging Economies", *Departmental Papers*, No. 10/03, Fiscal Affairs Department, International Monetary Fund, Washington, D.C.

IMF (2011a), "Revenue Mobilization in Developing Countries", *Policy Paper,* Fiscal Affairs Department, International Monetary Fund, Washington, D.C.

IMF (2011b), "Indonesia: Selected Issues", *IMF Country Reports*, No. 11/310, International Monetary Fund, Washington, D.C.

IMF (2011c), *IMF Government Finance Statistics*, International Monetary Fund, Washington, D.C.

Johansson, Å., C. Heady, J. Arnold, B. Brys and L. Vartia (2008), "Tax and Economic Growth", *OECD Economics Department Working Papers*, No. 620, OECD Publishing.

Johnston, D. (2008), "Changing Fiscal Landscape", *Journal of World Energy Law & Business*, Vol. 1, pp. 31-54.

Klemm, A. and S. van Parys (2009), "Empirical Evidence on the Effects of Tax Incentives", *IMF Working Papers*, No. 36, International Monetary Fund, Washington, D.C.

Lipsey, R. and F. Sjöholm (2011), "Foreign Direct Investment and Growth in East Asia: Lessons for Indonesia", *Bulletin of Indonesian Economic Studies*, Vol. 47, pp. 35-63.

McCluskey, W., and F. Plimmer (2011), "The creation of fiscal space for the property tax: The case of Central and Eastern Europe", *International Journal of Strategic Property Management*, Vol. 15, pp. 123–138.

Ministry of Finance of Indonesia (2009), "Economic and Fiscal Policy Strategies for Climate Change Mitigation in Indonesia", Jakarta.

Nugraha, K. and P. Lewis (2011), "Market Income, Actual Income and Income Distribution in Indonesia", paper presented at the 40th Australian Conference of Economists, Canberra, 11 July, available at http://ace2011.org.au/ACE2011/Documents/Abstract_Kunta_Nugraha_Phil_Lewis.pdf

OECD (2011a), *Divided We Stand: Why inequality keeps rising,* OECD Publishing.

OECD (2011b), *OECD Economic Survey: Israel*, OECD Publishing.

OECD (2012), *Taxing Wages,* OECD Publishing.

PWC (2008), *Mine Indonesia 2008,* Jakarta, Indonesia.

PWC (2011), *Oil and Gas in Indonesia: Investment and Taxation Guide,* Jakarta, Indonesia.

Rao, V. (2008). "Is Area-Based Assessment an Alternative, an Intermediate Step or an Impediment to Value Based Taxation in India?", in Bahl, R., J. Martinez-Vazquez, and J. Youngman (eds.), *Making the Property Tax Work: Experiences in Developing and Transitional Countries*, Lincoln Institute of Land Policy, Cambridge, MA.

Schwellnus, C. and J. Arnold (2008), "Do Corporate Taxes Reduce Productivity and Investment at the Firm Level? Cross-Country Evidence from the Amadeus Dataset", *OECD Economics Department Working Papers*, No. 641, OECD Publishing.

Sennoga, E., D. Sjoquist, and S. Wallace (2008), "Incidence and Economic Impacts of Property Taxes in Developing and Transitional Countries," in Bahl, R., J. Martinez-Vasquez and J. Youngman (eds), *Making the Property Tax Work: Experiences in Developing and Transitional Countries* , Lincoln Institute of Land Policy, Cambridge, MA.

Sjöholm, F. and R. Lipsey (2006), "Foreign Firms and Indonesian Manufacturing Wages: An Analysis with Panel Data", *Economic Development and Cultural Change*, Vol. 55, pp. 201-221.

Trinh, H. and W. McCluskey (2012). "Property Tax Reform in Vietnam: A Work in Progress", *IMFG Papers on Municipal Finance and Governance*, No. 8/2012, Munk School of Global Affairs, University of Toronto, Toronto.

van Meurs, P. (2009). "Trends in International Oil and Gas Taxation", presentation delivered at the Gubkin Oil and Gas University, Moscow, 4 September, available at www.vanmeurs.org.

World Bank (2012), *Doing Business in Indonesia*, Washington, D.C.

Yuwono, T. (2009), "Individual Income Tax in Indonesia: Behavioral Response, Incidence, and the Distribution of Income Tax Burden", *Economics Dissertations*, paper 36, Georgia State University, Atlanta, GA, available at http://digitalarchive.gsu.edu/econ_diss/36

Zolt, E. and R. Bird (2005), "Redistribution via Taxation: The Limited Role of the Personal Income Tax in Developing Countries", *International Tax Program Papers*, No. 0508, Institute for International Business, Joseph L. Rotman School of Management, University of Toronto, Toronto.

WORKING PAPERS

The full series of Economics Department Working Papers can be consulted at www.oecd.org/eco/workingpapers/

997. *Unleashing business innovation in Canada*
(November 2012) by Alexandra Bibbee

996. *Public policy and resource allocation: evidence from firms in OECD countries*
(October 2012) by Dan Andrews and Federico Cingano

995. *Promoting SME development in Indonesia*
(October 2012) by Annabelle Mourougane

994. *Portugal: Rebalancing the economy and returning to growth through job creation and better capital allocation.*
(October 2012) by Álvaro Pina and Ildeberta Abreu

993. *Public debt, economic growth and nonlinear effects: Myth or reality?*
(October 2012) by Balázs Égert

992. *Choosing the pace of fiscal consolidation*
(September 2012) by Lukasz Rawdanowicz

991. *Tertiary education developing skills for innovation and long-term growth in Canada*
(September 2012) by Calista Cheung, Yvan Guillemette and Shahrzad Mobasher-Fard

990. *Trade and product market policies in upstream sectors and productivity in downstream sectors: firm-level evidence from China*
(September 2012) by Maria Bas and Orsetta Causa

989. *Intangible assets, resource allocation and growth: a framework for analysis*
(September 2012) by Dan Andrews and Alain de Serres

988. *Current account benchmarks for Turkey*
(September 2012) by Oliver Röhn

987. *Structural reforms to boost Turkey's long-term growth*
(September 2012) by Rauf Gönenç, Oliver Röhn, Vincent Koen and Şeref Saygili

986. *Tackling Turkey's external and domestic macroeconomic imbalances*
(September 2012) by Oliver Röhn, Rauf Gönenç, Vincent Koen and Ramazan Karaşahin

985. *Portugal: Solid foundations for a sustainable fiscal consolidation*
(September 2012) by David Haugh and Stéphane Sorbe

984. *Portugal: Assessing the risks around the speed of fiscal consolidation in an uncertain environment*
(September 2012) by Stéphane Sorbe

983. *The German labour market: preparing for the future*
(September 2012) by Felix Hüfner and Caroline Klein

982. *Climate change policies in Germany: make ambition pay*
(September 2012) by Caroline Klein

981. *Restarting the growth engine in Finland*
(September 2012) by Henrik Braconier

980. *Import Competition, Domestic Regulation and Firm-Level Productivity Growth in the OECD*
(September 2012) by Sarra Ben Yahmed and Sean Dougherty

979. *Non-Parametric Stochastic Simulations to Investigate Uncertainty around the OECD Indicator Model Forecasts*
(August 2012) by Elena Rusticelli

978. *Measuring GDP Forecast Uncertainty using Quantile Regressions*
(July 2012) by Thomas Laurent and Tomasz Kozluk

977. *Implications of output gap uncertainty in times of crisis*
(July 2012) by Romain Bouis, Boris Cournède and Ane Kathrine Christensen

976. *Avoiding debt traps: financial backstops and structural reforms*
(July 2012) by Pier Carlo Padoan, Urban Sila and Paul van den Noord

975. *Sluggish productivity growth in Denmark: the usual suspects?*
(July 2012) by Müge Adalet McGowan and Stéphanie Jamet

974. *Towards green growth in Denmark: improving energy and climate change policies*
(July 2012) by Stéphanie Jamet

973. *An Analysis of Productivity Performance in Spain before and during the Crisis: Exploring the Role of Institutions*
(June 2012) Juan S. Mora-Sanguinetti and Andrés Fuentes

972. *Europe's new fiscal rules*
(June 2012) by Sebastian Barnes, David Davidsson and Łukasz Rawdanowicz

971. *Credit Crises and the Shortcomings of Traditional Policy Responses*
(June 2012) by William R. White

970. I*nternational Capital Mobility and Financial Fragility*
Part 7. Enhancing Financial Stability: Country-specific Evidence on Financial Account and Structural Policy Positions
(June 2012) by Rudiger Ahrend and Carla Valdivia

969. *International Capital Mobility and Financial Fragility*
Part 6. Are all Forms of Financial Integration Equally Risky in Times of Financial Turmoil? Asset Price Contagion during the Global Financial Crisis
(June 2012) by Rudiger Ahrend and Antoine Goujard