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Diagnosing the VAT Compliance Burden: A Cross-Country Assessment

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Via zoom

Schedule for 2020 Tax Research Seminars Online

1. **30 July 2020**, Tax and the Inheritance of Wealth – Dr Dan Halliday (University of Melbourne), discussant Professor Miranda Stewart (University of Melbourne)

2. **27 August 2020**, International Tax Frameworks: Assessing the 2020s Compromise – Professor Craig Elliffe (University of Auckland), discussant Professor Kerrie Sadiq (QUT)

3. **17 September 2020**, Diagnosing the VAT Compliance Burden: A Cross-Country Assessment – Professor Richard Highfield (UNSW), co-authored with R Brown, C Evans, B Tran-Nam, M Walpole, discussant Professor Rick Krever (UWA)

4. **29 October 2020**, Pro Bono Tax Clinics: An International Comparison and Framework for Evidence-based Evaluation – Dr Ann Kayis-Kumar (UNSW), co-authored with J Noone, F Martin, M Walpole, discussant Associate Professor Kate Fischer (University of Melbourne)

5. **26 November 2020,** The Taxation of Capital Gains in Trust after Bamford: A Critical evaluation of the Streaming Regime in Subdiv 115-C ITAA97 – Dr Sonali Walpola (ANU), discussant Dr Mark Brabazon (University of Sydney and NSW Bar)

Diagnosing the VAT Compliance Burden: A Cross-Country Assessment

Rodney Brown, Chris Evans, Richard Highfield,
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Melbourne Law School Tax Research Seminars Online

Thursday, 17 September 2020 (AEST 3.30-5.00pm)

Diagnosing the VAT Compliance Burden: A Cross-Country Assessment

Rodney Brown, Chris Evans, Richard Highfield, Binh Tran-Nam and Michael Walpole [1] [2]

Abstract

This paper is a report (process, findings and implications) of a major project to establish an innovative diagnostic tool for use in evaluating taxation compliance burden and its main drivers across large numbers of countries. The paper reports the results of the first of a series of tax compliance burden assessments – that of Value Added Tax (VAT).

Complexity and high compliance costs deter businesses from complying with their tax obligations.[3] The VAT compliance burden has been found to be particularly significant compared to the burden imposed by other taxes, and the higher the burden the greater the likelihood of businesses, especially smaller enterprises, failing to properly comply with their tax obligations.

A variety of approaches have been used over the years to gauge the size, nature and drivers of the burden imposed on businesses and others in complying with their tax obligations. These include large surveys of taxpayers, use of the 'Standard Cost Model' and the World Bank's 'Doing Business (DB)' series case study approach. While these methodologies have some useful features, they also present their own set of conceptual and practical limitations.[4]

In mid-2015, tax academics at UNSW Sydney agreed that the idea of a diagnostic tool, building on early (incomplete) developmental work carried out by the OECD's Centre for Tax Policy and Administration, and initially focussing on the VAT compliance burden, warranted further exploration. To this end and working with a cross-section of academics from around the world, a small pilot study involving 13 diverse countries was launched in early 2017. A presentation on the diagnostic tool and the results of the study was made at the 13th Tax Administration Conference in 2018. The findings broadly aligned with expectations and participants were generally of the view that the tool had merit in assessing the likely relative VAT compliance burden and its main drivers on a global basis. Following some refinements to the tool, a second round of research targeting the 47 member-countries of the OECD's Forum on Tax Administration (FTA) that administer a VAT system of taxation and carried out in collaboration with KPMG Global was launched in late September 2018 and completed in May 2019.

This paper shares the key findings and conclusions from the latest research. These include:

- The 47 countries surveyed range from those with very low compliance burdens to those with high compliance burdens, with the majority (38) clustered around the middle of a 'compliance burden index' developed by the authors;
- Just over a quarter of the countries surveyed (14) have indications of a low to very low relative VAT compliance burden, and this category includes Australia, New Zealand, and Singapore;

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[2] The authors would like to acknowledge and thank all the participants involved in the pilot and extended studies, and particularly Grant Wardell-Johnson from KPMG Australia.
[3] C Sandford (1973), *Hidden costs of taxation*, Institute for Fiscal Studies, London.
[4] R Highfield, M Walpole & C Evans (2017), "A proposal for the development and testing of a diagnostic tool for assessing VAT compliance costs", *International VAT Monitor*, vol. 28, no. 3, pp. 228-239.

- The VAT policy framework is a significant factor in driving the compliance burden across the majority of countries, whilst the administrative framework and the capabilities of the revenue services studied were less prominent as driving factors;
- The compliance burden is influenced by a country's level of economic development and the level of exports. It is also influenced, although not as significantly, by the ratio of VAT to GDP.

More importantly for the continuing research, the VAT compliance burden work has demonstrated that the VAT diagnostic tool is "fit for purpose" as a robust and efficient instrument capable of measuring and evaluating the business VAT compliance burden across the 47 FTA countries, and of identifying the key drivers of that burden. This result is sufficient proof of concept to be able to undertake, in collaboration with stakeholders, the development of a comprehensive suite of diagnostic tools designed to measure and evaluate the tax compliance burden of other important business taxes that will next target corporate income tax and employment and payroll-related taxes.

1. Introduction and Background

Over the last few decades, a variety of approaches have been used to gauge the size, nature and drivers of the burden imposed on businesses and others in complying with their tax obligations.[5] In this paper, the authors set out the findings of an extended study which was conducted in 2018, utilising an innovative diagnostic tool that has been developed for use in comparative cross-country assessments of the VAT compliance burden and its main drivers. It is based on data gathered from surveys conducted in the 47 member countries of the Forum on Tax Administration (FTA) that administer a Value Added Tax (VAT) or Goods and Services Tax (GST) regime.[6]

The initial design and development of the VAT diagnostic tool (explained in Section 2) was initiated by the Organisation for Economic Co-operation and Development (OECD) in 2012 and subsequently further developed by tax academics at UNSW Sydney in collaboration with other Australian and international universities and KPMG Global. It was successfully piloted in 13 countries in 2017.[7] Underlying the approach was the premise that it should be possible to develop a diagnostic tool that identifies the main factors that drive taxpayers' compliance burden, to identify a robust set of 'compliance burden indicators' that could be applied reasonably objectively for each factor, and to derive a method of scoring and possible weightings that reflect their contribution to the overall VAT compliance burden. It was envisaged that applied systematically and regularly at the individual country level, the tool could potentially provide insights as to whether progress was being made in an overall sense to reduce taxpayers' VAT compliance burden and to identify those areas of tax system design and administration that require attention from a burden reduction perspective.

An additional consideration concerned the potential to undertake and publish large-scale cross-country comparisons, given the attraction of using such comparisons to encourage 'poor performers'

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[5] The advantages and disadvantages of the various approaches have been set out in an article by three of the authors (see R. Highfield, M. Walpole and & C. Evans, *A proposal for the development and testing of a diagnostic tool for assessing VAT compliance costs*, International VAT Monitor, May/June 2017, pp. 228-239) and by others (see, for example, European Commission, *A Review and Evaluation of Methodologies to Calculate Tax Compliance Costs*, Working Paper N.40-2013 in EC's series of Taxation Papers, prepared by Ramboll Management Consulting, the Evaluation Partnership, and Europe Economic Research (2013)).

[6] Henceforward the paper will use the term VAT to cover both the VAT and the GST. The 47 member countries are detailed in Table 1 of the paper.

[7] R. Highfield, C. Evans & M. Walpole, 2019, *The development and testing of a diagnostic tool for assessing VAT compliance costs: Pilot study findings*, eJournal of Tax Research, Vol 16, No 3, pp. 620-654.

to give greater attention to addressing the compliance burden of their tax systems. Under this scenario, a large number of countries would be able to make comparisons between their tax systems and assess the likely impact of the policy and operational choices they make on the compliance burden. The set of indicators would show how a country 'scores' against four predetermined factors (and corresponding indicators) that reflect important elements of the tax compliance burden (i.e. activities related to time and effort required to comply with tax obligations and offsets and detriments related to the 'time value of money').

The paper is structured as follows. Section 2 explains the methodology that was used in the research, including the design of the VAT diagnostic tool and the administration of the underpinning country-by-country surveys. In Section 3 the principal outcomes of the surveys are reported, including an indication of the overall measurement of the compliance burden (by way of an index) in each of the 47 countries, whilst in Section 4 the findings are subjected to a more detailed analysis, identifying key features of the VAT compliance burden and its relationship to variables that may have an impact upon that burden. That analysis includes statistical analyses of the relationship between the derived VAT compliance burden index and a number of potential determinants such as the level of economic development, age (maturity) of VAT, tax level (Tax revenue/GDP), VAT level (VAT revenue/GDP), VAT share (VAT revenue/tax level), VAT revenue ratio (VAT revenue/Potential VAT revenue) and exports level (exports/GDP). The authors provide their conclusions in Section 5.

2. Methodology

2.1. Design of the VAT diagnostic tool

Analysis of the literature[8] together with the early OECD work and the conduct of the 13 country pilot study suggested that the design of the diagnostic tool should be based on four factors that are perceived to be the main drivers of the VAT compliance burden facing VAT registered business taxpayers at the individual country level: 1) tax law complexity and burden resulting from core elements of VAT policy (Factor A); 2) the number and frequency of administrative requirements to comply (Factor B); 3) revenue body capabilities in meeting taxpayers' service and compliance needs (Factor C); and 4) monetary costs and benefits associated with the act of complying (Factor D).

A comprehensive set of compliance burden indicators (27 in total) was then developed and categorised under Factors A – D (see Table 1 of the Attachment). These indicators were largely objective and aimed to maintain the consistency of the final weighted scores used for cross-country comparisons. In brief:

- Factor A was associated with the perceived degree of complexity and compliance burden resulting from core elements of the VAT policy framework (e.g. the VAT rate structure, the availability of simplified methods for determining VAT liabilities, and the VAT registration threshold). The set of core elements and associated indicators (six in total) were selected on the basis of previous studies suggesting they have a direct impact on the compliance burden.
- Factor B was associated with administrative obligations and events arising under the VAT law (e.g. registration, filing, payment, record-keeping, audits, disputes) and the burden these imposed on business. Eleven indicators were identified for this factor.

[8] See Highfield et al, *supra* n. 2 and Highfield et al, *supra* n. 4.

- Factor C was assigned eight indicators that provided more insight into how each country's revenue body operated in the context of helping taxpayers comply with their obligations. The indicators related to the nature and quality of specific services of the revenue body (e.g. the comprehensiveness of its website, the quality of its phone enquiry service, the ability to provide timely VAT refunds). Theoretically, the provision of such services reduces tax law complexity and thus, compliance burdens.
- Factor D was allocated two indicators that explored aspects of the monetary costs and benefits involved in complying with VAT laws. These indicators dealt with the aggregate value of annual VAT refunds and provisions for the payment of interest to taxpayers for delayed refunds.

It was acknowledged at the outset of the project that the four factors would impact unevenly in a compliance burden context and that, as a result, some form weighting would be needed for the prototype diagnostic tool. The development of a total weighted score was seen as a prerequisite to the derivation of a composite indicator that could be used to allocate participating countries into groups of relative VAT compliance burden.

2.2. Administration of the survey

The countries targeted for engagement in the extended study were those member countries of the FTA that administer a VAT system of taxation — some 47 countries as of August 2018 (see Table 1).[9] These countries provide a broad level of global representation, covering all continents and reflect a fair mix of advanced and developing countries.

Table 1. FTA Member Countries with a VAT

Argentina	Denmark	Ireland	Netherlands	Slovenia
Australia	Estonia	Israel	New Zealand	South Africa
Austria	Finland	Italy	Norway	Spain
Belgium	France	Japan	Peru	Sweden
Brazil	Germany	Kenya	Poland	Switzerland
Canada	Greece	Korea	Portugal	Turkey
Chile	Hungary	Latvia	PRC (China)	United Kingdom
Colombia	Iceland	Lithuania	Russian Fed.	
Costa Rica	India	Luxembourg	Singapore	
Czech Rep.	Indonesia	Mexico	Slovakia	

Planning for the project commenced in July 2018 and the project was formally launched in early August 2018 with surveys completed for all countries early in 2019. Each of the 27 compliance burden indicators required a single rating on the project's 'Rating and Evaluation Form'. There was provision for any qualifying/elaborating comments to be made by researchers if deemed necessary and helpful for research purposes. The relevant fiscal year for rating purposes was 2017. While some of the indicators could be determined independently by country researchers using published materials, a number required data and insights that were held only by government agencies, in particular the tax administration body and/or ministry of finance (MOF), and/or representatives of business and the tax/accounting profession. Guidance was provided on suggested data sources for each of the 27 compliance burden indicators.

The 'Rating and Evaluation Form' also gathered a limited amount of information concerning the degree of government and institutional recognition and attention being given to address the tax

[9] FTA member countries excluded from participation in the survey were Hong Kong (SAR) and the United States, neither of which impose a VAT, and Malaysia which repealed legislation for its VAT system in 2018 and reverted to the Sales Tax that existed up to 2015.

compliance burden of the VAT and other taxes. There were six statements (see Section 3 and Attachment) that required an indication of whether certain policies and processes were in place, with just a simple 'Yes/No' response required.

To carry out the preliminary research required, staff of KPMG member firms in each country undertook a range of enquiries needed to complete the diagnostic tool's 'Rating and Evaluation' form in respect of the country's VAT system. In the relatively short time available, KPMG country-based staff were required to research relevant publicly-available materials and liaise, to the extent practicable, with relevant government authorities, academics and professional bodies for completion of the survey, which was then collated, verified and analysed by the central UNSW Sydney project team. KPMG Global exercised an important coordination and control role in the whole process, which was critical to the 100 per cent response rate from the 47 countries and the high quality of those responses.

Each participating country's VAT system was then rated against the 27 indicators and ultimately assigned a final normalised weighted score. Each score was converted into a 'compliance burden index' applying a 10-point scale, with an index rating of 1 reflecting the compliance burden of the (theoretically) most simple VAT system while a rating of 10 is indicative of the compliance burden of the (theoretically) most complex VAT system.

3. Survey Results

In this part of the paper, the authors provide a summary and analysis of survey responses for each factor and associated indicators comprising the diagnostic tool. Completed survey forms were received for all 47 countries, including 8 in the Asia/ Pacific region. However, in a very few instances it was not possible to locate data or form a judgment as to an appropriate value for a specific indicator. For these situations, the researchers were required to adopt a 'default value' indicator that would be set at the mid-point of the indicator range value. It was also decided that if the survey response for any country included more than five 'default value' indicators the country would be excluded from the study's findings. No countries fell into this category.

3.1. The big picture

A summary of the VAT compliance burden index derived for each country is set out in Table 2.

Table 2. VAT Compliance Burden Index for Surveyed Countries (2017 Fiscal Year)

Compliance Burden Index	Number of Countries	Countries
1	-	-
2	1	Singapore
3	4	Australia, Costa Rica, New Zealand, South Africa
4	9	Canada, Denmark, Estonia, Ireland, Japan, Lithuania, Norway, Russian Federation, Sweden
5	18	Austria, Chile, Czech Rep., Finland, Germany, Iceland, India, Indonesia, Israel, Korea, Latvia, Netherlands, Peru, Portugal, Peoples' Republic of China, Slovenia, Switzerland, United Kingdom
6	11	Argentina, Colombia, France, Greece, Hungary, Italy, Kenya, Mexico, Poland, Slovakia, Spain

7	4	Belgium, Brazil,[10] Luxembourg, Turkey.
8	-	-
9	-	-
10	-	-

From Table 2 it is apparent that no countries scored a "1" (minimum possible compliance burden as a result of the VAT system), but also that no countries were so poor in terms of the burden of their VAT compliance that they scored 8 or more (where 10 would be indicative of a VAT system with the highest possible burden).

Fourteen out of 47 countries had a compliance burden index score of 4 or less, including five where the index score was less than 4 (i.e. Australia, Costa Rica, New Zealand, Singapore, and South Africa), while 15 countries were reported as having an index score of 6 or more, including four with an index score of 7. No country recorded an index score above 7, an outcome most likely resulting from the fact that the population of targeted countries was largely confined to higher income and advanced countries.

Based on the design of the tool and the data gathered, only one country rated an index of 2 or better (i.e. Singapore) and this rating was achieved with a relatively small margin below the threshold for a higher index rating. It is noteworthy that in the case of Singapore, four of the 27 indicators applied to arrive at its rating were allocated a default value in the absence of verifiable data/ knowledge. These 'gaps' largely impacted its score for Factor A (i.e. tax law complexity), while the high overall rating was achieved with exceptional scores for Factor B (i.e. administrative obligations) and Factor C (administrative capabilities). In the case of both Australia and New Zealand, both countries recorded above average scores for Factor A (i.e. tax law complexity) but offset this aspect of compliance burden with exceptionally low scores for Factor B (i.e. administrative obligations) and Factor C (administrative capabilities).

The diagnostic tool identified some 15 countries with indications of medium/high to very high VAT compliance burden, applying an index factor of 6 as the minimum for this observation. Significantly, of these 15 countries:

- thirteen countries rated above the midpoint score for Factor A (Tax complexity etc. resulting from the VAT policy framework), pointing to the pervasiveness of VAT policy choices as a significant factor influencing compliance burden in these countries;
- ten countries rated above the mid-point score for Factor B (Number/frequency of administrative obligations etc.), pointing to fair potential for administrative changes, for example:
    - streamlining the data requirements of regular VAT returns (12 of the 15 countries);
    - improving audit quality to reduce the incidence of disputed assessments (10 of the 15 countries); and

[10] With the inclusion of Brazil, the question arose as to which system of indirect taxation should be included—the federally-administered tax on industrialised products (IPI) and/or the state-administered tax on circulation of goods and transportation and communication services (ICMS). The OECD classifies each tax as a 'value added tax'. It was decided to include both taxes in the data gathering process. The federal and subnational Brazilian VAT each scored 7 on the compliance burden index. Subsequent references to Brazil in charts and figures in this paper refer only to the federal VAT.

- notwithstanding the challenges presented by the VAT policy and administrative framework to minimising compliance burden, approximately three quarters of these countries rated favourably on Factor C (Revenue body capabilities etc.,) suggesting that in these countries the revenue body has been successful in its efforts to minimise the VAT compliance burden.

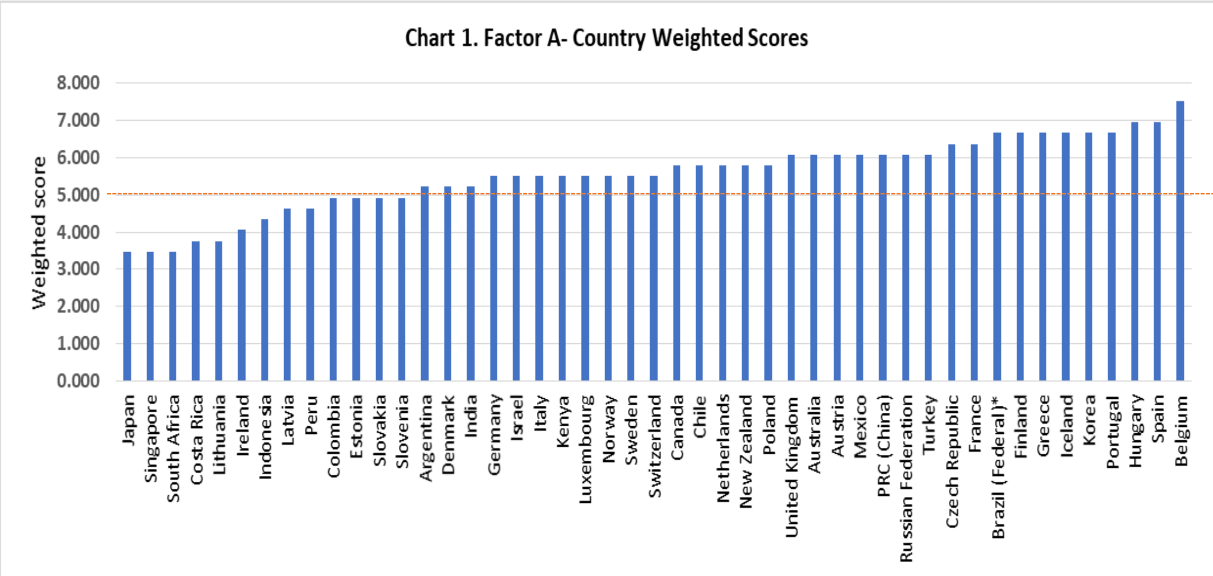
3.2. The Key Drivers

Twelve of the 27 indicators were shown to be the more prevalent drivers of compliance burden identified from use of the diagnostic tool. These are best explored by reference to each of the four factors in turn.

Factor A – Tax Law Complexity and Burden Resulting from Core Elements of VAT Policy

Taking account of survey ratings across the full range of indicators in the diagnostic tool, five of the six indicators for this factor were the more commonly observed drivers of compliance burden in 2017. These were: 1) the existence of multiple rate structures; 2) the scale of reduced rates and exemptions; 3) the limited use of the cash basis for determining VAT liabilities; 4) the limited availability/use of simple rules for prescribed industries for determining VAT liabilities; and 5) VAT registration obligations. Only one of the six factors – optionality – did not feature as a significant driver of the burden.

Viewed across all of the indicators for this factor, approximately two thirds of countries rated above the mid-point of the total weighted score range (i.e. approximately, a score of 5.000), suggesting a medium/high, or very high compliance burden attributable to the sorts of policy design elements identified in the prior section—see summary in Chart 1.



Countries in the Asia/ Pacific Region

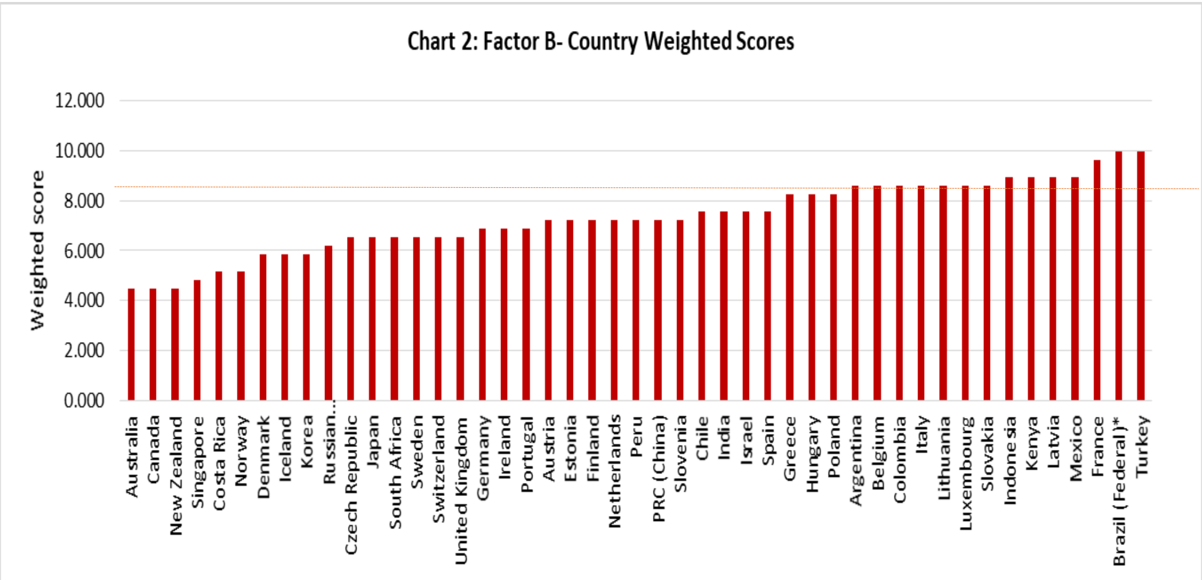
Japan and Singapore were identified as having the lowest compliance burden of all 47 surveyed countries for this factor although, as already mentioned, in the case of Singapore its overall rating across all six indicators included a number of 'default value' ratings in the absence of verifiable data/ knowledge. Indonesia also rated below the mid-point of the total weighted score for this factor, an outcome influenced greatly by the very high registration threshold that is a feature of its VAT system.

Australia, Korea, New Zealand and PRC (China) all rated well above the mid-point of the total weighted score for this factor. For Australia, this result was due in large part to the scale of VAT exemptions, the relatively large numbers of businesses that must register for VAT, and the number of optional regimes in place; for Korea, contributing factors were the inability to use cash records to compute liabilities, the absence of simplified rules for liability determination for businesses in prescribed industries, and the low registration threshold; and for New Zealand, contributing factors were the relatively high incidence of VAT registrations and the number of optional regimes. For PRC (China), the main indicators of burden identified were the complexity of the rate structure, the inability to use cash records to compute liabilities, and the low VAT registration threshold.

Factor B: Number and Frequency of Administrative Requirements to Comply

Only three of the eleven indicators for this factor were identified as the more significant/prevalent drivers of the VAT compliance burden in 2017: 1) burdensome tax return information requirements; 2) a lack of staggered VAT payment and filing periods for SMEs; and 3) high rates of verification actions and disputed assessments. The other eight indicators (see Attachment) did not have the same significant impact.

Viewed across all of the indicators for this factor, approximately two thirds of countries had a total weighted score below the mid-point of the total weighted score range (i.e. approximately 8.4) suggesting a very low or low/medium compliance burden resulting from the administrative compliance requirements of their respective VAT systems—see Chart 2.



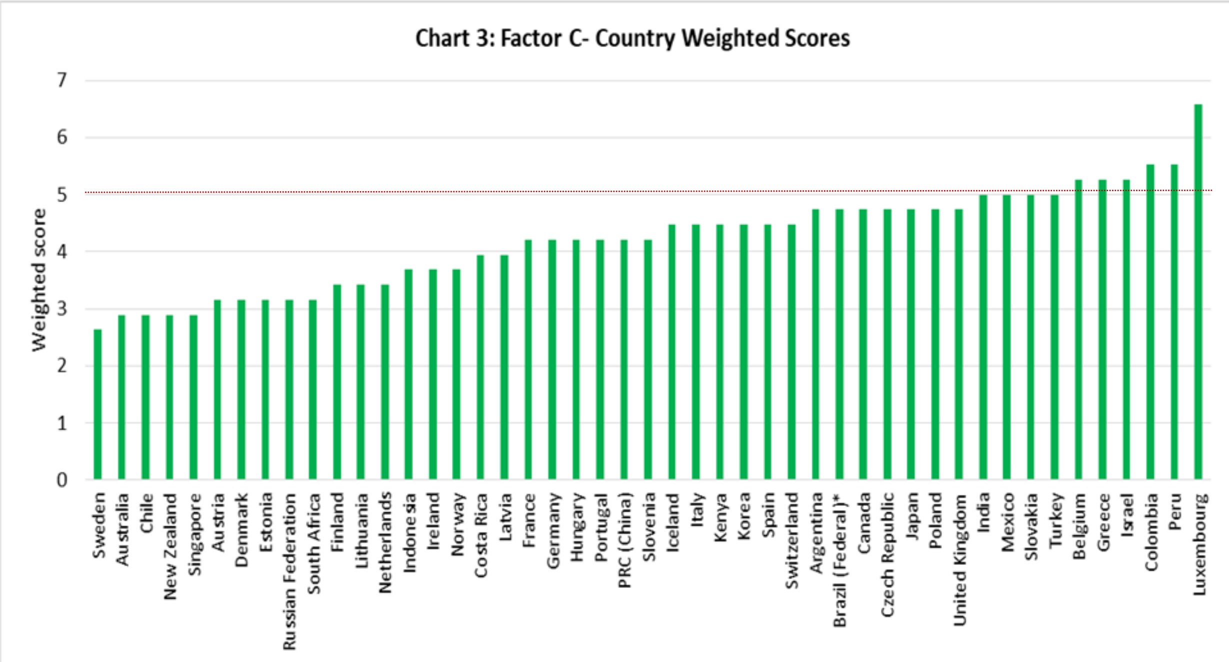
Countries in the Asia/ Pacific Region

Australia and New Zealand, along with Canada, were identified as having the lowest compliance burden of all 47 surveyed countries for this factor, closely followed by Singapore in fourth place. This overall result reflects a broad mix of policies and practices that serve to greatly minimise taxpayers' compliance burden: streamlined administrative requirements for registration, return filing and payment; an absence of other reporting obligations; extensive automation of routine processes, and relatively low levels of verification and disputation. India, Japan, Korea, and PRC (China) also rated well on this factor, all well the mid-point of the total weighted score for this factor.

Factor C: Revenue Body Capabilities in Meeting Taxpayers' Service and Compliance Needs

Taking account of survey ratings across the full range of countries, only three of the eight indicators for this factor were found to be the more significant/ prevalent drivers of compliance burden in 2017: 1) inadequate or poorly designed services and programs for newly registered taxpayers; 2) delays in refunding excess VAT payments to taxpayers, which in some countries is exacerbated by limitations on the payment of interest on late refunds (Factor D); and 3) weaknesses in revenue bodies' phone enquiry services.

Viewed across all of the indicators for this factor, the vast majority of countries (i.e. just under 90 percent) had a total weighted score below the mid-point of the total weighted score range (i.e. approximately 5), suggesting a very low or low/medium compliance burden resulting from the capabilities of the revenue body to meet taxpayers' service and compliance needs—see Chart 3.



Countries in the Asia/ Pacific Region

Australia, New Zealand, and Singapore all rated very well for this factor, all within the top 5 of those countries with the lowest compliance burden, with Sweden rating the lowest. This assessment reflects the high standards of tax administration in these countries, in particular the very high standards of service delivery (e.g. comprehensiveness of website, the quality of phone inquiry services, the extensive support provided for new businesses, and the quality and high usage of online services). Other countries in the region also achieved good ratings, and no country rated above the mid-point of the total weighted score for this factor.

Factor D: Monetary Costs and Benefits Associated with the Act of Complying

For this factor, there were two indicators: 1) whether interest is payable on 'delayed' refunds of excess VAT payments and the period of time that must have elapsed under the law before interest becomes payable; and 2) the total value of refunds as a proportion of total VAT revenue collections. Only the former was found to be a significant driver of the tax compliance burden for this factor.

Overall, responses for this indicator varied significantly reflecting highly divergent policy and practices on the payment of interest on delayed refunds:

- for 17 countries (including Canada, Colombia, Finland, Norway, New Zealand, Slovenia, and South Africa), interest was generally payable on excess VAT credits unpaid after one month or more;
- for 4 countries (including Hungary and Japan), interest was generally payable on excess VAT credits unpaid after two months or more;
- for 12 countries (including Czech Republic, France, Germany, Italy, Peru and Singapore), interest was generally paid on excess VAT credits unpaid after three months or more; and
- for 14 countries (including Austria, Belgium, Chile, Kenya, Korea, and Sweden), interest was generally not paid on excess VAT credits.

Countries in the Asia/ Pacific Region

Four countries in the region (i.e. Australia, Korea, PRC (China), and Singapore) rated above the midpoint of the total weighted score range for this factor. While Australia rated well due to provisions in the law that enable payment of interest after one month on delayed VAT refunds, its overall rating was impacted by a very high incidence of VAT refunds—over 50% in practice. For both Korea and PRC (China), their respective ratings were impacted by the absence of any provisions for the payment of interest on delayed refunds and the overall level of refunds (i.e. for Korea—30-39%; for PRC (China)—20-29%). In the case of Singapore, its overall rating was impacted by the length of time taxpayers must wait before interest becomes payable (i.e. 3 months) and its moderate level of refunds (i.e. 20-29%).

3.3. Institutional posture and attitudes

In addition to examining features of the VAT law and its administration in the form of the 27 compliance burden indicators, the diagnostic tool also aimed to gather insights as to the degree of government and institutional recognition and attention being given to address the VAT (and other taxes) compliance burden. Data were collected in relation to six statements included in the country-by country surveys which addressed the following issues:

- ***Formal Government Goal/Target for Reducing Compliance Costs/Burden:*** Governments in well over half of surveyed countries had established formal goals/targets for reducing compliance costs.
- ***Compliance Costs Considerations when Formulating Tax Policy Proposals:*** In over two thirds of countries surveyed, compliance cost considerations were taken into account when formulating tax policy proposals.
- ***Use of Objective Cost Data from External Resources to Inform Policy Decisions:*** Less than one third of countries acquired periodically and used objective compliance costs data obtained from external sources to inform their policy decisions.
- ***Announced Government Plan to Reduce VAT burden:*** Approximately a third of countries surveyed were reported as having an announced government plan with specific VAT burden reduction initiatives.
- ***Revenue Body's Formal Plans and Goals/Objectives for Compliance Cost Reductions:*** Revenue bodies in approximately half of the surveyed countries had formal plans that reflected goals/objectives to reduce compliance costs.

- ***Formal Consultative Arrangements to Discuss Compliance Costs issues:*** Two thirds of surveyed countries had formal consultative arrangements in place with representatives of business and/or the tax accounting profession that provide opportunities for stakeholders to raise and discuss compliance costs issues.

Hence, and concerning the prevailing institutional posture and attitude to tax compliance burden reduction, the survey indicators reflected a mix of positive and negative environments. Responses suggested that the compliance burden issue was recognised and there was a commitment and plan for burden reduction in seven countries (Belgium, Brazil, Colombia, Hungary, Italy, Kenya, and Mexico). Moreover, there were some indications of burden recognition reported in four further countries (France, Luxembourg, Spain, and Turkey), but more concerted action by governments appeared to be warranted, particularly as there were no indications of commitment or plans to reduce the VAT compliance burden reported in four countries (Argentina, Greece, Poland, and Slovakia).

Note, however, that given the limited and generalised nature of the information sought via this aspect of the survey, an absence of positive responses to one or more of the statements should not necessarily be viewed as a major concern. A country that has a relatively simple and well-administered VAT system and/or where action has been taken in the past to reduce the VAT compliance burden may no longer deem it a priority to make further efforts to reduce the VAT compliance burden, focusing on other more important matters. Concerns would, however, be justified where the diagnostic tool suggested that a country appeared to have a significant VAT compliance burden and based on the information gathered the matter did not appear to be a priority for government, the MOF and/or the revenue body.

Countries in the Asia/ Pacific Region

Generally speaking, compliance burden reduction is recognised and actively pursued within most of the countries assessed within the region. In the case of India whose new national VAT system was implemented only in 2017 it is perhaps too early to make a fair and balanced judgment, given the inevitable teething problems that can arise when implementing a new and broad-ranging tax. Unfortunately, no information was available in respect of the situation in Korea.

4. Analysis of Survey Findings

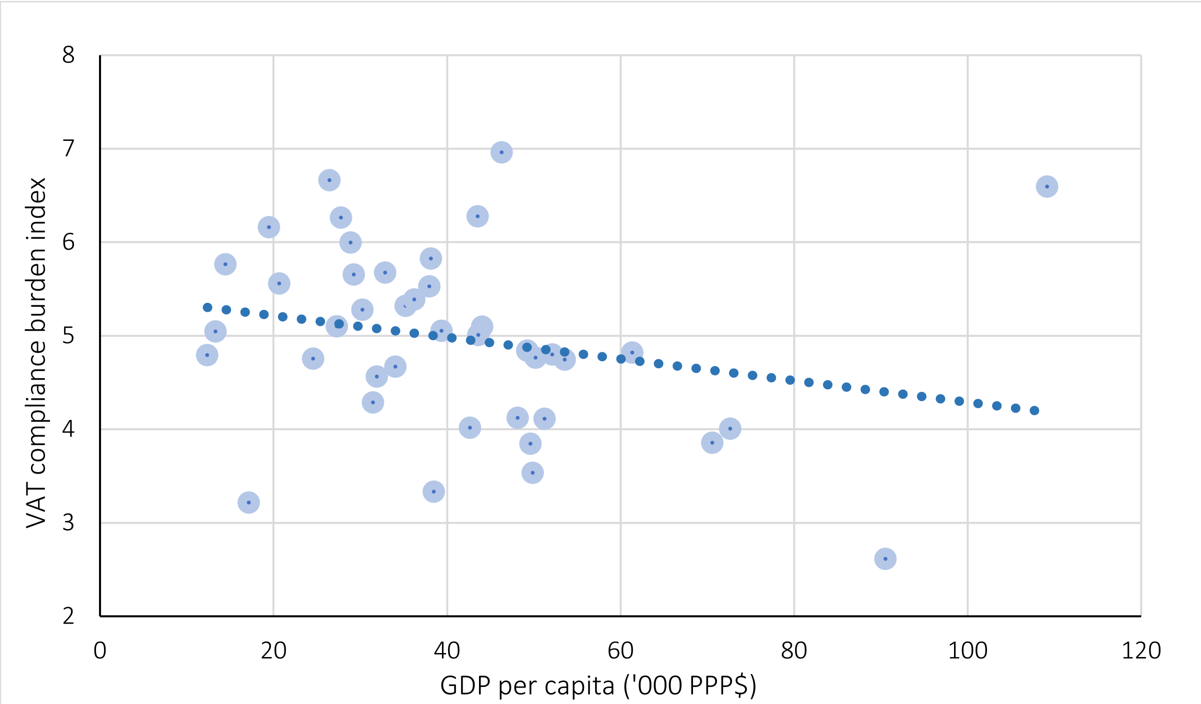
The primary objective of the diagnostic tool was to provide an indication of the likely scale of the compliance burden of a country's VAT system, expressed in terms of a composite compliance burden index, and the main drivers of that burden. The secondary objective of the tool was to identify those aspects of VAT policy and administration that contributed to such burden most frequently across a population of surveyed countries. The tool was not intended, nor designed, to provide a definitive ranking of the compliance burden of individual participating countries, acknowledging the considerable difficulties of achieving this in a precise and defensible manner.

This section presents summary statistical analyses of the relationship between the derived VAT compliance burden index and a number of potential determinants such as the level of economic development, age (maturity) of VAT, tax level (Tax revenue/GDP), VAT level (VAT revenue/GDP), VAT share (VAT revenue/tax level), VAT revenue ratio (VAT revenue/Potential VAT revenue) and exports level (exports/GDP).[11] To this end, secondary data sources for 2017 from the OECD and World Bank were utilised. Given the sample size (*n*=41), caution should be exercised when making any conclusions based on the statistical analyses because asymptotic inferences may be unreliable in small samples.

4.1. Analysis of countries by relative compliance burden and level of economic activity

It was established through simple correlation analysis that there was generally a negative relationship between the VAT compliance burden index and the level of development of a country. In other words, and as illustrated in the scatter diagram in Figure 1, the more developed the country the lower the likely compliance burden. For these purposes, the level of development of a country was measured by reference to GDP per capita in Purchasing Power Parity (PPP) dollars.

Figure 1. Country Compliance Burden Relative to Level of Country Development (41 Countries)



Note: Due to lack of relevant date, six countries, namely, Brazil, China, India, Kenya, Russia and South Africa, are excluded from statistical analyses.

As can be noted from the trend line, those countries with lower positions on the compliance burden index tended to have higher levels of development (as proxied by GDP per capita in PPP$). The simple correlation coefficient between relative VAT compliance burden and a country's income level (level of development) was found to be -0.232, which is statistically insignificant (with a computed *t*-statistic of -1.49).

This simple correlation analysis was supplemented by a more sophisticated multiple regression analysis. The multiple regression strongly confirmed the negative relationship between the VAT compliance burden and the level of development in a country: the more developed a country is, the

[11] Bearing in mind that VAT share = VAT level/tax level, these three variables are likely to be highly correlated. This is borne out in a multivariate regression analysis that includes all of these variables (and others). Thus, to avoid the problem of multicollinearity, VAT share is excluded from the regression analysis.

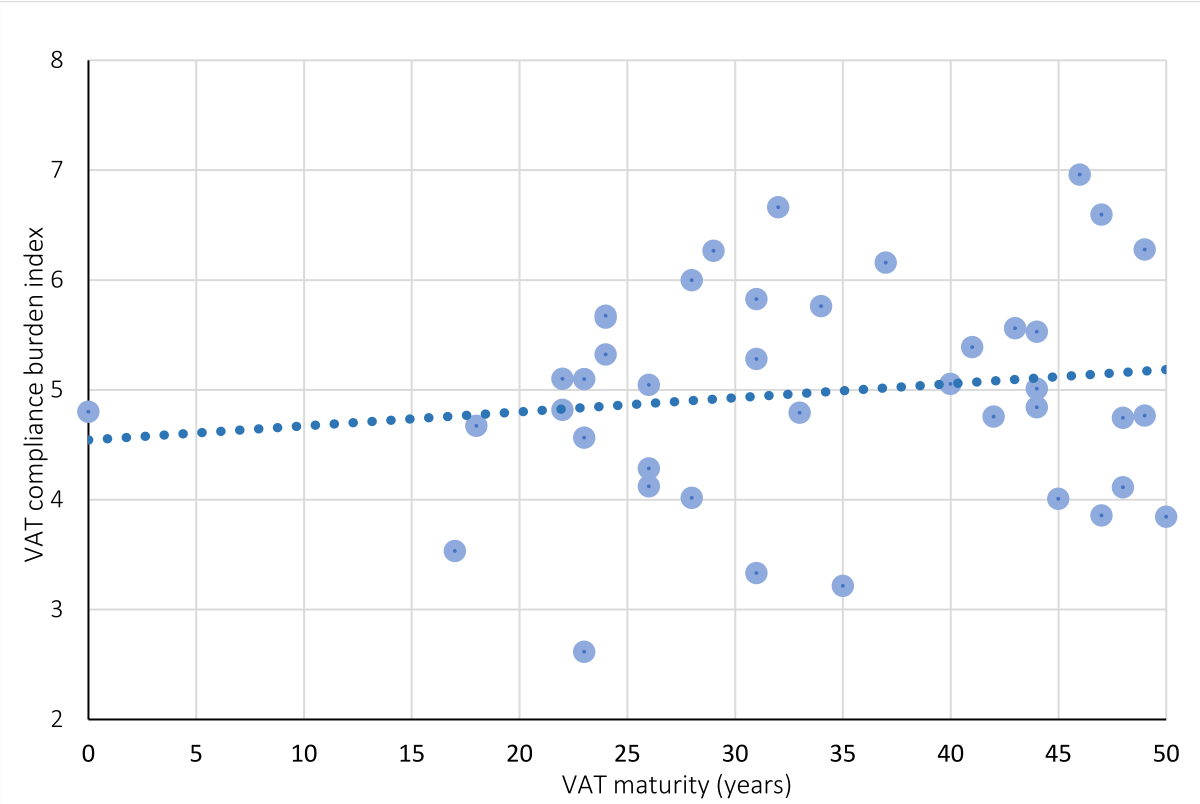
relatively lower is its compliance burden (estimated coefficient of –0.00004 with a computed *t*-statistic of –3.04, which is significant at the 1% level).

4.2. Analysis of countries by relative compliance burden and maturity of VAT

The level of maturity of a VAT regime (measured by the number of years since its introduction) could potentially and intuitively have two opposing impacts on the relative compliance burden. On the one hand, the older the VAT is, the more experienced tax administrators and VAT payers become, and this should have a downward effect on the relative VAT compliance burden. On the other hand, VAT law may become more complex over time with, for example, more tax rates and more layers of regulation.

Figure 2 provides a scatter diagram of the VAT compliance burden index plotted against VAT maturity. It generally indicates a negative impact of age of the VAT on relative compliance burden: the older the VAT becomes, the higher is the relative compliance burden (with a simple correlation coefficient of 0.151). But this influence, identified through simple correlation, is not statistically significant (with a computed *t*-statistic of 0.95).

Figure 2. Country Compliance Burden Relative to VAT Maturity (41 Countries)



This lack of significant simple correlation was not supported by a multiple regression analysis which indicated that the maturity of the VAT had a positive and significant impact on the compliance burden – the older the VAT becomes, the higher is the relative compliance burden (coefficient of 0.020 and computed *t*-statistic of 1.81, which is statistically significant at 5% level for a one-sided test).

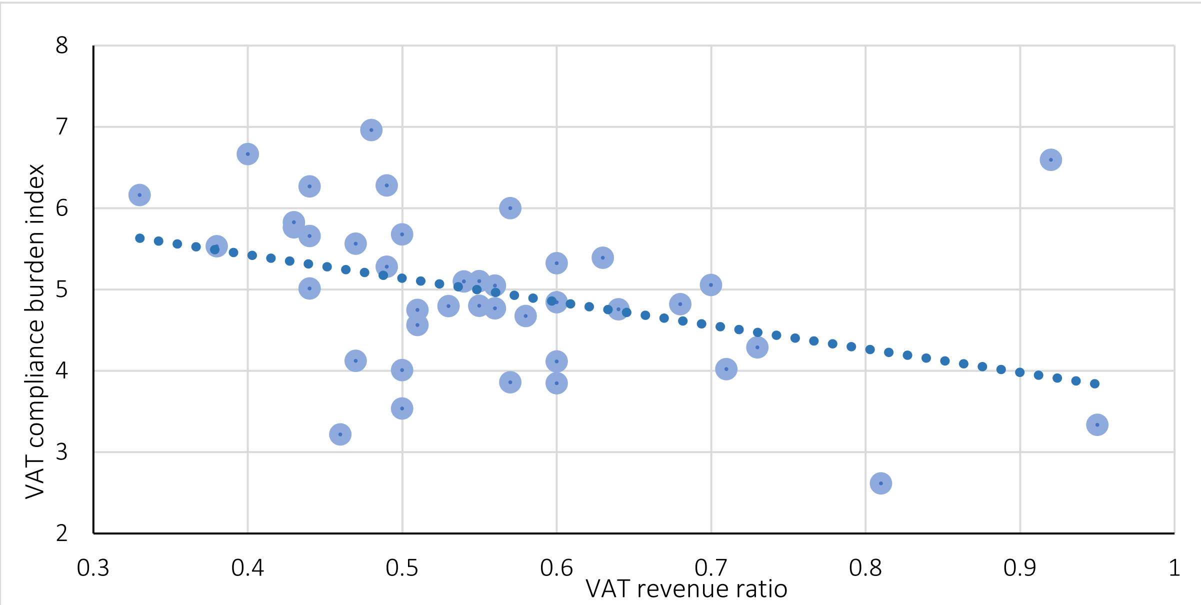
4.3. Analysis of countries by relative compliance burden and various tax ratios

In terms of simple correlation analysis, neither VAT level nor tax level significantly correlated with the VAT compliance burden index. In the regression analysis, VAT level remained an insignificant explanatory variable but tax level became a highly significant determinant of VAT compliance burden with a coefficient 0.058 and computed *t*-statistic of 2.78, which is significant at 1% level. That is, a country with a heavier tax ratio would be expected to have a relatively higher VAT compliance burden.

Further, the VAT revenue ratio[12] is a determinant that both significantly correlated with and exerted a significant and negative influence on the VAT compliance burden index. The simple correlation coefficient between VAT compliance burden index and VAT revenue ratio is -0.393 with a computed *t*-statistic of -2.67, which is significant at 1% level. This was further confirmed by a multiple regression analysis yielding a coefficient of -1.93 with a computed *t*-statistic of -1.81, which is significant at 5% level for a one-sided test.

Figure 3 illustrates the negative relationship between the VAT compliance burden index and VAT revenue ratio. This is intuitively plausible as it would be expected that a country with a broader base and fewer reduced VAT rates would have a relatively lower VAT compliance burden.

Figure 3. Country Compliance Burden Relative to VAT Revenue Ratio (41 Countries)



4.4. Analysis of countries by relative compliance burden and exports level

Multiple regression also strongly indicated that a country's level of exports had a statistically significant negative influence on the VAT compliance burden of a country – the higher the level of exports as a percentage of GDP, the higher was the relative compliance burden (coefficient of 0.015 and computed *t*-statistic of 2.92, which is statistically significant at the 1% level).

5. Concluding Comments

In this paper, the authors have provided a summarised account of a project across 47 advanced and developing countries designed to explore the merits of the VAT diagnostic tool for assessing VAT

[12] The VAT revenue ratio (VRR) measures the ratio between the amount of VAT revenue actually collected in respect of a fiscal year and what would theoretically be raised if the VAT was applied at the standard rate to the entire potential tax base in a "pure" VAT regime and all revenue was collected (i.e. with perfect compliance). In general, the maximum value of the VRR is 1, although in particular and rare circumstances its value can exceed 1. A more detailed account of the VRR's computation and its interpretation can be found in the OECD publication *Consumption Tax Trends* published biennially.

compliance burden and its key drivers.[13] It has established that the VAT diagnostic tool is "fit for purpose" as a robust instrument capable of measuring and evaluating the business VAT compliance burden across the 47 FTA countries, and of identifying the key drivers of that burden.

The countries surveyed ranged from those with very low compliance burdens to those with high compliance burdens, with the majority of countries (38) clustered around the middle of the index. Roughly 30 percent of the countries surveyed (14) had indications of a low to very low VAT compliance burden.

The VAT policy framework (Factor A of the tool) appeared to be a significant factor in driving the compliance burden in many countries, whilst the administrative framework (Factor B) and the capabilities of the revenue services (Factor C) were less prominent as driving factors.

It appears that the compliance burden was heavily influenced by the level of economic development of the country, and the level of exports. It was also influenced, although not as significantly, by the ratio of VAT to GDP. The VAT revenue ratio, reflecting the impact of tax policy design choices and taxpayers' non-compliance, also appeared to be highly relevant.

The overall process adopted for testing of the diagnostic tool proved highly effective and efficient—the initial survey process was carried out relatively quickly and the information gathered proved to be generally accurate and largely complete for analysis purposes. The UNSW Sydney research team considers that – at this stage – it has sufficient proof of concept to be able to undertake, in collaboration with stakeholders, the development of a broader suite of diagnostic tools designed to measure and evaluate the tax compliance burden of other business taxes, in particular, the corporate income tax and tax regimes applicable to the provision of labour (e.g. income tax withholding and social security regimes). The feasibility of carrying out further research, most likely next in respect of the corporate income tax, is currently being assessed.

[13] Full details of the project, with all supporting tables and statistical analyses, can be found in the final project Report – Diagnosing the VAT Compliance Burden: A Cross-Country Assessment, available at https://www.business.unsw.edu.au/our-people/chrisevans#PublicationsResearch. Note that it is based upon the country-specific information that was reported by the in-country teams as prevailing in the 2017 fiscal year and does not take into account changes that may have taken place in various countries since then.

Attachment

Compliance Burden Indicators and Their Ratings

Factor A: Tax Law Complexity and Burden Resulting from Core Elements of VAT Policy

Compliance Burden Indicators	Ratings
The VAT rate structure (NB: Reduced rates include 'zero-rated' goods and services, exclusive of exports.)	1. No reduced rates apply 2. One reduced rate applies. 3. Two reduced rates apply. 4. Three or more reduced rates apply.
The scale (i.e. revenue impact) of reduced rates and exemptions (NB: Reduced rates include 'zero-rated' goods and services, exclusive of exports.)	1. The revenue impact of reduced rates and exemptions is nil or low (i.e. <10% of the estimated VAT base). 2. The revenue impact of reduced rates and exemptions is medium (i.e. 10-19% of the estimated VAT base). 3. The revenue impact of reduced rates and exemptions is high (i.e. 20-29% of the estimated VAT base). 4. The revenue impact of reduced rates and exemptions is very high (i.e. 30% or more of the estimated VAT base).
Use of cash records by specified small businesses (*) to calculate VAT liabilities	1. 50% or more of small businesses required to pay VAT use the "cash basis of accounting" for calculating VAT liabilities. 2. Between 25-49% of small businesses required to pay VAT use the "cash basis of accounting" for calculating VAT liabilities. 3. Less than 25% of small businesses required to pay VAT use the "cash basis of accounting" for calculating VAT liabilities 4. Use of the "cash basis of accounting" is generally not permitted.
Use of rules for prescribed industries that simplify calculations of VAT liabilities	1. Over 50% of VAT taxpayers use simplified rules that are available for taxpayers in prescribed industries to calculate their VAT liabilities. 2. Between 25-50% of VAT taxpayers use simplified rules that are available for taxpayers in prescribed industries to calculate their VAT liabilities. 3. Less than 25% of VAT taxpayers use simplified rules that are available for taxpayers in prescribed industries to calculate their VAT liabilities. 4. There are no simplified rules for taxpayers in any prescribed industries.
VAT registration	1. Less than 30% of the business taxpayer population is registered for VAT purposes. 2. 30-39% of the business taxpayer population is registered for VAT purposes. 3. 40-49% of the business taxpayer population is registered for VAT purposes. 4. 50-59% of the business taxpayer population is registered for VAT purposes. 5. 60-69% of the business taxpayer population is registered for VAT purposes. 6. 70-79% of the business taxpayer population is registered for VAT purposes. 7. 80-89% of the business taxpayer population is registered for VAT purposes. 8. 90% or more of the business taxpayer population is registered for VAT purposes
Optionality (i.e. the availability of optional regimes to small businesses) (*):	1. There are no optional regimes generally available to small businesses. 2. There is only one optional regime generally available to small businesses. 3. There are two optional regimes generally available to small businesses. 4. There are three or more optional regimes generally available to small businesses.

Factor B: Number and frequency of administrative requirements to comply

Compliance burden indicators	Ratings
Electronic VAT registration	1. Businesses can register electronically: 50% or more use this method 2. Businesses can register electronically: 25-49% use this method 3. Businesses can register electronically: < 25% use this method 4. Businesses required to register must file applications on paper and/or attend a tax office in person.
Staggered VAT payment periods for small businesses:	1. Small businesses generally need only pay their VAT liabilities quarterly or less frequently. 2. Small businesses generally need only pay their VAT liabilities bi-monthly. 3. Most small businesses are generally required to pay VAT liabilities monthly.
Staggered return filing periods for small businesses:	1. Small businesses generally need only file VAT returns quarterly or less frequently. 2. Small businesses generally need only file VAT returns bi-monthly. 3. Most small businesses are generally required to file VAT returns monthly.
Information requirements of a typical VAT return	**1.** Tax returns require minimal data to be provided, with less than 10 boxes or fields (other than for taxpayer identification) typically to be completed. 2. Tax returns require a moderate amount of data, with 11-20 boxes or fields typically to be completed. 3. Tax returns require a significant amount of data to be provided, with 21-30 boxes or fields typically to be completed. 4. Tax returns require a very large amount of data, with over 30 boxes or fields typically to be completed.
Documentation requirements for exported goods and services	1. There are no additional documentation requirements in respect of exported goods and services to be provided to the tax authorities as part of return filing obligations. 2. There are additional documentation requirements in respect of exported goods and services to be provided to the tax authorities as part of return filing obligations that impact less than 10% of registered taxpayers. 3. There are additional documentation requirements in respect of exported goods and services to be provided to the tax authorities as part of return filing obligations that impact between 10-19% of registered taxpayers. 4. There are additional documentation requirements in respect of exported goods and services to be provided to the tax authorities as part of return filing obligations that impact 20% or more of registered taxpayers.
Other reporting requirements (in addition to the VAT return (e.g. statistical data)	1. There are no reporting requirements additional to the periodic VAT return 2. There are reporting requirements in addition to the periodic VAT return — completed on an annual basis. 3. There are reporting requirements in addition to the periodic VAT return — completed every 4-6 months. 4. There are reporting requirements in addition to the periodic VAT return — completed at least every 3 months or more frequently.
The use of electronic invoices between businesses	1. Legislation permits use of e-invoicing between businesses and 50% or more of invoices are estimated to be prepared in this way. *2.* Legislation permits use of e-invoicing between businesses and 25 to 49% of invoices are estimated to be prepared in this way. *3.* Legislation permits use of e-invoicing between businesses and less than 25% of invoices are estimated to be prepared in this way. 4. Legislation does not permit use of e-invoicing between businesses.
Provision of copies of VAT invoices to the revenue body	1. Except for specific requests (e.g. re audits), copies of invoices do not need to be provided to the revenue body as a general rule. 2. Less than 50% of businesses are required to supply invoices to the revenue body. 3. 50% or more of businesses are required to supply invoices to the revenue body.
Record retention periods	1. Records must be retained by taxpayers for up to 4 years. 2. Records must be retained by taxpayers for between 4 and 8 years. 3. Records must be retained by taxpayers for 8 years or more.

Compliance burden indicators	Ratings
The number of VAT verification actions (*) (*) "Verification actions" include all types of actions taken by revenue bodies to verify taxpayers' reported liabilities (e.g. document verification requests, audits, investigations, and written and phone inquiries).	**1.** The overall number of VAT verifications actions each year is generally less than 5% of the registered VAT payer population. 2. The overall number of VAT verification actions each year is generally between 5-10% of the registered VAT payer population. 3. The overall number of VAT verification actions each year is generally over 10% of the registered VAT payer population.
The level of disputed VAT assessments	1. The no. of VAT assessments disputed each year is < 5% of the no. of VAT verifications. 2. The no. of VAT assessments disputed each year is 5-10% of the no. of VAT verifications. 3. The no. VAT assessments disputed each year is over 10% of the no. of VAT verifications.

Factor C: Revenue body capabilities in meeting taxpayers' service and compliance needs

Compliance Burden Indicators	Ratings
The revenue body's website (*)	1. The revenue body's website has a very comprehensive range of VAT information on taxpayers' VAT obligations. *2.* The revenue body's website has reasonably comprehensive range of information on taxpayers' VAT obligations. 3. The revenue body's website offers very little or no information on taxpayers' VAT obligations.
The revenue body's phone enquiry services (*)	1. The revenue body provides a dedicated phone enquiry service — phone response times and the standard of advice and service are generally of a high standard. *2.* The revenue body provides a dedicated phone enquiry service — phone response times and the standard of advice and service are generally of a reasonable standard 3. The revenue body provides a dedicated phone enquiry service — phone response times and the standard of advice and service are generally of an unsatisfactory standard. 4. The revenue body does not provide a dedicated call centre enquiry service.
Support for newly registered businesses (*)	1. The revenue body's range of VAT-related services targeted at newly registered businesses are of a high standard. 2. The revenue body's range of VAT-related services targeted at newly registered businesses are of a reasonable standard. 3. The revenue body's range of VAT-related services targeted at newly registered businesses are of a poor standard. 4. The revenue body does not provide any unique VAT-related services dealing with VAT targeted at newly registered businesses.
The revenue body's online VAT payment facilities	1. 75% or more of VAT payments received from taxpayers are made using online payment facilities. 2. Between 50-74% of VAT payments received from taxpayers are made using online payment facilities. 3. Between 25-49% of VAT payments received from taxpayers are made using online payment facilities. 4. Less than 25% of VAT payments received from taxpayers are made using online payment facilities, or there is no such capability.
The revenue body's online VAT return filing service	1. 75% or more of taxpayers use online filing facilities for submitting returns. 2. Between 50-74% of taxpayers use online filing facilities for submitting returns. 3. Between 25-49% of taxpayers use online filing facilities for submitting returns. 4. Less than 25% of taxpayers use online filing facilities for submitting returns or there is no such service.

Compliance Burden Indicators	Ratings
Quality of the revenue body's online transaction services (e.g. return filing) (*)	**1.** The revenue body's online transaction services are of a very high standard 2. The revenue body's online transaction services are of a high standard 3. The revenue body's online transaction services are of a medium standard 4. The revenue body's online transaction services are of a low standard
The revenue body's refunding of excess VAT payments	1. 90% of refund claims are paid with 1 month of receipt. 2. 90% of refund claims are paid within 2 months of receipt. 3. 90% of refund claims are paid within 3 months of receipt. 4. More than 3 months are required to pay 90% of refund claims.
The revenue body's private rulings service	1. Rulings are generally provided within one month of being requested. *2.* Rulings are generally provided within two months of being requested. 3. Rulings generally take longer than two months to be provided.

Factor D. Monetary costs/benefits associated with the act of complying

Compliance Burden Indicators	Ratings
The payment of interest on delayed refunds	1. Interest is paid on excess VAT credits unpaid after one month or more. 2. Interest is paid on excess VAT credits after two months or more. 3. Interest is only paid on excess VAT credits after three months or more 4. Interest is <u>not</u> generally paid on excess VAT credits.
The aggregate value of annual VAT refunds	1. The value of VAT refunds annually is less than 10% of annual gross VAT collections. 2. The value of VAT refunds annually is between 10-19% of annual gross VAT collections. 3. The value of VAT refunds annually is between 20-29% of annual gross VAT collections. 4. The value of VAT refunds annually is between 30-39% of annual gross VAT collections. 5. The value of VAT refunds annually is 40% or more of annual gross VAT collections.

Institutional posture and attitude to tax compliance burden reduction

In addition to examining features of the VAT law and its administration, the diagnostic tool aimed to gather insights as to the degree of government and institutional recognition and attention being given to address VAT (and other tax) compliance costs. The issues explored by the tool are set out below:

Statement of position	Yes/ No
There is a formal government goal/ target in place for reducing tax compliance costs (or administrative burdens) in general resulting from Government regulations.	☐ Yes ☐ No
Compliance costs considerations are generally assessed by the Ministry of Finance (MOF) when formulating tax policy proposals affecting the VAT.	☐ Yes ☐ No
Objective data on tax compliance costs (or "administrative burdens") are captured periodically from external sources (by the MOF, the revenue body, and/or an associated research body) to inform development of tax policy and/or compliance costs reduction initiatives.	☐ Yes ☐ No
There is an announced government plan (not yet implemented) for specific VAT burden reduction initiatives (e.g. a higher registration threshold and relaxed return filing periods)	☐ Yes ☐ No
The revenue body's formal planning documents reflect goals/ objectives for compliance cost reductions, and related strategies to achieve them.	☐ Yes ☐ No
Formal consultative arrangements involving representatives of business and/ or the tax accounting profession are in place that provide an opportunity for compliance costs issues to be raised/ discussed.	☐ Yes ☐ No