Tax Administration 2017

COMPARATIVE INFORMATION ON OECD AND OTHER ADVANCED AND EMERGING ECONOMIES

OECD

Tax Administration 2017

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Foreword

The *Tax Administration 2017* is the seventh edition of the OECD Centre for Tax Policy and Administration's biennial comparative information series first published in 2004. The primary purpose of the Tax Administration Series (TAS) is to share information that will facilitate dialogue on the design and administration of tax systems.

This edition of the TAS provides internationally comparative data on aspects of tax systems and their administration in 55 advanced and emerging economies, and includes performance-related data, ratios and trends up to the end of the 2015 fiscal year.

This is the first edition of the TAS where the data has been collected through a joint web-based survey – the International Survey on Revenue Administration (ISORA) – developed in co-operation between the OECD, IMF, IOTA and CIAT. This single international survey is an important development which will simplify the collection of data and will improve international comparability across a broader range of countries.

This edition was prepared by Michael Hewetson and Oliver Petzold. Considerable support was received from tax officials of the revenue bodies that participated in the preparation of the TAS, including the contributing authors, as noted in the Acknowledgments.

Tax Administration 2017 is published under the responsibility of the OECD Secretary-General.

Preface

The Tax Administration Series has developed into a rich resource of comparable information for tax administrations since the first edition was published in 2004. This comprehensive survey of organisation, process and performance helps tax administrations to understand better how they and their peers are operating. The new 2017 edition contains more analysis of trends and activities and of the changing environment in which tax administrations operate. It includes, for the first time, country-authored articles on some of the latest developments in the field.

Our aim in regularly collating and publishing comparable data is to help tax administrations increase the efficiency, effectiveness and fairness of tax administrations and reduce the costs of compliance. This is an important and shared purpose. Together, the 55 tax administrations that participated in Tax Administration 2017 raise some EUR 8.5 trillion in revenue. Even small increases in compliance rates or compliance costs can have significant impacts on government revenues and the wider economy. The challenge of efficient and effective tax administration is not only to raise the revenue needed to fund public services – and increasingly to provide some of those services – but also to minimise burdens on taxpayers. Maintaining trust in the efficient operation and fairness of the tax system is key to ensuring its sustainability.

Tax administrations are embarking on a period of unprecedented change. The emergence of new technologies, analytical tools and a vast increase in the scope and scale of digital data offer significant opportunities to enhance tax administration and reduce burdens. But there are also challenges to realising these benefits. These include pressures on budgets and human resources, the capacity of tax administrations to respond swiftly to rapid changes in business models and the choice of cost-effective technical solutions. The value of the Tax Administration Series – and why I would encourage you to read this edition - is in the light it can shine on these opportunities and challenges. Tax administrations and governments can use this valuable resource to learn from each other and work together to improve the design, management and performance of their tax systems, enhancing tax administration around the world.

I would like to thank everyone who has been involved in producing this engaging and highly informative report, in particular the teams in the participating tax administrations that have contributed their time and expertise, as well as the OECD Secretariat which led the preparation of Tax Administration 2017.

Edward Troup

Chair, Forum on Tax Administration

Acknowledgements

The OECD has produced the Tax Administration Series (TAS), its comparative information series on tax administration, since 2004. Since that time the publication has grown in terms of its coverage, influence and importance and is now widely recognised as an authoritative source of information on tax administration around the globe.

The *2017 Tax Administration Series* would not have been possible without the direct support and help of a large number of people.

The work was led by Michael Hewetson and Oliver Petzold both from the OECD's Forum on Tax Administration (FTA) Secretariat, under the supervision since January 2017 of Peter Green, Head of the FTA Secretariat.

The new TAS format and approach was developed by the FTA and benefited from the input and direction provided by the FTA Bureau.

The principal author of the publication was Michael Hewetson, who also authored Chapters 1, 2, 3 and 6. Ronnie Nielsen, from the Danish Tax Administration, authored Chapters 4 and 5. Management and analysis of the data was undertaken by Oliver Petzold who also authored Chapter 7.

Authoring support was provided in respect of Chapter 3 by Tatiana Kurancheva while on secondment to the OECD Secretariat from the Mercator Program Centre for International Affairs.

The authors are also thankful for the work of Tom Brandt, currently Chief Risk Officer, Internal Revenue Service, United States and former Head of the FTA Secretariat, and the work of the small but dedicated support team at the OECD Secretariat.

This edition of the TAS also benefits from articles on topical issues on tax administration authored by officials of the Australian Tax Office, Canada Revenue Agency, Office of the Revenue Commissioners (Ireland), Netherlands Tax and Customs Administration, Skatteetaten (Tax Norway), Her Majesty's Revenue and Customs Agency (United Kingdom) and Internal Revenue Service (United States). These articles are featured in Chapters 8 to 15.

Finally, the authors would like to specifically acknowledge the work of the a large number of staff in the 55 tax administrations that provided data and country examples, reviewed content and responded to feedback and questions on the data and text that form the basis of the publication.

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Table of contents

Abbreviations 15

Executive summary 17

Reader's guide 21

Part I. Comparative information on tax administrations 25

***Chapter* 1. The changing face of tax administration** 27

Introduction 28
Globally connected 29
Technologically enabled 29
Collaborative and integrated 29
Data and insight led 30
Better informed compliance management 30
Enabled workforce 31
And finally 31

***Chapter* 2. Tax collection** 33

Net collections by tax administrations averages 20% of jurisdiction GDP 34
Net collections by tax administrations averages 54% total jurisdiction revenue 34
Tax audit is the dominant administration function using just under one-third of staff 36
Tax administrations covered in this survey have more than 750 million customers 37
Tax administration is big business globally 37
Note 38
References 38

***Chapter* 3. Institutional arrangements of tax administrations** 39

Introduction 40
Increasing responsibilities of tax administrations 40
Institutional arrangements for tax administrations 42
Organisational features 48

***Chapter* 4. Tax compliance risk** 53

Framework for compliance risk management 54
The emerging practice of compliance risk management 54
Current compliance strategies 55
Compliance interventions 57
Key segments 57
Managing the shadow economy 59
Sharing economy 62

Tax gap measurements, random audits and robust monitoring of risk . . . 62
Leveraging third-party data . . . 63
Voluntary disclosure mechanisms . . . 64
References . . . 65

***Chapter* 5. The changing role of tax service providers** . . . 67

Introduction . . . 68
The role of tax service providers . . . 68
Regulation of tax service providers . . . 69
Services offered to tax service providers . . . 70
New actors and technologies entering the market . . . 71
New tax administration business models . . . 71
References . . . 74

***Chapter* 6. Performance of tax administrations** . . . 75

Introduction . . . 76
Registration . . . 77
Assessment . . . 81
Taxpayer service . . . 88
Verification . . . 96
Collections . . . 104
Disputes . . . 113
Notes . . . 116
References . . . 116

***Chapter* 7. Budget and human resources** . . . 119

Introduction . . . 120
Budgetary pressure . . . 120
Productivity and innovation . . . 121
Workforce . . . 125
Capability change . . . 133
Notes . . . 136
References . . . 136

Part II. Topical issues in tax administration . . . 137

***Chapter 8.* Advanced analytics** . . . 139

What is advanced analytics? . . . 140
Application of advanced analytics . . . 140
Organisational management of advanced analytics projects . . . 143
Change management . . . 145
Building capability . . . 145
Next steps . . . 145
References . . . 146

***Chapter 9.* Co-operative approaches to tax** . . . 147

Mutual or conflicting interests . . . 148
Risk management and taxpayer behaviour – the background to co-operative compliance . . . 149
Tax control framework – the central pillar . . . 151
Exiting co-operative compliance . . . 152
Next steps . . . 153
References . . . 153

Chapter 10. **Insights from innovations in tax debt management** . . . 155

Innovation in tax debt management . . . 156
Use of advanced data analysis in tax debt management . . . 156
Segmentation . . . 157
Behavioural approaches . . . 158
Campaign based activities . . . 158
Next steps . . . 160
References . . . 161

Chapter **11. Using digital delivery to enhance the integrity of tax systems** . . . 163

Digital delivery and the evolution of compliance . . . 164
Stronger identity security . . . 164
Integration with natural systems . . . 166
Emerging Technology . . . 167
Measuring the impact of digital delivery . . . 167
And finally . . . 168
References . . . 168

Chapter **12. Large business and international** . . . 169

Compliance risk management . . . 170
International collaboration . . . 170
Co-operative compliance . . . 171
Tax certainty . . . 172
Future direction . . . 173
Notes . . . 173
References . . . 174

Chapter **13. Improving mutual agreement procedures** . . . 175

Precursors of the BEPS Action 14 minimum standard . . . 177
BEPS Action 14 minimum standard . . . 177
Innovative approaches to prevent disputes and for quicker resolution . . . 178
Note . . . 180
References . . . 180

Chapter **14. The measurement of tax gaps** . . . 181

What is the tax gap and why measure it? . . . 182
Measurement and design options . . . 182
Alternative approaches to measuring the tax gap . . . 185
Limitations of tax gap estimates . . . 186
Note . . . 186
References . . . 187

Chapter **15. Third-party data management – the journey from post-assessment crosschecking to pre-filling and no-return approaches** . . . 189

The pre-filled "pathway" . . . 190
Post-assessment . . . 191
Transformation phase . . . 192
Pre-assessment verification . . . 194
Note . . . 195
References . . . 195

Part III. Annexes 197

***Annex A.* Data tables** 199

***Annex B.* Participating tax administrations** 201

Figures

Figure 1.1 Tax administration eco-system 28
Figure 2.1 Key figures related to the administrations covered in this publication, 2015 34
Figure 2.2 Net revenue collected as a percent of gross domestic product, 2014 35
Figure 2.3 Net revenue collected as a percent of total government revenue, 2014 35
Figure 2.4 Average net revenue collections by major revenue type, 2015 36
Figure 2.5 Tax administration staff usage by function, 2015 36
Figure 2.6 Taxpayer registrations by tax type, 2015 37
Figure 3.1 Tax administrations – wider roles, 2015 41
Figure 3.2 Tax administrations – involvement in the collection of SSC, 2015 41
Figure 3.3 Institutional frameworks, 2015 43
Figure 3.4 Taxpayer rights formally defined, 2015 47
Figure 3.5 Existence of special body for dealing with taxpayers' complaints, 2015 47
Figure 3.6 Large taxpayer offices/programmes, 2015 52
Figure 3.7 HNWI programmes, 2015 52
Figure 4.1 Compliance risk management process 54
Figure 4.2 Priority of compliance interventions, 2015 57
Figure 4.3 Use of tax gap methodology, 2015 63
Figure 4.4 Use of third party data, 2015 64
Figure 5.1 Specialised services provided to tax service providers, 2015 70
Figure 6.1 Overview of core tax administration functions 76
Figure 6.2 Registration of active personal income taxpayers as percentage of citizen population, 2015 77
Figure 6.3 Categories of third party information used in pre-filled returns, 2015 83
Figure 6.4 PIT and CIT on-time filing rates, 2015 85
Figure 6.5 VAT on-time filing rates – VAT monthly filers vs. VAT annual filers, 2015 85
Figure 6.6 Range in on-time payment performance by tax type, 2015 87
Figure 6.7 Dominant contact channel, 2015 90
Figure 6.8 Most common verification case selection criteria, 2015 97
Figure 6.9 Information and access powers, 2015 97
Figure 6.10 PIT audit coverage and adjustment rates, 2015 99
Figure 6.11 CIT audit coverage and adjustment rates, 2015 100
Figure 6.12 VAT audit coverage and adjustment rates, 2015 100
Figure 6.13 Verification adjustment ratio by audit type, 2015 101
Figure 6.14 Total year-end tax debt as a percent of total net revenue, 2011-15 106
Figure 6.15 Movement in total year-end collectable tax debt, 2011-15 106
Figure 6.16 Movement in tax debt cases between 2014 year-beginning and 2015 year-end 107
Figure 6.17 Make-up of tax debt older than 12 months (CIT, PIT, VAT), 2015 108
Figure 6.18 Powers to assist managing debt, 2015 108
Figure 6.19 Powers to assist collection, 2015 109
Figure 6.20 Powers to assist enforcement of debt, 2015 110
Figure 6.21 Number of administrative review cases initiated per 1 000 active PIT & CIT taxpayers, 2015 114
Figure 6.22 Changes in the number of administrative review cases at year-end, 2013 to 2015 114
Figure 6.23 Percentage of cases resolved in favour of the tax administration, 2015 115
Figure 7.1 Salary cost as a percent of total operating budget, 2015 120
Figure 7.2 Administration's approaches to innovation, 2015 122

Figure 7.3 Development of primary IT solutions, 2015 . . . 123
Figure 7.4 IT from external/both: Product type, 2015 . . . 123
Figure 7.5 Most common administrative functions/operations fully or partially outsourced, 2015 . . 125
Figure 7.6 Double pressure on workforce . . . 125
Figure 7.7 Staff usage by function, 2015 . . . 126
Figure 7.8 Age profiles of tax administration staff, 2015 . . . 127
Figure 7.9 Age profiles of general labour force, 2015 . . . 128
Figure 7.10 Average length of service vs. average age profile, 2015 . . . 129
Figure 7.11 Percentage of female staff – total female staff vs. female executives, 2015 . . . 129
Figure 7.12 Attrition and hire rates, 2015 . . . 130
Figure 7.13 Number of administrations having specialised positions, 2015 . . . 135
Figure 8.1 Use of advanced analytics . . . 141
Figure 8.2 Key characteristics of advanced analytics projects . . . 144
Figure 9.1 Co-operative compliance approaches – Existence and implementation status, 2015 . . . 148
Figure 9.2 Nature of co-operative compliance programmes, 2015 . . . 149
Figure 9.3 Co-operative compliance programmes: Features and requirements, 2015 . . . 150
Figure 10.1 Phone campaign results – self employed, Norway . . . 160
Figure 10.2 Phone campaign results – limited companies, Norway . . . 160
Figure 13.1 Evolution of the inventory of MAP cases in OECD member countries, 2006-15 . . . 176
Figure 14.1 Tax gap measurement and random audits . . . 182
Figure 14.2 HMRC's interpretation of the tax gap . . . 184
Figure 14.3 Effect of information reporting on individual income tax reporting compliance, tax years 2008-10 . . . 185
Figure 15.1 A pre-filling maturity "pathway" . . . 190

Tables

Table 2.1 Percent of tax administration staff usage by function, 2013 and 2015 . . . 37
Table 3.1 Taxpayer's rights and obligations . . . 46
Table 5.1 Services and registration of tax service providers, 2015 . . . 70
Table 6.1 Return filing rates by channel (in percent) . . . 82
Table 6.2 Payment rates by channel (for CIT, PIT and VAT) . . . 82
Table 6.3 Average on-time filing rates by tax type . . . 84
Table 6.4 Average on-time payment rates by tax type . . . 86
Table 6.5 Service demand by channel . . . 89
Table 6.6 Taxpayer satisfaction surveys by taxpayer segment, 2015 . . . 95
Table 6.7 Verification adjustment rate by segment, 2015 . . . 102
Table 6.8 Administrations that track the collection of verification debt, 2015 . . . 102
Table 6.9 Participation in tax and crime work . . . 103
Table 6.10 Summary of tax and crime work . . . 104
Table 7.1 Human resource management approaches, 2015 . . . 131
Table 7.2 Human resource autonomy, 2015 . . . 132
Table 7.3 Staff satisfaction and performance management, 2015 . . . 133
Table 7.4 Remuneration, 2015 . . . 133

Boxes

Box 3.1 Institutional arrangements . . . 42
Box 3.2 Board arrangements . . . 45
Box 3.3 Taxpayers rights and obligations . . . 47
Box 3.4 Finland – replacing legacy tax systems with tax COTS application . . . 49
Box 3.5 China – administrative challenges in implementing VAT reform . . . 50
Box 4.1 Integrated approach to managing risks . . . 56
Box 4.2 Integrated risk assessment for large business . . . 58
Box 4.3 Dedicated HNWI programme . . . 59
Box 4.4 Use of certified cash registers . . . 60

Box 4.5 Co-operation and innovation . . . 61
Box 4.6 Voluntary disclosure programme . . . 64
Box 5.1 Working with tax service providers . . . 69
Box 5.2 Exposing business rules and APIs . . . 72
Box 5.3 Collaboration with software developers . . . 72
Box 5.4 Advice for implementation for Engagement and Involvement approaches . . . 73
Box 6.1 Registration and identification . . . 78
Box 6.2 Security and authentication . . . 79
Box 6.3 Identity protection . . . 80
Box 6.4 Cross border identity management . . . 81
Box 6.5 Foreign Account Tax Compliance Act (FATCA) Data . . . 83
Box 6.6 Data management and storage . . . 88
Box 6.7 Managing demand . . . 90
Box 6.8 Supporting self-service . . . 92
Box 6.9 Mobile app and tax . . . 93
Box 6.10 User design and engagement . . . 96
Box 6.11 Information and Access powers . . . 98
Box 6.12 VAT real time risk model . . . 98
Box 6.13 Innovation in VAT . . . 101
Box 6.14 Tax and crime . . . 103
Box 6.15 Predictive modelling . . . 110
Box 6.16 Automated enforcement . . . 111
Box 6.17 Education and communication . . . 112
Box 6.18 Cross border collection activity . . . 112
Box 6.19 Appeal and review processes . . . 113
Box 6.20 Settling large tax disputes . . . 115
Box 7.1 Tax administration economy and efficiency measures . . . 121
Box 7.2 Outsourcing debt collection, 2015 . . . 124
Box 7.3 Succession planning and leadership programmes . . . 131
Box 7.4 Capability change . . . 134
Box 7.5 Delivery of tax administration capacity building . . . 135
Box 8.1 Data mining models for non-filer programmes . . . 142
Box 8.2 Text mining of inbound emails . . . 142
Box 8.3 Centralised governance of advanced analytics . . . 144
Box 9.1 Use of legislation . . . 149
Box 9.2 Use of tax risk management . . . 151
Box 10.1 Debt risk modelling . . . 156
Box 10.2 Segmentation . . . 157
Box 10.3 Outbound call campaign . . . 159
Box 14.1 Measuring tax gaps . . . 183
Box 15.1 Combining information from multiple sources . . . 191
Box 15.2 Collection of data for third parties . . . 192
Box 15.3 Working with third parties to obtain data . . . 193
Box 15.4 Bringing it together . . . 195

Abbreviations

AE	Agenzia Entrate (Italy)
AEOI	Automatic Exchange of Information
AFIP	Administración Federal Ingresos Publicos (Argentina)
ATO	Australian Taxation Office
CFA	Committee on Fiscal Affairs (OECD)
CIAT	Inter-American Center of Tax Administration
CIT	Corporate income tax
CRA	Canada Revenue Agency (Canada)
CRS	Common Reporting Standard
CTPA	Centre for Tax Policy and Administration (OECD)
DGFiP	Directorate Générale des Finances Publiques (France)
DIAN	Direccion de Impuestos y Aduanas Nationales (Colombia)
DT	Direct Taxes
EC	European Commission
EOI	Exchange of Information
ETCB	Estonian Tax and Customs Board
EU	European Union
FATCA	Foreign Account Tax Compliance Act
FDSR	Financial Directorate of the Slovak Republic
FTA	Forum on Tax Administration (OECD)
FTE	Full-time equivalent
FTS	Federal Tax Service (Russian Federation)
GDP	Gross domestic product
GST	Goods and Services Tax
HMRC	Her Majesty's Revenue and Customs (United Kingdom)
HNWI	High Net Wealth Individuals
HR	Human Resource
HRM	Human Resource Management
IMF	International Monetary Fund

IOTA	Intra-European Organisation of Tax Administrations
IR	Inland Revenue (New Zealand)
IRAS	Inland Revenue Authority of Singapore
IRBM	Inland Revenue Board of Malaysia (the direct taxes administration)
ISORA	International Survey of Revenue Administrations
IRS	Internal Revenue Service (United States)
IT	Information technology
IVR	Interactive voice response
LB&I	Large Business and International
LTO	Large taxpayer office
MOF	Ministry of Finance
NAFA	National Agency for Fiscal Administration (Romania)
NAO	National Audit Office
NRA	National Revenue Agency (Bulgaria)
NTA	National Tax Agency (Japan)
NTA	Norwegian Tax Administration
NTCA	Netherlands Tax and Customs Administration
NTS	National Tax Service (Korea)
OECD	Organisation for Economic Co-operation and Development
PAYE	Pay-as-you-earn
PIT	Personal income tax
SARS	South Africa Revenue Service
SAT	Servicio de Administración Tributaria (Mexico)
SKAT	Danish Tax Administration
SME	Small and medium-sized enterprises
SRS	State Revenue Service (Latvia)
SSC	Social security contributions
STA	Swedish Tax Agency
STI	State Tax Inspectorate (Lithuania)
SUNAT	Superintendencia Nacional de Administración Tributaria (Peru)
TIN	Taxpayer Identification Number
VAT	Value added tax
VDP	Voluntary Disclosure Programme
VERO	Finnish Tax Administration
WBG	World Bank Group

Executive summary

The 55 tax administrations participating in the seventh edition of the OECD's Tax Administration Series (TAS 2017) collect net revenue of EUR 8.5 trillion (2015), equal to about 20% of the GDP. They are large and complex organisations employing almost 2 million staff that deal with the tax affairs of more than 750 million personal and corporate taxpayers. Their combined operating budgets amount to EUR73 billion, less than 1% of net revenue collected.

Part I of the TAS 2017 contains seven chapters that provide performance-related data, trends and commentary based on data up to the end of the 2015 fiscal year. Part II includes eight articles authored by participating administrations on a range of topical issues in tax administrations. Part III, which is available in electronic form, consists of tables containing the responses from taxpayers that form the basis of the analysis.

The TAS 2017 shows the significant change that is taking place in tax administrations, with both internal and external drivers at work. Tax administrations are improving delivery performance and sharpening their compliance focus while actively changing the compliance environment. At the same time they are moving to more effectively use and manage data, with an increased focus on the security of taxpayer information and data.

Significant change continues

This report highlights four significant drivers of on-going change:

- *The use of new technologies, tools and data to improve the effectiveness and delivery of contemporary services* – This report sets out a series of examples of how administrations are adapting their processes to allow more timely and targeted action to support taxpayers to meet their tax obligations and receive their entitlements.
- *Reducing the cost of tax operations and burdens on taxpayers* – The report provides information on administrations use of innovative approaches that are allowing them to operate a more efficient and effective tax system, with reduced burden for taxpayers.
- *The taking on of new responsibilities* – Many administrations report new roles that utilise the strong capabilities of tax administration in delivery of service and payments, operating registry services, managing and using data and compliance management.
- *Implementing changes to the international tax environment* – Tax administrations globally are implementing the far-reaching and major changes to the international tax rules developed over the last five years, including the outcomes under the OECD/G20 Base Erosion and Profit Shifting (BEPS) project.

Strengthening delivery performance

The collective performance of tax administrations covered in this publication has generally strengthened over the last two years, including steady growth in the provision and use of digital services, particularly to support taxpayer self-service, the use of e-channels to file or pay and improvements in telephone communications, which remains the dominant service channel. There are however two areas to note for further consideration:

- *On-time filing and payment* – two important indicators of voluntary compliance are the rates of on-time filing and on-time payment. These rates are around 90% for on-time payment and 85% for on-time filing. While this appears high, given the large number of taxpayers required to file and pay periodically, even small increases in filing and payment rates can raise significant amounts.
- *Tax debt* – at EUR 1.8 trillion tax debt levels are still substantial. With administrations reporting that around 45% of tax debt (around EUR 800 billion) is considered collectable, there remains significant scope for making further in-roads into outstanding debt levels.

Sharpening compliance focus

The use of more sophisticated tools is allowing administrations to more actively manage compliance risk and determine effective compliance interventions across the spectrum of taxpayers:

- *Large business taxpayers* – Between 35% and 50% of overall net revenue collected comes from large business taxpayers. Many tax administrations have set up dedicated units to manage the particular compliance risks and complex business issues emerging from this significant group of taxpayers.
- *High Net Worth Individuals (HNWI)* – The HNWI segment is estimated to have grown fourfold over the last two decades. Managing compliance within this group remains a high priority for tax administrations, particularly as regards off-shore transactions and structures.
- *Small and Medium Enterprises (SMEs)* – In many jurisdictions, the SME sector employs the largest number of people and has the greatest exposure to the cash economy. It remains an area of critical focus, with many administrations reporting new approaches to facilitate and support tax compliance.
- *Shadow economy* – A large number of administrations report the use of new technologies and analytics approaches which are enhancing their efforts to reduce the size and impact of the shadow economy.
- *Sharing economy* – The rapidly expanding global sharing economy presents an emerging tax risk. Tax administrations are increasingly reaching out to other government agencies and other tax administrations to secure transaction information.

Changing the compliance environment

Since the 2015 edition of the publication, tax administrations report progress in improving levels of tax compliance. Levers used include simplifying tax requirements, expanding co-operative arrangements and more managing of compliance, such as the pre-filling of tax returns.

- *Simplifying tax requirements* – Without exception tax service or customer strategies are looking to incorporate design approaches that include mobile and digital solutions that best fit with taxpayers preferred means of engagement.
- *Co-operative arrangements* – Some administrations are starting to extend co-operative compliance approaches successfully used in the large business area into other tax segments. This expansion is largely based on improvements in compliance risk management made possible by access to a wider range of data, advanced analytics and risk assessment techniques. In addition the emergence of new businesses and services is allowing some administrations to move away from being the principal provider of tax service in some areas.
- The changing international landscape, including as a result of the outcomes of the BEPS project, is leading to a desire for enhanced international co-operation, including in multilateral risk assessments and the expanding opportunities for joint or simultaneous audit.
- *Managing compliance* – New data sources and approaches are allowing administrations to extend no-return or pre-filled options, primarily for personal income taxpayers, into other more complex areas. The pre-filled approach has led to impressive compliance rates and lower administrative costs for personal income tax, which for many represents a significant share of the tax base.

Managing, using and securing data more effectively

Lower storage costs coupled with advances in analytics technologies have allowed administrations to not only source more data in support of new approaches and products, but to also facilitate better management of tax risks. This includes how they look to upstream and manage compliance closer to the taxable event or where it most naturally occurs for the taxpayer. New data approaches are also allowing administrations to differentiate service and intervention treatment based on the perceived tax risk of a transaction, taxpayer or event.

Administrations also report work to further strengthen security of taxpayer information, as well as putting considerable effort into ensuring internal processes prevent unlawful attempts to obtain information and to ensure that the person they are dealing with is in fact the taxpayer. Increasingly these approaches, which in many instances have now extended to multi-step authentication, are making use of biometric information, unique to the taxpayer. This is also opening up new opportunities for whole of government approaches to the benefit of the citizen and administration.

Reader's guide

Tax Administrations covered by the report

The Tax Administration Series (TAS) 2017 is the seventh edition of the OECD Centre for Tax Policy and Administration's comparative information series. The primary purpose of the series, which commenced in 2004, is to share information that will facilitate dialogue among tax officials on important tax administration issues, and that may also identify opportunities to improve the design and administration of their systems.

This edition of the series provides internationally comparative data on aspects of tax systems and their administration in 55 advanced and emerging economies. It covers all jurisdictions that were members of the OECD's Forum on Tax Administration (FTA) at the launch of the 2016 tax administration survey. In addition, it includes information on Peru, that became a member of the FTA in March 2017; the non-FTA jurisdictions that are members of the European Union (i.e. Bulgaria, Croatia, Cyprus,[1] Malta, and Romania); as well as Morocco (which increases the reports' geographical coverage).

Missing from the 2015 edition are Saudi Arabia and Thailand, which both decided not to participate in the 2017 publication.

Changes to data gathering process and reporting

Since the publication of the 2015 edition of the TAS there has been considerable change in the way the OECD has gone about its production:

- Throughout 2015 the OECD, worked collaboratively with the Inter-American Center of Tax Administrations (CIAT), the International Monetary Fund (IMF) and the Intra-European Organisation of Tax Administrations (IOTA), to develop a new joint International Survey of Revenue Administrations (ISORA). This new performance framework standardised terminology and requirements for capturing global tax administration performance information.
- This new survey was issued to jurisdictions participating in this publication along with other members of CIAT, IOTA and the IMF at the Beijing Plenary of the FTA in May 2016. Survey information was gathered using the IMF's Revenue Administration Fiscal Information Tool (RAFIT). All data contained in the publication has been subject to four rounds of validation by the OECD and participating administrations.
- The format and approach to the TAS itself has changed. The commentary is more succinct, and focuses on significant issues and trends across tax administration. It provides:
    - Increased analysis, backed by more than 170 data tables.

- More than one hundred examples of innovation and practice in tax administrations that enhance the commentary.
- Eight articles authored by officials working in participating tax administrations that provide an "inside view" on a range of topical issues tax administrations are managing today.

Data comparability

The TAS includes performance-related data, ratios and trends up to the end of the 2015 fiscal year for the jurisdictions concerned. Given the "comparative" nature of this series that dates back to 2004, every effort has been made to ensure that terms retain their previous meaning.

At the request of survey participants the four organisations have gone to considerable effort to agree and document a range of words and terms used in the survey and their meaning. This has allowed a significant reduction in the number and use of footnotes in the publication compared to the 2015 edition. While this has improved data integrity and comparability between administrations, care is needed in making comparisons with prior year information as definitions may now exist for terms not previously defined, or in some instances, have changed. This may mean that a small amount of data and ratios reported in previous editions can no longer reliably be used.

Publication structure

The series examines the fundamental elements of modern tax administration systems and uses data, analyses and examples to highlight key trends, recent innovations, and examples of good practice and performance measures and indicators. The first part of the publication is structured around seven chapters as follows:

- Chapter 1 provides an overview of how tax administration is changing as administrations respond to a changing global environment, leveraging new technologies, delivery approaches and business arrangements, to move more services and transactions into real or near real-time.
- Chapter 2 provides information on the aggregate net tax revenues of surveyed tax administrations. It also provides key statistics that illustrate both the size of tax administrations in the 55 jurisdictions covered by this publication and their importance to governments and economies in discharging their primary role.
- Chapter 3 describes the increasing responsibilities being undertaken by many tax administrations, the institutional structures adopted to administer these responsibilities, and the key features of tax administration organisational design.
- Chapter 4 provides an introduction to contemporary compliance risk management and looks at areas of risk and mitigation strategies; and approaches to managing key segments: large businesses, high net worth individuals, small and medium-sized enterprises and the shadow economy.
- Chapter 5 explores the changing role of tax service providers and the nature of their working relationship with the tax administration. It also comments on how administrations are responding to the challenges and opportunities presented by the new business models and technologies.

- Chapter 6 summarises operational performance data for: registration; assessment; service; verification; collection; and disputes. What in previous editions were separate sections on powers and electronic and digital service delivery are now included into this chapter which concludes that overall performance by tax administrations remains strong. It also notes the significant challenges that lie ahead in utilising new technologies and business approaches to continue to decrease compliance burden and enhance compliance. This chapter also highlights a number of areas where administrations are invited to consider opportunities to improve performance and reporting.
- Chapter 7 describes how tax administrations are managing the significant on-going pressure on their operating budgets. In so doing it comments on improvements in productivity and innovation that are helping them manage financial pressures and in some cases allowing them to fund the development of new capabilities. It provides information on tax administrations' workforce and sets out challenges administrations are facing in increasing their capability while managing a workforce that in general terms is reducing in size and on average getting older.

The second part of the publication includes eight articles authored by participating administrations. These provide a country view on a range of topical issues in tax administration.

The final part of the publication, part three contains tables that contain the responses provided by tax administrations[2] which form the basis of the analysis in this report as well as details of the administrations that participated in this publication. This part of the publication is available in electronic form only.

Data tables

The tables and charts in the publication are all accompanied by a dynamic hyperlink or StatLink that directs readers to a corresponding Excel™ file containing the underlying data. These links are stable and will remain unchanged over time.

All data tables, figures and charts in the main body of the publication contain source notes. Typically, these notes refer readers to the underlying data that is contained in part three of the publication.

Symbols and abbreviations that are used in the tables are explained at the bottom of each table. The reader should note that where no data is shown for a specific jurisdiction in a table this is primarily due to it being: a construct of how the survey question was asked; the opening question to a sub-section of the survey being answered in the negative and, therefore, the jurisdiction did not have to answer the follow-up questions; or the underlying survey question was optional and the jurisdiction choose not to answer it.

Forum on Tax Administration

Readers wishing to find out more about the OECD's work on tax administration should go to www.oecd.org/tax/forum-on-tax-administration/.

Caveat

Tax administrations operate in varied environments, and the way in which they each administer their taxation system differs in respect to their policy and legislative environment and their administrative practice and culture. As such, a standard approach to tax administration may be neither practical nor desirable in a particular instance. Therefore, this report and the observations it makes need to be interpreted with this in mind. Care should be taken when considering a country's practices to fully appreciate the complex factors that have shaped a particular approach. Similarly, regard needs to be had to the distinct challenges and priorities each administration is managing.

Notes

1. Note by Turkey: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

   Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

2. For Japan, given that it publishes its currency Figures in millions the currency Figures included in the tables have had added a suffix of "000" in order to fit the survey requirements that Figures needed to be provided in thousands.

Part I

Comparative information on tax administrations

Chapter 1

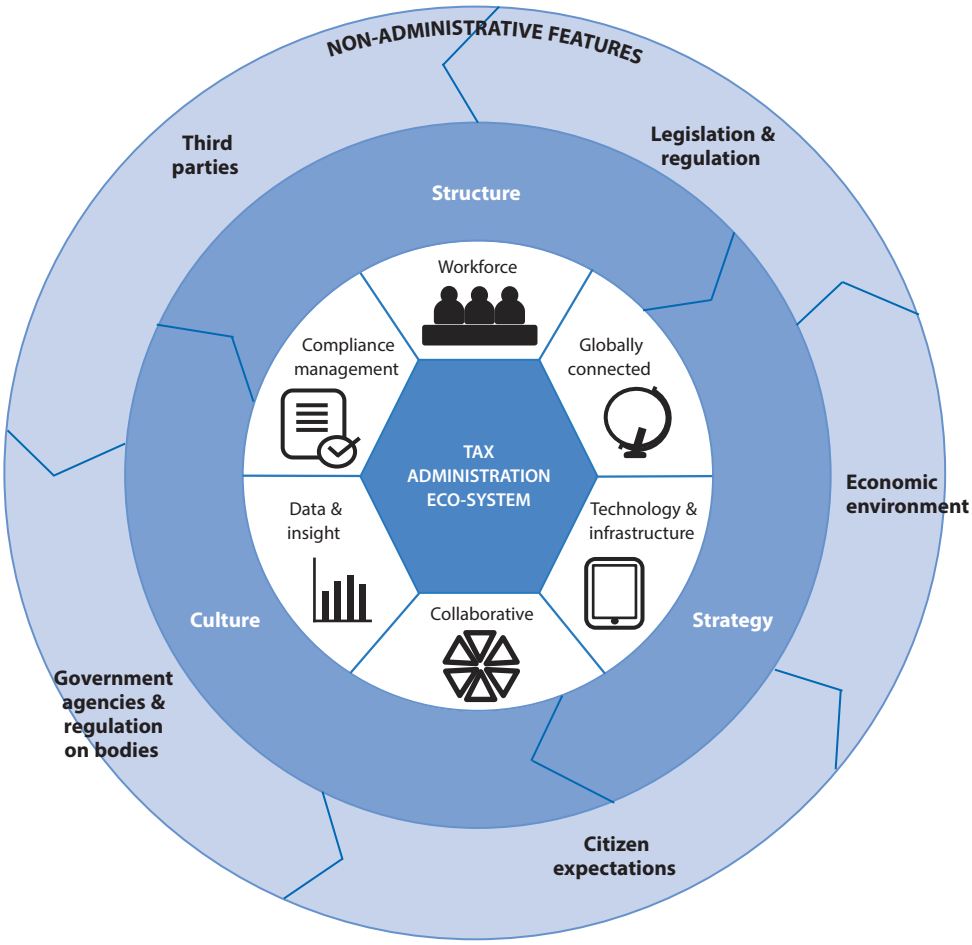
The changing face of tax administration

This chapter provides an overview of how tax administration is changing as the ecosystem in which tax administrations operate becomes broader and deeper, including as a result of a vast increase in the flow of digital information. Administrations are responding to these challenges through the introduction of new technologies and analytical tools. This is allowing tax them to rethink how they operate, offering the prospect of lower costs, increased compliance and a reduction in burdens for compliant taxpayers.

Introduction

The emergence of new technologies, increased digitalisation and the unprecedented flow of information is creating fundamental and rapid change across the economy. This is causing many governments to re-examine how public service delivery is best carried out in the 21st century. All tax administrations covered in this edition of the Tax Administration Series report are re-thinking not only what they do but how they do it. This is not an insular change but involves looking at the position and role of tax administration in the wider "tax ecosystem" and against the objectives of lowering costs, enhancing voluntary compliance and reducing the burdens arising from paying taxes, thus helping to promote growth and investment (see Figure 1.1).

Figure 1.1. **Tax administration eco-system**



In concrete terms this means they are looking at how they can deploy new technologies and new delivery approaches to improve their effectiveness as well as the efficiency of their operations. In addition they are engaging with third party providers of data and services in new business arrangements that extend the traditional view of the tax eco-system, including through monitoring and standard setting. As a consequence tax administration is becoming more about stewarding of the wider tax eco-system rather than focusing

just on operating effective and efficient internal systems. To compound the challenges, these changes are taking place at the same time that administrations are implementing major changes to the international tax rules, responding to the tax issues surrounding new economic systems (including the digital and sharing economies) and taking measure to further reduce the tax gap.

Globally connected

If administrations ever considered their national tax systems to be only a function of domestic laws and interactions within their borders, the last decade has strongly dispelled this view. Advances in transportation and telecommunications have facilitated changes in trade, transactions, capital movements, labour and knowledge. Together these have changed not only how taxpayers conduct themselves and their businesses, but also their expectations of government and of tax administrations.

An increasingly digital, mobile and global taxpayer base is requiring tax administrations to respond to issues that were once only the domain of its largest businesses. These changes are prompting administrations to consider how they can best support this growing group of taxpayers. In particular they are looking at how they can provide easier approaches to compliance, including embedding tax requirements in the processes and applications that taxpayers use on a day to day basis, providing greater tax certainty and reducing costs. They are also increasingly co-operating across borders, sharing information and rulings, updating tax treaties and joining forces to tackle the threats arising from base erosion and profit shifting and tax evasion.

Technologically enabled

The exponential growth in the use of digital devices and the digitalisation of information has led many tax administrations to commence developing a suite of new applications to support tax activities such as paying, filing and enquiry. Third party software and service providers are in many jurisdictions embedding tax requirements into the *natural systems* taxpayers use to run their businesses, manage their bank accounts, or interact with government services including education, health and welfare.

Many survey participants report significantly increasing their investment over the last five years in developing new capabilities, including:

- digital technologies to increase reach and engagement.
- sophisticated tools to better manage and analyse data to distil insight and inform action.
- service design approaches that develop solutions that work better for taxpayers and the tax administration.
- agile and responsive approaches to project management and delivery.

Collaborative and integrated

Meeting taxpayers' expectations of a modern tax administration requires greater collaboration with third parties. While traditional business partners, including tax agents and other intermediaries, continue to feature strongly in tax delivery plans, the emergence

of new businesses and services is allowing tax administrations in some instances to move away from being the principal provider of service.

Tax administrations also report they are starting to extend co-operative compliance approaches successfully used in the large business areas into other tax segments. This expansion is largely based on improvements in compliance risk management made possible by access to a wider range of data, advanced analytics and risk assessment techniques. More active engagement with industry associations, taxpayers and other government agencies is also providing administrations with more insight into how to improve services and enhance compliance, including through possible changes to tax policy. In this regard, a number of administrations have used "open dialogues" with taxpayers, academics, business, tax advisors, and other government officials to discuss what the future tax administration might look like.

Many tax administrations also report now having responsibility for a range of new activities, some previously undertaken elsewhere in government and others formerly regarded as incompatible with tax collection. These new activities see many tax administrations managing population and valuation registers and collecting child support, loan repayments and pension contributions. Undertaking such activities is requiring new skills and capabilities, and in some instances new "operating models" for tax administrations.

Data and insight led

Traditionally the majority of data available to tax administrations was supplied by taxpayers in forms, declarations and tax returns. For administrations managing this data, the focus was often more about what to keep, how to keep it (including for security and data protection reasons), and how to access it. The focus now is shifting to how that data can be used most effectively. Lower storage costs coupled with advances in analytics technologies have allowed administrations to not only source more third party data in support of new approaches and products, but also enabled (or facilitated) the better management of tax risks. This is allowing them to:

- consider replacing traditional periodic return filing by taxpayers with no-return or pre-filled options based on greater transparency and access to data.
- differentiate service based on the perceived tax risk of a transaction, taxpayer or event.
- respond to demands for services that support interactions with government as a whole.
- support third parties to incorporate tax requirements into the systems taxpayers use to operate their business or complete other personal activities;.

As a result, the approaches many administrations are now taking to data are increasingly analogous to the approaches taken by large service providers in the private or commercial sectors.

Better informed compliance management

The ability to draw internal and external data sources together into a *single view of the customer* is supporting administrations in examining both the type and timing of interventions that help taxpayers meet their tax obligations, including paying tax debts.

New technologies are also allowing administrations to move from analysing transactions that have occurred through post-filing interventions (in particular audit) for some taxpayer segments, to developing approaches and processes that support tax assessment closer to the time a transactions or tax event occurs. This facilitates better compliance outcomes, increases tax certainty and reduces burdens.

Enabled workforce

Modernising tax administration goes far beyond simply facilitating existing operations with new capabilities or adding new technologies or methods such as digital work management to existing products and business processes. It requires administrations to identify the critical capabilities they need for success – many of which are different in nature to their current capabilities.

At the same time the number of staff employed by tax administrations has been reducing, and that pattern looks set to continue with continuing pressure to deliver more with less. While some reductions in staff numbers may be off-set by the new capabilities administrations will need, the specialist nature of many of these roles may lead to training and recruitment challenges as part of wider change management programmes.

As well as changing roles for its staff, administrations will also need to develop new enterprise capabilities and structures, including:

- governance and accountability approaches – *that are more agile, flexible and responsive*.
- business delivery models – *that are supporting outcomes through third parties and in real-time*.
- business structures and technology – *that are adaptive and open*.
- processes that support wider engagement with stakeholders and users – *that are more accessible, considering all facets of the tax system*.

These issues have caused a number of tax commissioners to comment that while the challenge of keeping pace with technology changes and its impact on their business is significant, the greater challenge they face is how to achieve the major *cultural change* that needs to occur inside their operations and across the community in order for them to successfully provide a contemporary and modern tax administration.

And finally

Tax administration continues to change and the emergence of new technologies and business approaches will only accelerate over the next decade. Cognitive computing, blockchain technology, artificial intelligence and robotics are prominent examples of technologies that some administrations are already using or exploring. These new technologies offer tax administrations not only further opportunities to improve their efficiency but, equally importantly, their effectiveness.

To fully realise the potential that business change and technology advances make available, tax administrations need to embark on a significant journey of change, re-invention and transformation. As administrations know only too well, transformational change is not easy, but the rewards are high both for the government and taxpayer as well as the wider economy.

Chapter 2

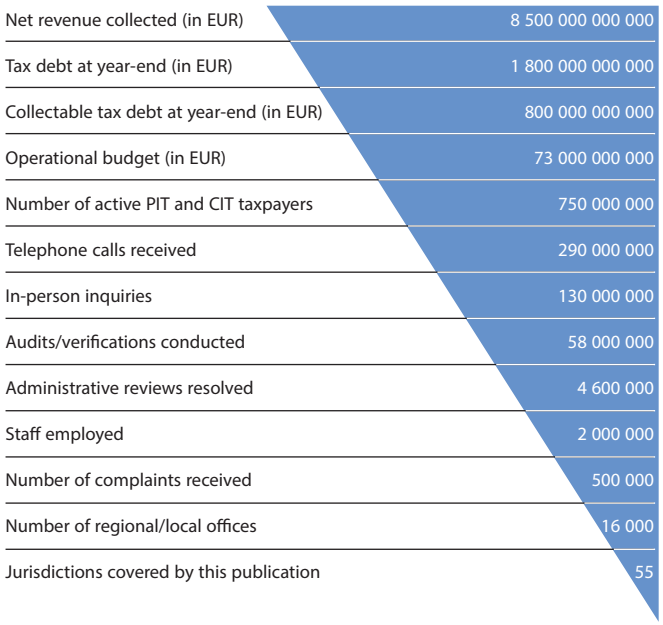
Tax collection

The primary purpose of a tax administration is the collection of tax revenue on behalf of citizens to fund the work of the government. Administrations, in serving the public interest, look to collect the proper amount of tax due to the government at the least economic cost, while conducting their operations in an efficient and effective manner. Given most administrations rely on taxpayers meeting payment obligations of their own accord (voluntary compliance); they perform their role as tax collectors giving careful regard to the relationship of trust that needs to exist between them and their customers.

Before examining in Chapters 3 to 7 how tax administrations go about the tasks of tax collection, it is appropriate to look at their importance to governments and economies in discharging their primary role. In this respect, this chapter provides information on the aggregate net tax revenues collected as well as other key figures related to activities of the administrations covered in this publication.

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.

Figure 2.1. **Key figures related to the administrations covered in this publication, 2015**



Note: These figures are based on the data included in the Annex. They are minimum figures as not all administrations were able to provide information for all data points.

Net collections by tax administrations averages 20% of jurisdiction GDP

The OECD generally seeks to publish internationally comparable data on the tax revenues of OECD members for all levels of government. The term "taxes" is confined to compulsory, unrequited payments to government. It is important to recognise that the tax ratios published by the OECD depend just as much on the denominator (GDP) as the numerator (tax revenue), and that the denominator is subject to revision for a variety of reasons.

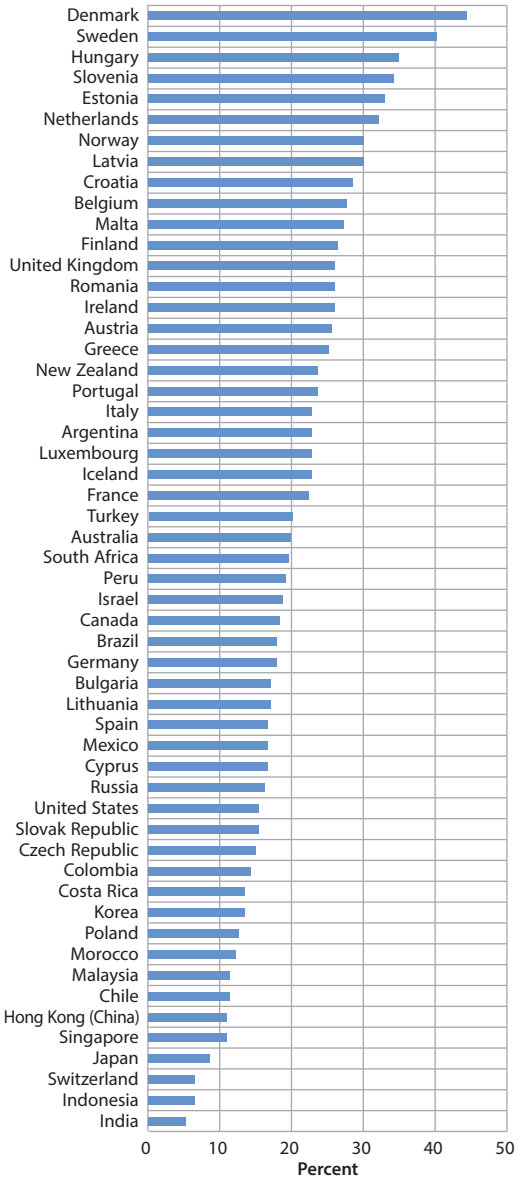
As the information contained in the OECD Revenue Statistics publication reports data at a jurisdiction and not an administration level, tax administrations were asked to provide a range of information on their revenue collection activity. This information aptly demonstrates the importance of tax administrations to the economies of their jurisdictions.

Net revenue collected by tax administrations participating in this report (see Annex B) as a percentage of GDP in 2014 ranges from less than 10% to reach more than 30% in the case of Denmark, Sweden, Hungary, Slovenia, Estonia, the Netherlands, Norway and Latvia. Average net revenue collected by survey respondent administrations is approximately 20% of GDP (see Figure 2.2).

Net collections by tax administrations averages 54% total jurisdiction revenue

Twenty-five jurisdictions report tax administration net revenue collections exceeding more than 50% of total government revenue in 2014, making tax administrations the principle government revenue collection agency in more than half of survey respondents where data was available (see Figure 2.3).

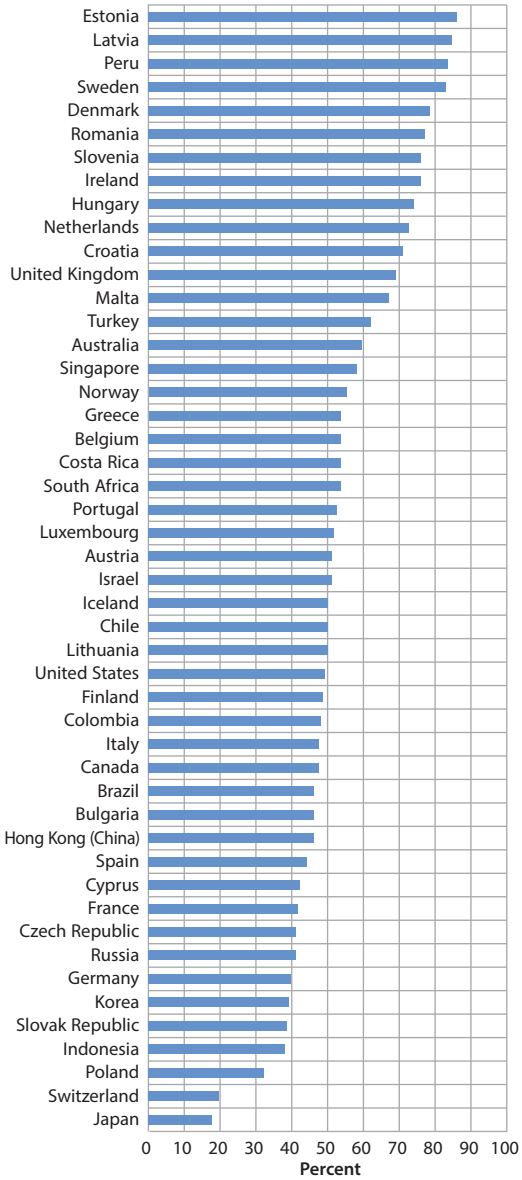
Figure 2.2. **Net revenue collected as a percent of gross domestic product, 2014**



StatLink http://dx.doi.org/10.1787/888933545880

Source: Table A.1 Total net revenue collected by the tax administration as a percent of gross domestic product and as a percent of total government revenue.

Figure 2.3. **Net revenue collected as a percent of total government revenue, 2014**



StatLink http://dx.doi.org/10.1787/888933545899

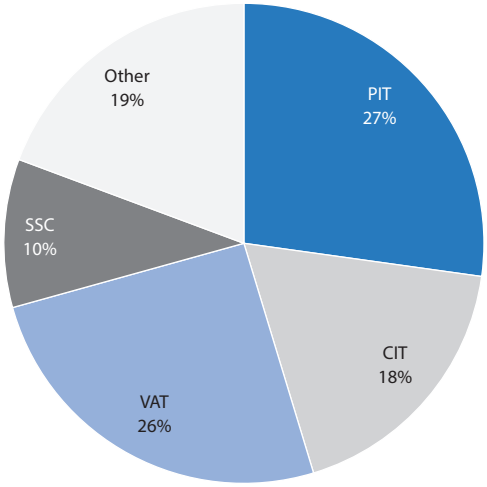
Source: Table A.1 Total net revenue collected by the tax administration as a percent of gross domestic product and as a percent of total government revenue.

Note by Turkey: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Personal income tax is the major tax type collected by just over one-quarter of the tax administrations responding to this survey. Value added tax (26%), corporate income tax (18%) and social security contributions (10%) comprise the other major revenue types as reflected in Figure 2.4. In many jurisdictions social security contributions are not collected by tax administrations and are therefore, underrepresented when looking at average net revenue collections for all Tax Administration Series participants. Where collected, they are often the predominant source of tax revenue (see Table A.2).

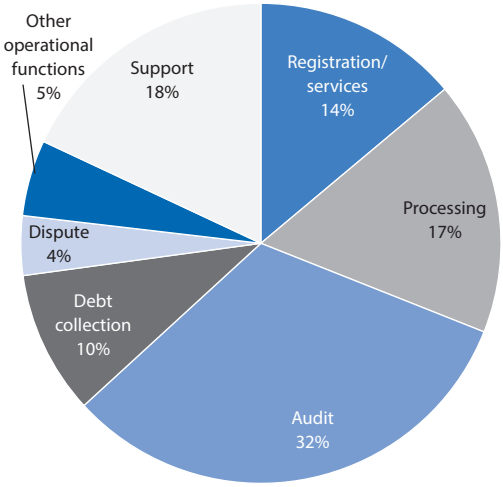
Figure 2.4. **Average net revenue collections by major revenue type, 2015**



StatLink http://dx.doi.org/10.1787/888933545918

Source: Table A.2 Net revenue collections by major revenue type, OECD Secretariat calculations.

Figure 2.5. **Tax administration staff usage by function, 2015**



StatLink http://dx.doi.org/10.1787/888933545937

Source: Table A.20 Staff usage by functions of the administration in percent of the total tax administration, OECD Secretariat calculations.

Tax audit is the dominant administration function using just under one-third of staff

The significant variations in net revenue to GDP and the wide variety in the mix of direct and indirect taxes mean that there can be quite different administrative workloads and compliance issues in comparing jurisdictions. These variations have a number of implications from a tax administration viewpoint, particularly in the context of international comparisons. They are most noticeable in the wide range of staff by function as reported in Chapter 7.

Total human resources are estimated at approximately 2 million staff consuming around 70% of annual budgets, which total more than EUR 73 billion per annum. On average administrations report that almost one-third of their staff resources are engaged in tax audit/verification. Table 2.1 compares the distribution of staff in administrations reporting information in 2013 and 2015. While those supplying information slightly changed, the data still provides an overall picture of where surveyed administrations are on average using their resources. This information is commented on in detail in Chapter 7.

Table 2.1. **Percent of tax administration staff usage by function, 2013 and 2015**

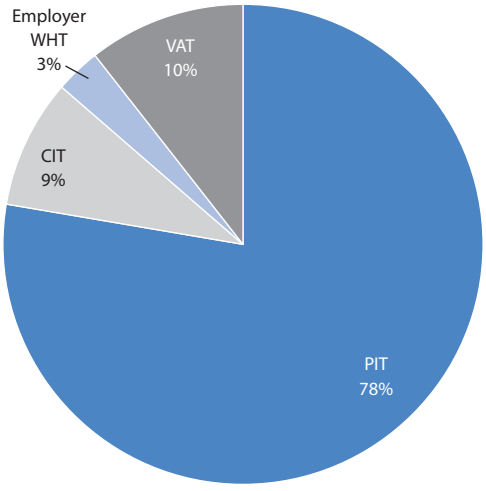
	Tax audit	Registration, processing and services	Debt management	Other operations	Support
2013 Average	34	28	12	9	17
2015 Average	32	31	10	9	18

Sources: For 2015 data: Table A.20 Staff usage by functions of the administration in percent of the total tax administration, for 2013 data: Adapted from Table 5.7 in OECD (2015), *Tax Administration 2015: Comparative Information on OECD and Other Advanced and Emerging Economies*, http://dx.doi.org/10.1787/tax_admin-2015-en.

Tax administrations covered in this survey have more than 750 million customers

Of the 750 million active taxpayers[1] more than three-quarters are registered for personal income tax. The total number of active taxpayers is a conservative estimate as some administrations were unable to provide all the details of their taxpayer registration base. The detailed commentary on tax registration is contained in Chapter 6.

Figure 2.6. **Taxpayer registrations by tax type, 2015**



StatLink http://dx.doi.org/10.1787/888933545956

Note: Taxpayers may have multiple registrations.

Sources: Tables A.75 to A.77 Taxpayer registration and registration by tax type, OECD Secretariat calculations.

Tax administration is big business globally

The 55 administrations covered in this year's publication report performance information that, when aggregated, provides an estimate of the scale and scope of tax administration:

- Total tax debt is estimated at around EUR 1.8 trillion, of which around 45% or EUR 800 billion is currently considered collectable.
- Customer contacts exceed 450 million annually, with around two-thirds taking place by phone.

- The total number of tax disputes reported is approximately 4.6 million, with customer complaints totalling slightly more than 500 000 per annum. These numbers are relatively low considering the overall volume of contacts reported.

Further explanation and observations regarding this data is provided in the relevant sections of Chapter 6 on operational performance.

Note

1. Active taxpayers are normally those for whom a tax consequence arises during the fiscal year (tax liability or tax refund) or that for any other purpose are obliged to file a tax return.

References

OECD (2016), *Revenue Statistics 2016*, OECD Publishing, Paris, http://dx.doi.org/10.1787/rev_stats-2016-en-fr.

OECD (2015), *Tax Administration 2015: Comparative Information on OECD and Other Advanced and Emerging Economies*, OECD Publishing, Paris, http://dx.doi.org/10.1787/tax_admin-2015-en.

Chapter 3

Institutional arrangements of tax administrations

This Chapter describes the increasing responsibilities being undertaken by many tax administrations, the institutional structures adopted to administer these, and the key organisational features that support tax administration operations.

Introduction

This chapter looks at the increasing responsibilities being undertaken by many tax administrations. It looks at the institutional structures adopted by different jurisdictions and the key organisational features of tax administrations, including how these are changing in the light of new technologies and business options.

Overall, the approaches of the tax administrations covered in this publication confirm the following features as core elements of successful tax administration:

- **Independence** in exercising statutory tax collection powers.
- A common and stable legal framework **for the administration of all taxes** (as opposed to an individual framework for each tax).
- A **unified body** for tax administration responsible for both direct and indirect taxes.
- **Sufficient autonomy** for the tax administration in: organisation and planning, budget management, performance management, resource allocation, and human resource management.
- **Clear roles, responsibilities and accountabilities** for its operation that are translated into organisational mission, vision and strategy.
- **Nexus between its tax operations and other activities** it is responsible for. This is to ensure the delivery of other activities does not impair the effective and efficient administration of tax laws.

Increasing responsibilities of tax administrations

With few exceptions, jurisdictions have unified the collection of direct and (most) indirect taxes within a single body for tax administration. There is an increasing trend, as also found in previous editions of the Tax Administration Series (TAS), to add other areas of responsibility (including shared responsibility in some areas) to traditional tax roles.

While some of these new roles are relatively closely aligned to the core work of tax administration, increasingly administrations report that they are being tasked with managing wider programmes and activity. The allocation of these additional responsibilities in the main is a reflection of the strong capabilities that exist within tax organisations, particularly in registry, service delivery, customer interface, data management and compliance.

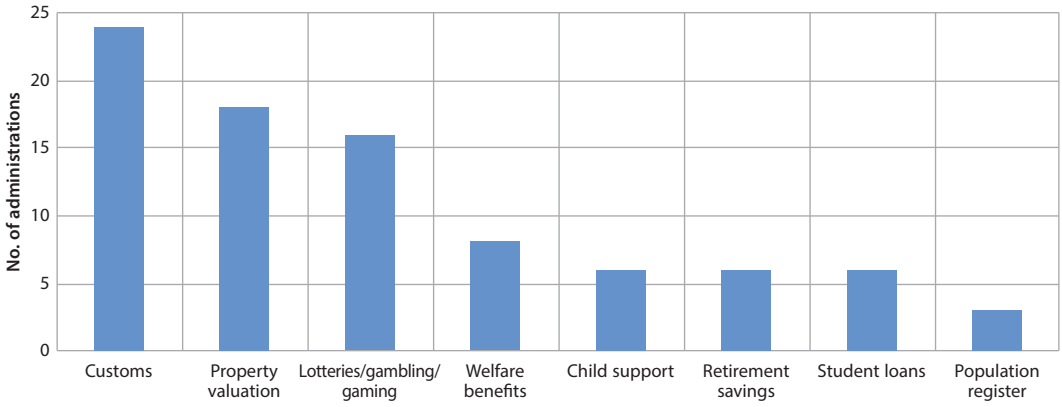
The most common reasons advanced for being allocated new roles include: the synergies with existing administrative processes, particularly when introducing new policies or re-designing services from the customer's perspective; access to tax data, powers or core capabilities of the tax administration; and economies of scale, particularly in delivery. Confidence in the proven ability of tax administrations to deliver complex administrative processes on a large scale also undoubtedly plays a significant part in decision making.

Figure 3.1 illustrates the most common roles reported by administrations which are:

- customs administration
- collection of non-tax debts e.g. student loans
- payment of benefits under various social or welfare programmes, some of which are integrated with elements of the tax system
- collection of child support (e.g. overdue payments from non-custodial parents)

- administration of property valuation functions that, for some jurisdictions, is linked to the administration of real property taxes.

Figure 3.1. **Tax administrations – wider roles, 2015**



StatLink http://dx.doi.org/10.1787/888933545975

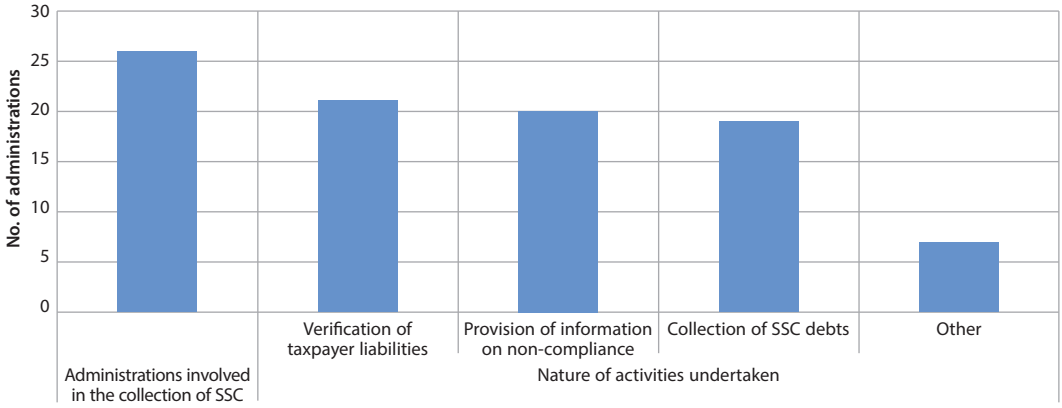
Source: Table A.34 Major other roles and OECD Secretariat research.

Some of these new roles entail use of the tax legislation framework of the jurisdiction, as well as the administrative process of the tax administration. Typically these may be to provide economic benefits to taxpayers (e.g. welfare-type benefits) or to collect loans or debts owing to government (e.g. student loans or child support). In other situations, the role/function is less directly related to the tax system, for example oversight of certain gambling activities or population registries.

Social security contribution (SSC) regimes have been established in the vast majority of jurisdictions as a complementary source of government revenue to fund specific government services (e.g. health, unemployment and pensions). SSCs are the largest single source of government tax revenue in many OECD jurisdictions, particularly of those in Europe.

The majority of administrations participating in the survey report separate SSC regimes and administer their collection through a separate social security agency (or a number of such agencies), rather than through the main tax revenue body. In Germany,

Figure 3.2. **Tax administrations – involvement in the collection of SSC, 2015**



StatLink http://dx.doi.org/10.1787/888933545994

Source: Table A.33 Social security contributions.

for example, the responsibility for tax administration is largely devolved to regional (i.e. "Länder") administrations, while a relatively small central body exercises a high level co-ordination role. Customs operations are administered separately (and centrally) while the collection of SSCs is also carried out by separate social security agencies.

However, in 26 jurisdictions surveyed, the tax administration is involved to some extent in the collection of SSC. Notwithstanding the dominance of the separate agency approach to SSCs and tax collection, there has been a marked trend over the last two decades towards integration. With Greece, Russia and the Slovak Republic reporting plans to integrate the collection of SSCs, that trend is set to continue.

While there has been an increasing trend in the expansion of the roles of tax administrations into other areas of public administration, it is too early to generalise from this. Some governments will choose to pursue further integration of administrative functions, while others may well continue to rely on specialised agencies with clearly defined roles and responsibilities. As the trend for more unified approaches to provide government services continues in a number of the jurisdictions, the classification of these roles as "non-tax" may, over time, not be a meaningful distinction. Nevertheless, this expansion of responsibilities can potentially increase risks to the core task of raising the tax revenue needed to fund public services and public goods, and requires strong governance, risk management and appropriate resourcing.

Box 3.1. **Institutional arrangements**

In ***Italy***, three separate bodies are tasked with the collection of taxes and duties: (1) the Revenue Agency performs services related to the administration, and collection of the main taxes and duties, including direct taxes, and VAT. It also performs a number of other tasks not related to tax administration, including maintaining of property registers and management of the real estate market; (2) the Customs and Monopolies Agency is responsible for administering excises, VAT on imports and customs duties as well as for dealing with public gaming and tobacco; and (3) the Italian Social Security Institute manages welfare benefits and retirements savings.

Since 2009 the ***Belgian*** government has been integrating different fiscal and non-fiscal collection and recovery services operating within the FPS Finance. What commenced as an amalgamation of the units at a headquarters level moved in the second stage to the integration of collection staff, divided over tax collection and tax enforcement offices. The bringing together of collections procedures, means and methods, that were similar across the FPS Finance, has produced synergies through the collection of multiple debts in one action. This improvement of the effectiveness and efficiency of debt recovery is leading to savings for both the government and the debtor.

Source: Italy – Italian Revenue Agency; Belgium – General Administration for Collection and Recovery of Taxes (2017).

Institutional arrangements for tax administrations

Tax institutional arrangements are typically grouped around four general categories:

- A *single directorate* or unit within the Ministry of Finance (MOF) or its equivalent.
- *Multiple directorates* or units within the MOF or its equivalent.

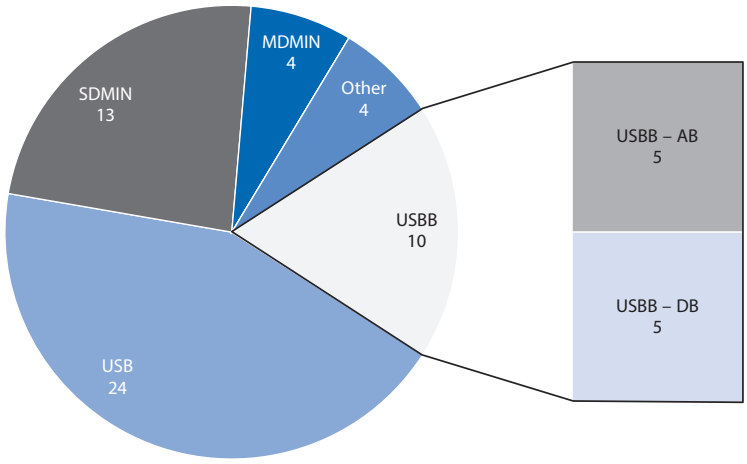
- A *unified semi-autonomous body*, where tax administration and support functions are the responsibility of a Commissioner or Director General who reports to a government minister.
- A *unified semi-autonomous body with a board*, where tax administration and support functions are the responsibility of a Commissioner or Director General who reports to an oversight body/board of management that includes external members.

There are some exceptions to the above categories. In Switzerland responsibility for tax administration largely occurs at a sub-national level and the "cantons" undertake collection activity on behalf of the federal government. In Italy tax administration is spread across a number of separate bodies, with distinct roles and responsibilities. In Germany the responsibility of collecting taxes is largely devolved to regional (i.e. Länder) administrations, while a relatively small central body exercises a high level co-ordination role.

Over the last five years, while a number of administrations have introduced advisory boards to assist them in managing the tax systems, there has not been any discernible trend towards or away from any of the above categories. The individual approach adopted seems to be driven more by wider public sector accountabilities than tax specific approaches. Figure 3.3 summarises survey respondents by category.

Figure 3.3. **Institutional frameworks, 2015**

Number of administrations



StatLink http://dx.doi.org/10.1787/888933546013

USB – Unified semi-autonomous body; **USBB** – Unified semi-autonomous body with board (**AB** – Advisory board; **DB** – Decision-making board); **SDMIN** – Single directorate in ministry; **MDMIN** – Multiple directorates in ministry.

Source: Table A.32 Institutional Arrangements.

Whether a jurisdiction administers tax collection through a MOF directorate or through a semi-autonomous body, tax collection requires a number of specific statutory powers to enable the organisation to perform its role. These responsibilities are most often conveyed by legislation, or in a small number of cases, by delegation of direct regulation making powers to the tax administration. The main statutory powers required are:

- ***Assessment of tax:*** The authority to raise an assessment or amend an assessment for the various revenues administered and collected by the tax administration. This

is obviously fundamental to the collection of revenue by the tax administration and may also allow a wide range of approaches, including the use of self-assessment and pre-filled approaches to tax assessment.

- ***Tax law interpretation:*** The authority to provide interpretations, both in the form of public and private rulings, of how tax laws will be interpreted, subject only to review by judicial bodies. The exercise of this power in advance of tax filing can be expected to assist taxpayers and the tax administration by clarifying the application of the law and its administration.
- ***Enforcement:*** The authority to exercise, without referral to another body, certain enforcement powers associated with administration of the laws (e.g. to obtain information from taxpayers and third parties and to impose liens over property in respect of unpaid debts).
- ***Penalties and interest:*** The authority to impose administrative sanctions (i.e. penalties and interest) for acts of non-compliance and to remit such sanctions in appropriate circumstances. In practice, effective use of this power can afford greater flexibility to the revenue body in its treatment of taxpayers' non-compliance.

Autonomy of operations

The last few years have seen an increase in the extent and rate of change in public administration driven by technology and the use of data. This has enabled governments to improve the delivery of services to citizens and business, and has increasingly provided opportunities to reduce the compliance burden. The observations made in earlier editions of the TAS concerning the importance of autonomy of tax administrations to delivering improved performance and outcomes remain valid.

Autonomy can take on many forms, but at its core involves the government setting objectives for the tax system (including tax legislation) as well as an accountability framework, while providing tax administrations with flexibility in the following areas to decide how to deliver those objectives:

- ***Budget expenditure management*** – including discretion to allocate/adjust budgeted administrative funds across functions to take account of changed circumstances or to meet new emerging priorities.
- ***Organisation*** – determining the internal organisational structure of the tax administration operations, including geographical location of tax offices.
- ***Planning*** – responsibility for formulating strategic and operational plans.
- ***Performance standard***s – discretion to set (in association with central bodies) administrative performance standards.
- ***Personnel recruitment, development and remuneratio***n – the ability to set qualification standards for categories of recruits, recruit and dismiss staff (in accordance with public sector policies); negotiate remuneration levels in accordance with broader public sector-wide arrangements; and establish and operate training and development programmes.
- ***Information technology*** – authority to administer its own in-house IT systems, or to outsource the provision of such services.

The range of powers given to a tax administration depends on a variety of factors. These include the general arrangement of government powers, the state of development of a jurisdiction's public sector administration practices, as well as the institutional model adopted for tax administration. For government, the return to granting greater autonomy is the prospect of increased efficiency and effectiveness. With few exceptions, most tax administrations report that they operate with a degree of autonomy that allows them to appropriately discharge their administrative functions.

That said the inability of more than a third of the administrations surveyed to place staff within a remuneration range (see Table A.59) could be an issue of growing importance as administrations seek to recruit staff with skills beyond those traditionally engaged in the work of tax administration, in particular in the area of data analytics. This issue is discussed further in the human resource management section of Chapter 7.

Survey responses also indicate that a number of tax administrations have limited ability to re-allocate budgeted funds across operational functions to meet new priorities, or to design their own internal organisational structure, including their network of offices and geographical footprint (see Table A.37).

Governance arrangements

Like all government bodies, tax administrations are ultimately accountable to the citizens they serve. The framework within which this accountability operates varies between jurisdictions and is a result of various factors, including the institutional arrangements and government structures in place. The most common form of external governance arrangement indicated by jurisdictions is the use of formal management boards, advisory bodies and external oversight bodies. Tax administrations reported that such bodies: execute general oversight; play a role in strategy development and planning; comment and provide advice on major operational policy reviews; and are involved in the sign-off of formal budgets and business plans. Importantly none appear to have a role in assisting the Commissioner or Director General in exercising any statutory tax powers, nor do they have access to taxpayer specific information.

There does not appear to be any consensus around board size but most jurisdictions report that their management or advisory boards usually consist of both Ministry and revenue body officials, while public boards include external representatives from various sectors. While discussions are normally confidential, some jurisdictions report that decisions or reviews carried out by the boards are often made public to ensure transparency to the wider taxpayer community.

Box 3.2. **Board arrangements**

In ***Singapore***, the Inland Revenue Authority of Singapore (IRAS) Board oversees IRAS and ensures that it carries out its functions competently. This includes the review of major corporate policies and the approval of financial statements, annual budget and major expenditures. The Board is chaired by the Permanent Secretary of the Ministry of Finance, and has nine other members (including the Commissioner of Inland Revenue/Chief Executive Officer of IRAS). The Board has two committees: the Audit and Risk Committee, which reviews the adequacy and compliance of accounting and financial policies and internal controls; and the Staff Committee A, which approves key remuneration policies in IRAS, and the key appointments, promotion and remuneration of senior executives.

Box 3.2. **Board arrangements** *(continued)*

In ***Russia***, the Federal Tax Service (FTS) established a public board, which functions as a consulting body that oversees tax administration. Major FTS initiatives are reviewed and assessed by the board whose members include independent representatives from academia, the business community, the media as well as public figures known for their professional accomplishments and integrity. The public board, which meets at least quarterly, provides a forum where the community exercises public control over FTS activities. Board decisions are public.

In ***Malaysia***, the Inland Revenue Board of Malaysia direct tax entity (IRBD) became a semi-autonomous revenue administration agency in 1996 and adopted corporate governance structures. The Board of Directors supports the Commissioner on organisational, financial, human resource and administration issues, subject to approval through the government's central agencies. While tax policy decisions remain under the jurisdiction and control of the Ministry of Finance, IRBD and its Board now have increased autonomy to administer its finances and human resources. In January 2015, the IRBD was granted self-financing status, allowing it to be financed outside the government budget process through receipt of an agency fee from the government. The agency fee is a percentage of annual direct tax collection; an approach that is similar to that used in a number of revenue administrators in Asia, Africa and South America. While government approval is still required for change, IRBD is able to respond more quickly to changes in the business environment; and to more easily implement business improvement and efficiency measures.

Sources: Singapore – Inland Revenue Authority of Singapore; Russia – Federal Tax Service Tax; Malaysia – Inland Revenue Board of Malaysia (2017).

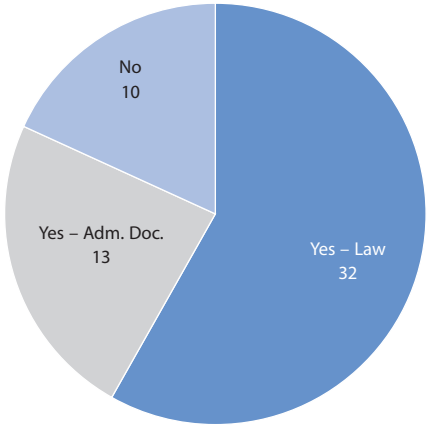
An important part of the wider governance of tax administrations comes from the set of taxpayer rights. Ultimately, tax administrations administer the collection of taxes on behalf and for the benefit of the public, operating on the basis of mutual trust and confidence. This is essential to the operation of an efficient and modern administration which depends heavily on voluntary compliance.

The vast majority of respondents have legislation or administrative procedures governing taxpayers' rights and corresponding obligations. There are pros and cons with both approaches. While the administrative approach tends to be more flexible and service-orientated, the codified system can be seen as more robust since it has the force of law. OECD research show that the following basic taxpayer's rights and obligations are reflected in most implemented charters and/or laws.

Table 3.1. **Taxpayer's rights and obligations**

Right	Obligation
To be informed, assisted, and heard.	To be honest.
Of appeal.	To be co-operative.
To pay no more than the correct amount of tax.	To provide accurate information and documents on time.
Certainty.	To keep records.
Privacy.	To pay taxes on time.
Confidentiality and secrecy.	

Figure 3.4. **Taxpayer rights formally defined, 2015**

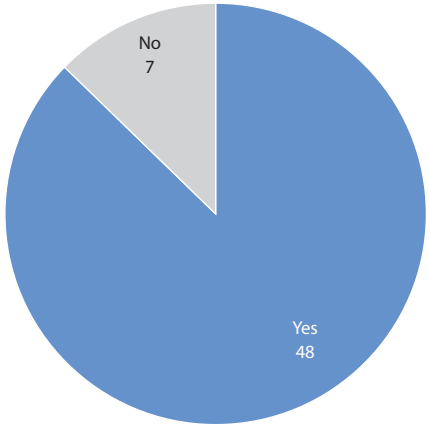


StatLink http://dx.doi.org/10.1787/888933546032

Law refers to law or other statute; **Adm. Doc.** refers to document(s) published by the administration, i.e. not in any statute.

Source: Table A.124 Taxpayer rights and complaints.

Figure 3.5. **Existence of special body for dealing with taxpayers' complaints, 2015**



StatLink http://dx.doi.org/10.1787/888933546051

Source: Table A.124 Taxpayer rights and complaints.

There are differences in the scope of applicability of taxpayer's rights and obligations. For example, some jurisdictions only codify taxpayer's rights, not their obligations, while others apply specific charters to different taxes or only deal with taxpayer's rights in case of an audit. In June 2014, the US Internal Revenue Service (IRS) adopted a Taxpayer Bill of Rights, which grouped existing rights in the tax code into ten fundamental rights. These are available in six languages and are posted in public IRS offices as well as on its website.

Box 3.3. **Taxpayers rights and obligations**

In ***Mexico***, the Office of Taxpayer Advocate which commenced operations in September 2011 is a public agency with technical and managerial autonomy specialising in tax matters. The agency provides free, fast and simple advisory, advocacy and representation services for complaints or claims against acts of the federal tax authorities which are deemed at risk of contravening the rights of taxpayers. The Office operates independently of the Tax Administration Service (SAT) and it is free to make reports on systemic issues requiring attention by the SAT or government. While its recommendations are not binding on SAT, it can propose corrective measures, interpreting tax rules at the request of the SAT, and make submissions to propose amendments to the tax rules.

Source: Mexico – Tax Administration Service of Mexico (2017).

Policy advice

All but seven TAS participating jurisdictions (Costa Rica, Germany, Japan, Korea, Luxembourg, Norway, United States) report that their tax administrations provide advice on tax policy ahead of it being enacted (see Table A.35). The majority of jurisdictions providing such advice report that this is provided jointly with the main policy institutions advising the government, with about 40% of jurisdictions reporting that their advice is

limited to the operational implications of the proposed change. Only two administrations, Brazil and New Zealand, describe themselves as the main provider of tax policy advice to government.

The crucial issue is perhaps not which organisation is providing tax policy advice, but rather on such advice being based on a robust policy development and feedback process covering the various aspects of revenue collection. Tax administrations are in a unique position to support policy development by making policy makers aware of the challenges of implementation and changes in service provision and compliance management, including the role of third-party providers. Policy makers on the other hand are well placed to consider and advance new administrative options allowing higher levels of participation, reductions in the compliance burden and designing out opportunities for non-compliance.

Organisational features

By the early 1990s tax administrations, almost without exception, had moved from internal organisation based on tax types to a ***functional*** approach based around the key tax functions of registration; assessment; customer service; audit and verification; and collections. While this approach allowed greater standardisation of processes, the experience of many administrations was that the approach did not optimise delivery of compliance programmes across all taxpayer groups. They also reported the functional approach inhibited end-to-end thinking and the development of systems and processes that treated taxpayer interaction holistically.

The next two decades saw many administrations re-orientating their business models and structures around the taxpayer. These ***segmented*** models, sacrificed some of the functional advantages of having staff doing the same work grouped together in order to allow a more systematic view of the needs and requirements of different groups of taxpayers. It also saw the establishment of corporate functions for core supporting activities including research; compliance; planning and resource management; service design; and analytics.

Almost at the same time, a number of administrations started to adapt this segmented approach introducing hybrid models that contained aspects of all earlier models and reflect more ***networked*** organisations. These approaches, many of which are unique to the administration implementing them, frequently arose from the need to take a structural response to:

- implementing new tax regimes or policies (e.g. value added tax (VAT) or social programmes)
- introducing new technologies or work methods (e.g. developing digital services)
- managing emerging compliance risks (e.g. managing VAT carousel fraud or base erosion and profit shifting)
- establishing centres of excellence outside the segmented model (e.g. debt collection).

The last decade has seen a resurgence of customer-oriented business models within tax administrations, especially for those delivering wider government services, or taking a "systems approach" of their operations. These new models, many of which are supported by advanced analytics and the use of big data, are enabling more tailored approaches to be developed as well as a general re-thinking of how tax compliance can be best assured at lowest cost and least burden, including through the use of third parties.

The wider transformational approaches can be illustrated by the work being undertaken by Inland Revenue in New Zealand. This involves a fundamental re-examination of every aspect of its operations. The roadmap for the transformation process has four main stages: (1) enabling secure digital services; (2) streamlining tax; (3) streamlining social policy; and (4) completing the future revenue system. This approach, which will require changes to legislation as well as processes, is intended to leverage technology to fit the future revenue system seamlessly into taxpayers' day-to-day life. Such fundamental rethinking of tax processes, both internal and external facing, can lead to issues with legacy information technology (IT) systems which may not be easy to adapt. Given the on-going nature of change, many administrations report that their operating models and structures are no longer seen as needing to endure, instead being seen as having a likely life span of three to five years.

A number of tax administrations report looking at the options for replacing aspects of their core systems with commercial of the shelf (COTS) applications. See Box 3.4 for an explanation of the approach Finland is taking in this respect.

For a brief overview of the implementation issues managed by Republic of China (hereafter "China") in introducing its VAT reforms in 2016, see Box 3.5.

Box 3.4. **Finland – replacing legacy tax systems with tax COTS application**

Tax Finland (TF) has since 2013 been undertaking a major operations and application renewal programme with the aim of redeveloping its tax processes, renewing its tax legislation and replacing seventy current IT applications with one COTS (commercial off-the-shelf) application. This programme, which will renew every aspect of the operations of the Finnish tax system, will run through till 2019 in four stages, two of which have gone live as planned. Stage three, which will transfer corporate income taxation, goes live in 2018; and stage four, the largest of the stages will move personal income and asset taxation into the new environment in 2019.

IT inflexibility and increasing costs as drivers for the change: In the late 2000s TF's IT maintenance costs were increasing and negatively influencing its ability to enhance its systems. Development efforts targeting increased automation or provision of effective services and operations were often limited due to inflexible application architecture and the time needed to implement changes. It thus became apparent that to secure current delivery and allow future flexibility, TF would need to replace its core systems. A comprehensive study in 2010 identified three alternatives: evolving current applications; replacing applications with "best-of-breed" components; or replacing the core system with a comprehensive COTS solution. In 2011 TF commenced a comprehensive COTS product evaluation exercise that after evaluating three possible options concluded that its tax requirements could be met by a COTS product. After delays arising from challenges to the procurement process, TF commenced implementation of its new COTS tax application (GenTax®) in 2014.

Simplification brings business benefits and saves costs, preparation saves time: TF anticipates the largest benefits from the implementation of its COTS tax application will come from simplification. Developing common processes for all tax types and having all the data and tax processing in one application will improve work productivity; reduce systems maintenance costs, and shorten implementation timeframes. TF's did not describe the necessary functionalities as traditional software requirements, but rather as business rules supported by process diagrams and decision models. These were used to ensure everyone understood the change goals. A strong effort has also been placed into simplifying approaches where possible.

Box 3.4. **Finland – replacing legacy tax systems with tax COTS application** *(continued)*

Change and the customers: Existing e-services are being replaced by new services that provide customers more visibility of their data as well as wider selection of online services. Key stakeholders, including accounting companies, have worked closely with TF to support the change and to educate and increase awareness.

Managing staff change is a key to success: The importance of change management cannot be underestimated. The change programme not only provides staff with a new business tool to support their tax work, but also changes what they do and how they do it. TF has also invested heavily in helping manage staff change. Staff have not only received extensive training on the new COTS processes and tools, but they have also had training to explain the purpose of the change and the effects the new systems will have on their everyday work life. Assessing change readiness and the attitude of tax staff are keys to providing targeted communication, training or other actions needed to ensure the COTS renewal programme achieves its overall goals.

Source: Finland – Tax Finland (2017).

Box 3.5. **China – administrative challenges in implementing VAT reform**

From 1 May 2016 China expanded its Business Tax (BT) to VAT Reform programme on a national basis. This final stage of the reform covered more than 10 million legal persons and more than 10 million natural persons in the construction, real-estate, financial and service industry sectors. More than 2 trillion Yuan of business tax revenue was transferred to VAT. In successfully implementing this major change, SAT:

Overcame unprecedented challenges arising from the short implementation timeframe and its existing workload: With less than two months between proclamation of the reform and its implementation, a high powered leadership team was drawn together. All the optimal resources were mobilised to work at designated venues for a 100 days from top to bottom under the command of the leadership team, which saw staff at SAT and provincial levels working around-the-clock.

Successfully responded to the complex industry conditions and, in so doing, strengthened the foundation of the tax administration process: The reform was complicated by unique characteristics in each of the four sectors. With all sectors crucial to the national economy and many of the people in these industries not having any practical understanding of what the new VAT might mean for them or their business, SAT actively developed promotional and guiding materials.

Dealt with more than 20 million taxpayer queries on the new regime: SAT added more than 20 000 tax officials and over 15 500 service counters, and deployed more than 6 500 training teams to ensure taxpayers involved in the BT to VAT Reform pilot programme could invoice customers as well as declare tax from the 1 May 2016 implementation date. These measures saw more than 21.3 million taxpayer queries on the implications of the new VAT Reform programme with SAT's approach being to educate and upskill taxpayers.

Box 3.5. **China – administrative challenges in implementing VAT reform** *(continued)*

Investing heavily in improving the capability of its people and technology: SAT upgraded major parts of its IT system, and promoted the Golden Tax Project Phase III with full effort, especially the development and implementation of a new VAT invoice management system. This improved how taxation management through information was conducted and guaranteed smooth implementation of the pilot programme.

The new VAT is an important building block in its fiscal and tax reforms, and lays a foundation for changes to the relationship between central and local governments, the state and its enterprises, and state and local tax administrations.

Source: China – State Administration of Taxation (2017).

Large Business and High Net Wealth Individuals

Two specific areas where tax administrations have found it advantageous to manage specific groups of taxpayers on a segented basis are large business taxpayers, and High Net Wealth Individuals (HNWI). The rationale for focusing administration resources on managing these groups revolves around:

- *Significance of tax compliance risks*: due to the nature and type of transactions, offshore activities, opportunity and strategies to minimise tax liabilities; and in the case of Large Business, the differences between financial accounting profits and the profits computed for tax purposes.
- *Complexity of business and tax dealings*: particularly the breadth of their business interests and in the case of HNWI, the mix of private and tax affairs.
- *Integrity of the tax system*: the importance of being able to assure stakeholders about the work undertaken with these groups of taxpayers.

Additionally, in the case of large taxpayers, a small number of taxpayers are typically responsible for a disproportionate share of tax revenue collected. Data collected as part of the 2016 TAS survey indicates that for most jurisdictions that were able to provide the data between 35% and 50% of their total net revenue, including withholding payments on behalf of employees, was received from taxpayers covered by their large taxpayer programmes (see Tables A.27 and A.68).

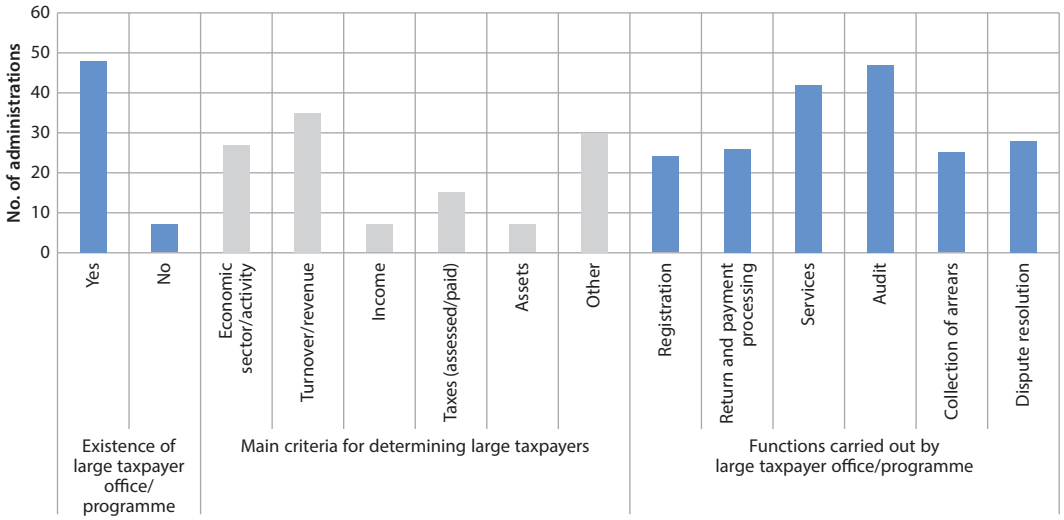
While management of these groups of taxpayers is often undertaken as a programme, a large number of survey participants report that these programmes were also structural involving a Large Taxpayer Office or HNWI unit. The scope of the work of these units varies considerably, ranging from undertaking traditional audit activity, through to "full service" approaches that encompass co-operative compliance approaches.

Administrations that have established specialist units report considerable benefits from this approach. Obviously, the existence of such an approach does not of itself address the risks mentioned above. Similar results can also be achieved through non-structural means. What is critical is that the approach taken by the administration ensures the risks posed by these segments are appropriately managed. This would as a minimum need to include:

- Developing an effective risk management capability.

- Ensuring effective international co-operation at both strategic and operational levels, including the sharing of information and expertise between tax administrations.
- Creating an appropriate policy process to respond to specific tax risks that emerge from activities undertaken within these segments.

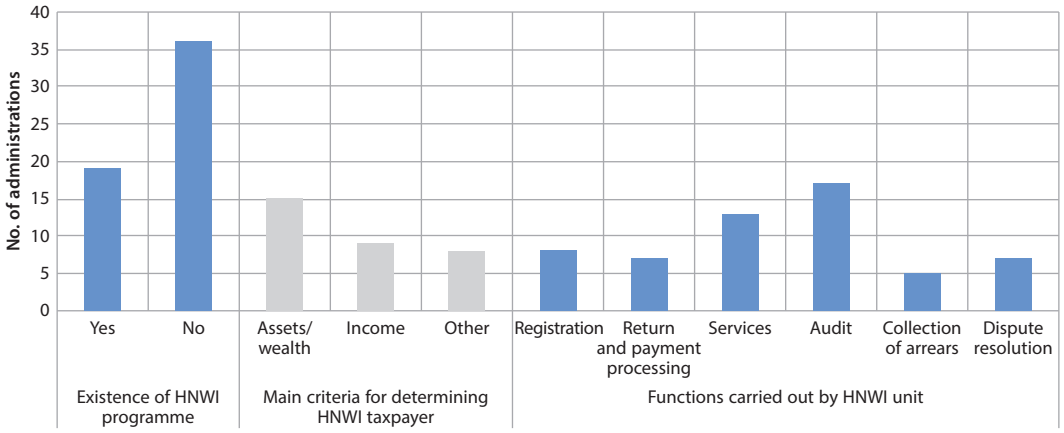
Figure 3.6. **Large taxpayer offices/programmes, 2015**



StatLink http://dx.doi.org/10.1787/888933546070

Sources: Tables A.64 to A.66 Large taxpayer office/programme.

Figure 3.7. **HNWI programmes, 2015**



StatLink http://dx.doi.org/10.1787/888933546089

Source: Table A.69 High net wealth individuals (HNWIs) programme – Main criteria and functions carried out.

Chapter 4

Tax compliance risk

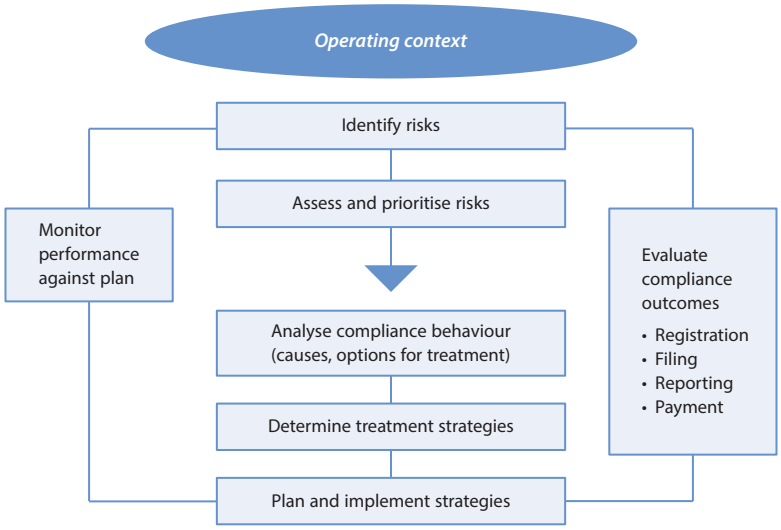
Tax administrations have traditionally relied extensively on audits of high-risk cases to bring in additional revenue and to enhance the perception that non-compliance is associated with significant risk. The last decade has seen a shift towards more evidence-based approaches to compliance risk management, as documented in a range of Forum on Tax Administration (FTA) publications. These approaches generally involve allocating resources and structuring activities on the basis of risk patterns, using a range of instruments to address drivers (rather than symptoms) of risk, and evaluating the success of activities in terms of their impact on the overall compliance environment.

This chapter describes how changes in technology, combined with more extensive use of third party data and advanced analytical tools, are now ushering in another wave of change to the way administrations determine report and manage tax compliance risk.

Framework for compliance risk management

The term "compliance risk management" was first explored in-depth in the FTA guidance note *Compliance Risk Management: Managing and Improving Tax Compliance* (OECD, 2004). Based on the experience of leading tax administrations, the note looked at how the use of modern risk management techniques could help tax administrations develop more effective risk-mitigation strategies. This is against the background that modern tax systems largely depend on voluntary compliance which cannot be assured by individual interventions alone. As set out in Figure 4.1, the framework showed compliance risk management as a cyclical process capable of enhancing the evidence base for risk identification and compliance activities over time. It continues to serve as an effective process more than a decade later.

Figure 4.1. **Compliance risk management process**



Source: OECD (2004), "Compliance Risk Management: Managing and Improving Tax Compliance" (guidance note), www.oecd.org/tax/forum-on-tax-administration/publications-and-products/compliance/33818656.pdf.

The framework sets out the key steps in developing a more systemic understanding of compliance risks, shifting the focus from the individual taxpayer to the broader compliance environment. In turn this allows administrations to prioritise more effectively and to consider where they should adapt their processes and develop new capabilities, including in the area of communication and education. This opens up a range of new risk mitigation strategies, including greater reliance on proactive and close to real-time approaches, as well as tax policy and internal process change.

The emerging practice of compliance risk management

Subsequent FTA reports have explored aspects of this shift in perspective and provided tax administrations with practical guidance and examples of best practice in the following areas:

- ***Influencing compliance behaviours:*** The FTA information note *Understanding and Influencing Taxpayers' Compliance Behaviour* (OECD, 2010) recognised the shortcomings of standard economic models in explaining compliance behaviour,

which were not generally based on behaviours observed in practice. The note set out five broad categories for influencing behaviour positively: opportunity, social norms, fairness considerations, economic incentives, and deterrence.

- ***Shifting from reactive to proactive approaches:*** The 2010 information note underscored a shift from reactive activities targeting symptoms to more proactive approaches aimed at the causes of non-compliance. This was further explored in the 2013 information note *Right from the start: Influencing the Compliance Environment for Small and Medium Enterprises* (OECD, 2012a). This looked at how administrative systems and processes might be reshaped to "build-in compliance", emphasising the importance of considering whether tax policies might need to change to enable new ways of working e.g. electronic filing, and working with stakeholders to strengthen end-to-end processes.
- ***Collaborative and user-oriented approaches*:** The FTA report *Together for Better Outcomes: Engaging and Involving SME Taxpayers and Stakeholders* (OECD, 2013) explored how administrations might involve taxpayers and other stakeholders in developing better targeted services and interventions. This included working with tax intermediaries and others who could help influence SME compliance.

While the compliance risk management model in Figure 4.1 dates back to 2004 and its principles remain valid, what is changing are the:

- ***approaches*** used to identify, assess and prioritise risk, with many administrations now making use of new technologies and advanced analytics
- ***information sources*** which are increasingly based on external data, particularly unstructured data, as well as information supplied by other jurisdictions
- ***timing of interventions***, more of which are now occurring in real-time or close to real-time
- ***type of treatment***, with simpler tasks increasingly becoming more automated
- ***application of methods,*** where new tools and models are allowing administrations to manage "complete data sets" rather than using risk approaches to allocate scarce resources to best cases.

Current compliance strategies

Most administrations report having formal risk management procedures in place, with just over one-third of these making compliance risks public (see Table A.41). This is on the basis that publication can enhance compliance strategies by increasing awareness and acting as a deterrence; while at the same time reassuring the public that non-compliance is being dealt with.

Tax administrations were asked to identify the relative priority attached to a number of risk categories in their current compliance strategies. There was a high degree of commonality, with highest priority areas seen as: value added tax (VAT) fraud, aggressive tax avoidance schemes (including those leading to base erosion and profit shifting), the shadow economy and transactions involving zero or near zero tax jurisdictions. Many administrations also identified e-commerce, identity-fraud, and high net wealth individuals (HNWIs) as medium to high priorities (see Table A.138).

The high priority attached to VAT fraud reflects both its importance as a major source of revenue and the continued vulnerability of repayment mechanisms generally to

organised fraud. VAT fraud and other refund based fraud schemes are increasingly taking new and sophisticated forms involving the use of technologies and at times considerable resources on the part of the perpetrators. For example, Denmark has recently been the victim of an elaborate refund fraud scheme regarding withheld dividends. This led to an estimated DKK 12.3 billion loss of revenue over the period 2012-15. Tax administrations are well-advised to have integrated approaches in place for managing refund or repayment risks. The country examples in Box 4.1 illustrates how the Australian Tax Office is using advanced analytics to manage claims for work-related expenses and how the Swedish Tax Agency is working to manage refund risks across agencies.

Box 4.1. **Integrated approach to managing risks**

In 2016 the Swedish Tax Agency increased resources aimed at preventing fraud connected to the payment system. This early intervention programme is intended to map, prevent and stop attacks on direct and in-direct refunds/payments from the tax agency, including VAT, tax credits and other tax account related payments. In co-operation with other payment agencies (for example the National Insurance Agency and Sweden's Public Employment Agency) the compliance activities will also target fraud connected to the welfare systems.

Analysis showed an increase in risks for systematic and organised fraud in this area. It is increasingly common that such attacks occur across a variety of payment systems, both across agencies and within the same agency. Such activity generally involves a combination of different crimes affecting tax and welfare systems, including identity related crimes. As part of the programme, there will be an evaluation of its effectiveness in managing risks and in how synergies were exploited in the overall compliance activities.

In ***Australia,*** to support its work in managing claims for work-related expenses, the Australian Tax Office (ATO) has developed an analytical model that risk assesses taxpayer claims. In 2014-15, 8.4 million taxpayers claimed work-related expenses to the value of AUD 21.3 billion. The model, *Nearest Neighbour*, enables the ATO to compare a taxpayer's work-related deduction claims against those in similar jobs and earning similar amounts of income to determine how far they differ from the norm. In essence, this provides a personalised risk profile that enables the ATO to identify higher than expected claims. While a larger claim might be legitimate, it may result in the ATO clarifying the claims with the taxpayer and their employer.

The use of the model commenced as a pilot programme in 2014, issuing letters to 2000 taxpayers whose work-related expenses were higher than their peer group. The following year the ATO observed a significant reduction in claims from this group compared to their previous tax returns, especially for those where an amendment was made. Since the successful completion of the pilot project, the *Nearest Neighbour* model has been used extensively by the ATO to select higher-risk candidates for treatment. Currently, adjustment rates for tax returns selected for audit using this methodology exceed 80%.

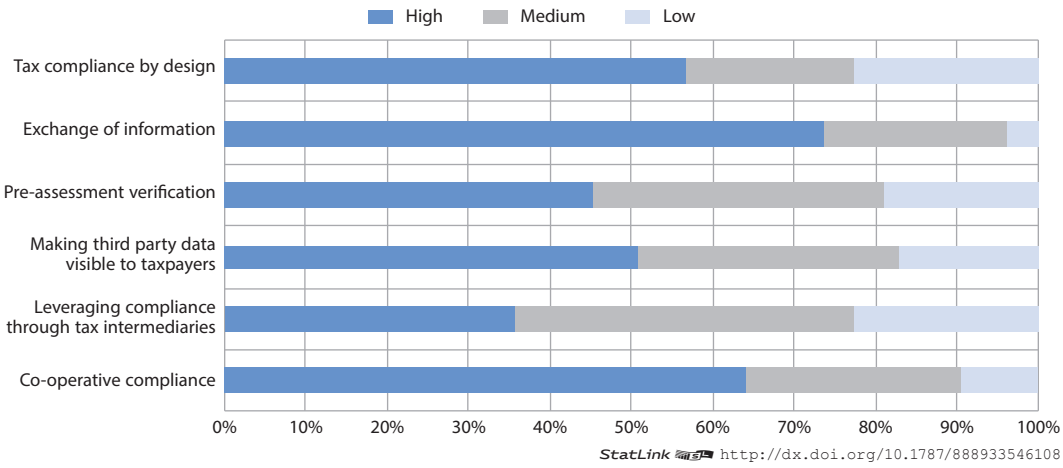
In 2016, the ATO extended the use of *Nearest Neighbour* to operate in real-time. In *myTax* (the lodgement system for self-preparers), if work-related expense claims seem higher than expected, taxpayers are prompted to check their claims before submitting their returns. The ATO will introduce similar online analytics for tax agent clients for Tax Time 2017. Prompts for tax agents will alert them if a client falls outside "normal" claim parameters and may require their further attention. The *Nearest Neighbour* analysis is transforming the way the ATO manages compliance, enabling greater emphasis on prevention and self-correction to encourage willing participation.

Source: Sweden – Swedish Tax Agency; Australia – Australian Tax Office (2017).

Compliance interventions

Surveyed tax administrations were asked to identify the priority they attached to a menu of six potential interventions included in compliance strategies. The relative ranking of the six items (see Figure 4.2) indicates exchange of information is a clear priority, reflecting the growing focus on risks associated with offshore non-compliance. The relatively low ranking of leveraging compliance through tax intermediaries is perhaps surprising given the importance of this relationship to many tax administrations.

Figure 4.2. **Priority of compliance interventions, 2015**



Source: Table A.137 Key aspect of the compliance focus – Approaches.

Key segments

There are a number of segments that typically feature prominently in both the operating structure and the compliance approaches and strategies of tax administrations. This section briefly comments on four: large businesses, HNWIs, small and medium enterprises (SMEs), and the shadow economy.

Managing Large Business Compliance

Almost all tax administrations report having in place a large business unit or a similar form of programme. As mentioned in Chapter 3, this reflects the importance of large business in terms of its contribution to the tax base and the complexity of large business tax affairs. Large business units differ in terms of how they are organised and resourced, and in the focus of their activities, which may reflect local circumstances and variations in the large business population. In general such units administer affairs across all tax types and obligations. Large business units are generally responsible for providing services and for auditing, but it is fairly common that they also manage registrations, return and payment processing, collection and management of arrears, and dispute resolution. The units are frequently organised geographically or by economic sector (see Tables A.64 to A.67).

An increasing trend in the administration of large business compliance is the use of co-operative compliance programmes. These programmes involve a more transparent relationship and more proactive approaches to resolving material tax risks. The concept of co-operative compliance has been the subject of several FTA reports, most recently

Co-operative Tax Compliance: Building Better Tax Control Frameworks (OECD, 2016). Sixty percent of survey participants report already having or being in the process of implementing a co-operative compliance programme for large business. Most often these programmes are based on formal agreements with specific companies, although in some jurisdictions these programmes are more informal. In a limited number of cases, the operation of a co-operative compliance programme is based on legal provisions. Among the requirements for entering such arrangements, tax administrations most frequently cite commitment of the taxpayer to effective management of their tax affairs, followed by the presence of a formal tax control framework and the absence of pending issues or arrears (see Tables A.141 to A.143).

Box 4.2. **Integrated risk assessment for large business**

In ***Canada*** the Canada Revenue Agency (CRA) has implemented an Integrated Risk Assessment System, which allows the agency to consider risks in the large business population both at the economic entity level and at the legal entity level. This system links information from CRA databases and various forms and returns. It then applies risk algorithms to the data to risk score the entire large business population. Taxpayers considered high to medium risk by the automated system are further analysed by experienced integrated Large Business audit teams to determine an overall risk profile for each taxpayer. The risk profile determines the audit approach taken. Those taxpayers considered high risk will be subject to a full compliance audit. Taxpayers in the medium risk category may be subject to a full compliance or limited scope audit. Taxpayers considered low risk may be subject to a compliance assurance review to validate the low risk ranking. The approach allows the CRA to focus its audit resources on high risk cases within the large business population while reducing the compliance burden for businesses associated with low risk.

Source: Canada – Canada Revenue Agency (2017).

Managing HNWI compliance

One-third of survey participants report having units or programmes dedicated to the management of the tax affairs of HNWIs. While most are generally focused on audit, two-thirds include a service component. The service function may integrate activities such as registration, returns and payments processing, debt management, and dispute resolution (see Table A.69). The example in Box 4.3 illustrates how the Netherlands have organised its dealings with the HNWI segment and adapted a range of principles from the management of large business compliance to fit the needs of this important segment.

The establishment of dedicated HNWI units by tax administrations reflects the recognition that a small number of taxpayers are typically responsible for a disproportionate share of the wealth and assets held within the economy. The 2016 edition of the *World Wealth Report* (Capgemini, 2016) estimates that the HNWI segment (defined in this report as individuals with investable assets exceeding USD 1 million) has grown fourfold over two decades. The report estimates that the growth of this segment across all regions will see the wealth held by HNWIs projected to surpass USD 100 trillion by 2025. This concentration of wealth and income, with its significant tax implications, is likely to see more tax administrations establishing HNWI units and/or programmes in the coming years.

Box 4.3. **Dedicated HNWI programme**

In the ***Netherlands*** the Netherlands Tax and Customs Administration (NTCA) has since May 2014 closely monitored the fiscal activity of HNWIs through a dedicated programme undertaken by a specific department for this segment. The approach of dealing with HNWIs as a designated group aligns well with the recommendations of the OECD in its 2009 report dealing with HNWI compliance. This approach is not only acknowledged as appropriate and beneficial for the tax administration itself, but also for the individuals whose affairs are managed through the programme's activities. The dedicated HNWI department is situated within the large business segment of NTCA. An important reason for this is that practice shows that a large number of HNWIs are strongly connected with large businesses. This arrangement improves administrative effectiveness and efficiency and creates opportunities for a thorough and specialised fiscal treatment by NTCA, allowing HNWIs to be managed using the same co-operative compliance model used for large businesses. NTCA has further plans to improve the operations and responsiveness of its activity in the HNWI area through improved co-operation with taxpayers and their consultants.

Source: the Netherlands – Netherlands Tax and Customs Agency (2017).

Managing SME compliance

In most jurisdictions the SME sector is both a significant part of the tax base and employs the largest number of people. It also poses particular challenges for tax administrations since; in general, the SME sector has high turnover rates and varying financial literacy. It also has greater exposure to the "cash economy" than larger businesses and can be impacted relatively more heavily by compliance burden. It is perhaps surprising then, that while a significant minority of administrations report having a dedicated SME programme in place, many do not (see Table A.71).

An increasingly digital and mobile SME taxpayer base, especially one that is operating more and more on a cross-border basis, poses new challenges to tax administrations. As a result many tax administrations are, as part of their compliance management approach for this segment exploring new ways to facilitate and promote SME tax compliance. In so doing many are using the "right from the start" approach described in the OECD report (OECD, 2012a).

Managing the shadow economy

Since the global financial crisis, many tax administrations have strengthened their efforts to analyse the shadow economy and identify ways to disrupt its structures. The shadow or underground economy (as it is also known) covers a broad range of activity, from non-declaration of second jobs to deliberate falsification of invoices and in some cases also has links to organised crime.

The shadow economy was the subject of a comprehensive information note prepared by the FTA in 2012 *Reducing Opportunities for Tax Non-compliance in the Underground Economy* (OECD, 2012b). This note explored the key components of successful compliance strategies, assessed the impact of digital payment technologies and reviewed the methodology for estimating the size of the underground economy. The note encouraged administrations to update their compliance strategies to ensure they reflected new and growing risks, including through using the electronic records created by payment

systems to identify unreported business income. Much of this content is still relevant to the management of the shadow economy today. The newly released report *Technology Tools to Tackle Tax Evasion and Tax Fraud* (OECD, 2017), draws on the experience of 21 jurisdictions to highlight their key successes in using technology to help tackle tax evasion.

Electronic cash registers and electronic invoicing

Those participating in the shadow economy employ various techniques to avoid declaring income and money flows. The two best known are sales suppression and false invoicing. Sales suppression means the intentional under-reporting of sales in order to distort actual tax liabilities. An established method to combat suppression of cash sales is the requirement to use *electronic cash registers*. Such registers transmit sales information directly to the tax administration or record the information on a secure device that can only be accessed by the tax administration. Since the 1990s, several jurisdictions have implemented mandatory electronic cash registers for retail businesses, many achieving considerable revenue increases as a result. Sweden introduced the mandatory use of certified cash registers for traders in January 2010, and supports implementation by carrying out unannounced inspections, undercover purchases and customer verifications. The Swedish Tax Agency estimates that as of 2013, this approach helped increase VAT and income tax revenues by EUR 300 million per year.

Box 4.4. **Use of certified cash registers**

In the ***Russian Federation*** (hereafter, "Russia"), the Federal Tax Service (FTS) in February 2017 started the transition to mandatory online cash registers. The introduction which will be completed by July 2018 instantly uploads sales data to the FTS data processing centres. As required by legislation, each receipt generated by online cash registers has a scannable QR-code that enables customers to verify the transaction by comparing it to the information maintained by tax authorities.

In ***Italy***, the Revenue Agency in January 2017, initiated the optional use of electronic cash registers for VAT operators that allow the storing of data electronically and transmission to the Revenue Agency on a daily basis. Ahead of the launch, technical instructions were published on the agency website in October 2016 to guide the operators in processing the acquired data.

Source: Russia – Federal Tax Service; Italy – Revenue Agency (2017).

The use of fraudulent invoices has obvious issues for VAT and income tax. In several jurisdictions, technological solutions have helped launch *electronic invoicing systems* which enable tax administrations to access invoices directly. Chile introduced its electronic invoicing system in 2002, which became mandatory for all businesses in January 2014. A phased roll-out is underway, with the major part of businesses scheduled to be using the system by early 2017.

From the taxpayers' perspective, it is important to note that the technological innovations to combat sales suppression and false invoicing can also have positive effects. As well as increasing tax certainty, it can lead to a reduction in compliance costs and significantly reduce the likelihood of audit as well as supporting fair competition. In addition the Swedish electronic invoicing system includes a simplified accounting system for businesses, which provides the taxpayer with monthly financial statements and generates prefilled annual returns. In Italy, businesses that use electronic invoices can benefit from quicker VAT refund processing.

Inter-agency co-operation and innovation

Jurisdictions report implementing innovative and more targeted investigation techniques to identify methods used within the shadow economy and actively prevent evasion. To foster institutional learning and increase impact, tax administrations are actively co-operating with other government bodies. This "whole-of-government" approach enables better treatment of risk at a "systems level".

Box 4.5. **Co-operation and innovation**

In ***Sweden***, the Swedish Tax Agency, in co-operation with the Trade Organisation for Taxis in Sweden, introduced in May 2017 a mandatory transmission system for taximeters in the taxi industry. This includes the obligation for taxi businesses to transmit data (digitally and wirelessly) from their taximeters to a certified Accounting Centre for Taxi Businesses, supervised by the Swedish Transport Agency. The Swedish Tax Agency can then request standardised and digitalised information from the accounting centres. Sweden expects this transmission system to improve tax compliance and foster fair competition within the taxi business.

In the ***United Kingdom***, Her Majesty's Revenue and Customs (HMRC) collects *merchant acquirer data*, which includes credit and debit card information, to combat evasion by identifying incorrect records and tax returns. To achieve this, the bulk data is analysed with regard to declared turnover in relation to the entire sector. The analysis of merchant acquirer data enables the tax authority to identify and follow up potential irregularities between real and declared sales. HMRC has also developed a new approach to link incomplete *merchant acquirer data* with HMRC data. This has provided the administration with significantly improved confidence levels in unmatched records identified, to more effectively target businesses operating in the hidden economy. As of November 2016, HMRC had examined 3 725 cases and collected an additional GBP 35 million as a result of this approach.

In ***New Zealand***, Inland Revenue's hidden economy work focuses on sectors where there are greater risks of people not reporting cash revenue and tax-evasion behaviours, such as construction, hospitality and those operating outside the tax system. Investigations into the hidden economy in 2015-16 found tax position differences of NZD166 million. The tax administration ran a successful marketing campaign directed at tradespeople with the tagline "It's just the odd under-the-table job here and there." Since 2012, New Zealand has seen the proportion of construction industry workers who perform cash jobs fall from 29% to 19%.

In ***Peru***, two important goals of the tax administration (SUNAT) are to broaden the tax base and reduce tax evasion. In 2015 SUNAT research identified individuals who borrowed from the financial system and matched this data against taxpayers registered in the tax administration. Any individuals that had credit in the financial system and did not have a tax ID number, or no payments on their behalf could be identified, was flagged as a potential tax evader. This was on the basis that to access credit in the financial system individuals would need to have a relatively stable income stream in order to pay off their credit obligations. Based on 2014 information, this research identified 1.8 million "informal individuals", representing 19.2% of the total client base (31% of these were small and micro enterprises). Although it represented only 3.6% of the total amount of credit in the financial system, the potential tax evasion related to the entire informal group was estimated to be 0.7% of GDP.

This kind of research was possible because legislation that protects banking secrecy covers only financial deposits but does not include financial credits. The information collected is currently under review by the operative unit in SUNAT and will be included as an input in designing and carrying out inspection actions directed to individuals who are not usually reached by regular control programmes.

Source: Sweden – Swedish Tax Agency; United Kingdom – HM Revenue and Customs; New Zealand – Inland Revenue; Peru – Superintendencia Nacional de Administración Tributaria (2017).

Sharing economy

The global sharing economy, which puts suppliers and customers in direct contact through web or mobile based applications, presents an emerging tax risk. Because of the private nature of payments, and the often global basis for payments, it can be challenging to ensure tax compliance. To overcome this, tax administrations are increasingly reaching out to other government agencies and other tax administrations to ensure comprehensive exchanges of information relating to transactions between individuals based in different jurisdictions. In Australia, for example, the Australian Tax Office (ATO) has access to information on financial flows maintained by the Australian Transaction Reports and Analysis Centre. This helps the ATO identify unregistered businesses operating in the sharing economy (OECD, 2017).

With the sector being relatively new and expanding rapidly, not all taxpayers participating in the sharing economy are aware of their obligations. In promoting tax compliance many administrations are taking a service and education approach. These include approaches described in the OECD publications *Tax Compliance by Design* (OECD, 2014), which encouraged administrations to adopt a systems approach to improve SME tax compliance, and *Right from the Start* (OECD, 2012a). Several jurisdictions also report using third party information and internet scraping technologies (data mining) to help identify individuals and entities operating in the sharing economy. In the United Kingdom, HMRC for example uses a product that collates and filters social media and other websites to monitor trends in specific locations or business sectors.

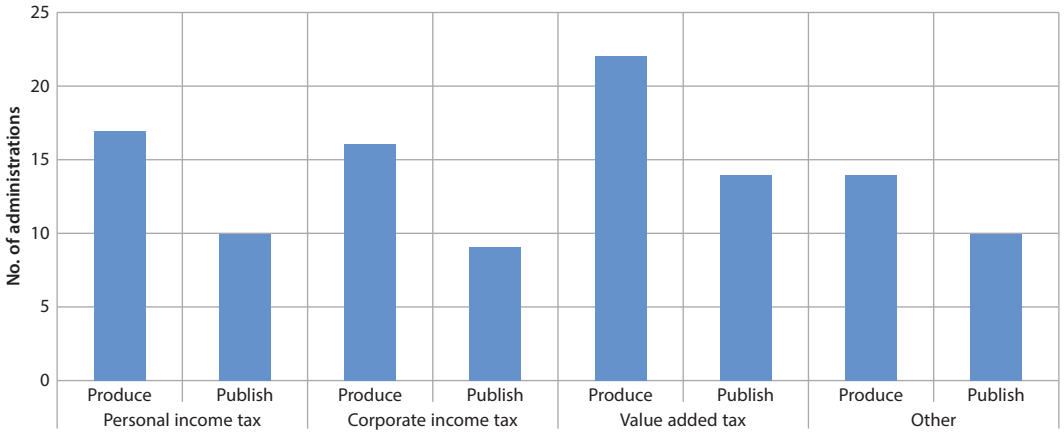
Tax gap measurements, random audits and robust monitoring of risk

The use of tax gap measurements is becoming more common, especially for VAT, as jurisdictions increasingly see the benefits of having high level estimates of non-compliance within the tax system. Top-down methodologies that use national accounts data represent a relatively low-cost means of producing such estimates. These approaches are often associated, though, with a fairly high degree of uncertainty and therefore are of limited operational use. Bottom-up methodologies that include information from random audits, on the other hand, can provide a more accurate picture of lost revenue across segments and tax types.

Almost one half of the 55 surveyed administrations report producing periodic tax gap estimates for one or more of the main tax types, with the production of estimates of VAT the most prevalent (see Figure 4.3). The majority of administrations that produce assessments do so for all three major tax types, with around half of those making their estimates publicly available. This practice seems well aligned with the trend discussed above in relation to transparency about compliance risks, strategies and results.

It is generally acknowledged that the combination of top-down and bottom-up figures provide the most solid basis for drawing conclusions on the health of the tax system over time. It is important to observe, however, that the data from both methodologies is often available with a delay of several years. Therefore these *lagging indicators* need to be supplemented with a robust set of *leading indicators* (for instance the incidence of timely and accurate filing and payment across segments and tax types). This is important for monitoring current risk trends, assisting operational decision-making and evaluating the success of treatment strategies. This edition of the Tax Administration Series does not include data that can form the basis for an assessment of current practices, but previous FTA work does suggest scope for improved operational measures.

Figure 4.3. **Use of tax gap methodology, 2015**



StatLink http://dx.doi.org/10.1787/888933546127

Source: Table A.139 Tax gap approaches.

Random audits

Slightly less than two thirds of participating tax administrations report having random audit programmes in place (see Table A.140). These are generally intended to provide a more accurate understanding of compliance risks, measure the impact of audits and other compliance activities on taxpayer behaviour, and enhance risk-profiling systems. About one-third of the jurisdictions with established random audit programmes report also using the data to produce tax gap estimates. Those administrations that do not use random audit programmes often cite the significant burden on the taxpayers, particularly low-risk taxpayers who would otherwise not be audited.

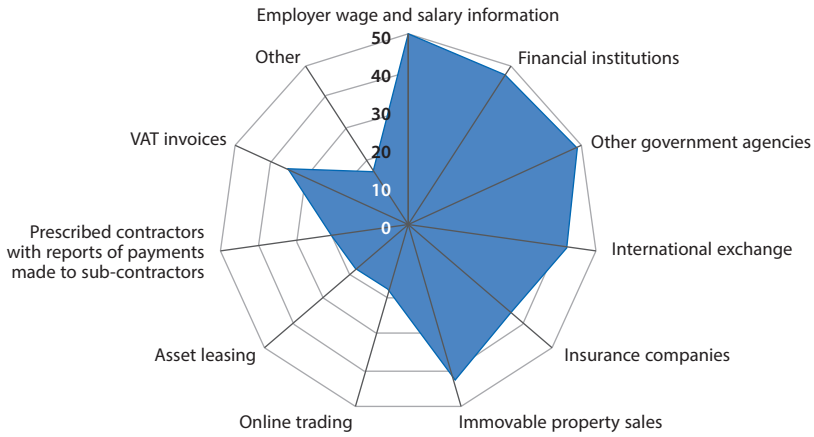
Leveraging third-party data

The benefits of third-party data in enhancing tax compliance and service delivery are widely recognised. It is therefore no surprise that the great majority of participating tax administrations report they are expanding their collection of data from third-parties including online trading, asset leasing, payments to subcontractors, and VAT invoices. That said as illustrated by the Figure 4.4 there is still a strong focus and concentration on the collection and use of traditional data sources. These include data on wage and salary information from employers as well as data from, financial institutions, property sales, other government agencies, and information exchanged with other jurisdictions.

Tax administrations generally report sharing data (subject to specific provisions) with other government bodies and other jurisdictions. While data sharing with employers, financial institutions or third parties is increasing as some administrations look to improve withholding systems, it is still not common (see Table A.145).

With the bulk of third party data coming from organisations that have withheld personal income tax from individuals, tax administrations have been active in establishing processes to improve outcomes and simplify compliance for salary and wage earners. As a result some administrations now report being able pre-fill 100% of the data for selected groups of taxpayers. The practice is most widespread and successful in the Nordic tax administrations where it has led to impressive compliance rates and low administrative costs for personal income tax, which in these jurisdictions represent a very significant share of the tax base.

Figure 4.4. **Use of third party data, 2015**



StatLink http://dx.doi.org/10.1787/888933546146

Source: Table A.144 Use of third party data.

Increasingly the spread of digital payments, electronic invoicing and connected devices (like online cash-registers and point-of-sale solutions) is generating data that can be used by tax administrations. Taken together data on sales and on payments complement each other to form a picture of potentially taxable transactions. The transformative potential of these data sources can be seen in the case of Russia where the Federal Tax Service (which already processes more than 1 billion electronic invoices every quarter) will receive real-time data from online cash-registers at 2.5 million sales points based on legislation in effect as of February 2017.

How tax administrations position themselves to influence and leverage this environment and the data it produces will be a key transformative theme over the next decade.

Voluntary disclosure mechanisms

Voluntary disclosure mechanisms can be an important part of compliance programmes when used as part of a broad approach to facilitating compliance outcomes. Such programmes offer non-compliant taxpayers the opportunity and incentive to proactively put their tax affairs in order. As well as being less resource-intensive than investigations, they can also potentially generate significant insights into the reasons for evasion (including accidental) and the structures used to facilitate deliberate evasion.

Box 4.6. **Voluntary disclosure programme**

In Australia, where taxpayers recognise a mistake or omission in a previously lodged tax return or activity statement, the ATO encourages them to disclose this and work with it to fix the problem.

In March 2014, Project DO IT (Disclose Offshore Income Today) was launched, offering taxpayers an incentive to come forward voluntarily before the end of the year and disclose unreported foreign income or capital gains and related deductions claimed incorrectly. Taxpayers disclosing their offshore assets were: generally only assessed for the previous four years; liable for

Box 4.6. **Voluntary disclosure programme** *(continued)*

a maximum shortfall penalty of just 10% and full shortfall interest charges; and not investigated by the ATO or referred for criminal investigation on the basis of their disclosures. Taxpayers with undisclosed offshore income or assets that did not come forward before the deadline are still encouraged to come forward and discuss their situation.

At 30 June 2015, the ATO had received over 5 800 disclosures with over AUD 5 billion in assets declared and over AUD 600 million of omitted income disclosed, leading to AUD 127 million in collections. The ATO anticipates significant future tax collections based on the assets and income brought into the tax system under the project. Intelligence from the project will also help to detect and deal with inappropriate offshore arrangements, including those who chose not to voluntarily disclose income.

Source: Australia – Australian Tax Office (2017).

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Chapter 5

The changing role of tax service providers

Traditional tax intermediaries such as tax agents, bookkeepers and the accountancy professions continue to play a significant role in the operation of the tax system of many jurisdictions. These intermediaries often support taxpayers in complying with their tax obligations, as well as undertaking other services. They have a long-established role in many jurisdictions of working with administrations to improve how the tax system functions technically and as an end-to-end process.

As new technology has enabled new types of supporting services, including online accounting and automated filing, tax administrations are increasingly having to consider how they can best interact and engage with a wider range of tax service providers.

This chapter explores the changing role of tax service providers and the nature of the working relationship with the tax administration. It also comments on how administrations are responding to the challenges and opportunities presented by the new business models and technologies.

Introduction

Traditionally tax administrations have relied heavily on tax intermediaries to fill an important role in the tax system. These intermediaries, which include bookkeepers, accountancy and advisory professionals as well as tax agents, assist taxpayers to understand and meet their tax obligations. Many administrations have invested in establishing supportive relationships with these groups at an industry level. This is on the basis that they are well placed to not only influence and support taxpayers' compliance efforts, but also because the services they provide can have a significant impact on the workloads of tax administrations. This is particularly the case as regards filing and payment.

Over the last three decades or more, tax administrations have established services and processes to support the role of the tax agents. These include differential return filing dates, dedicated services – particularly within contact centres – and formal or ad hoc mechanisms for consultation, collaboration or escalation of administrative issues. As administrations have looked to take a more customer-centric or segmented view of tax processes and systems, many have sought to expand these tax agent relationships. This includes involving them in strategic discussions about how tax administration is changing and what this means for them.

At the same time, the landscape is also shifting for the provision of tax services. Technology has enabled new types of services, including online accounting and automatic filing or other tax-related obligations as a "by-product" of using accounting software. This has brought new businesses and new operators into the tax world along with new service concepts and new patterns in customer interaction. These prompted the Forum on Tax Administration (FTA) to publish *Rethinking tax services: the changing role of tax service providers in SME tax compliance* (OECD, 2016a). That report provided an overview of the relevant technological and business developments. It also explored how these developments can influence small and medium enterprises (SMEs), tax service providers and tax administrations – and the way that they co-operate.

The role of tax service providers

Tax service providers operate in many jurisdictions, conducting a range of tasks that aid the functioning of the tax system. These include providing taxpayers with advice on the application of tax laws, assisting them in the preparation of returns, and representing them in their dealings with the tax administration, often involving tax audit and disputes. While it is generally taxpayers who initiate and make the arrangements for tax services from providers, the providers remain an important potential partner that can assist administrations in improving compliance rates, meeting service demands, and lowering the administrative burden and cost of tax administration.

Tax administrations have long recognised the potential benefits of establishing formal arrangements with tax service providers. The 2013 report *Together for Better Outcomes: Engaging and Involving SME Taxpayers and Stakeholders* (OECD, 2013) pointed to a move from somewhat formalistic engagement mechanisms towards deeper and more genuine forms of collaboration and co-creation based on a shared agenda. For instance, tax administrations and tax service providers may co-create information and guidance that tax service providers may then deliver on behalf of the tax administration.

While the report acknowledged these developments, it also pointed out the potential for more systematic, far-reaching and ultimately transformative approaches. The advent

of new technologies and service providers brings new urgency to this agenda. As tax compliance is increasingly mediated by third parties, technologies, and data in the broader tax ecosystem, tax administrations need to adopt strategies for leveraging and influencing these developments. Such strategies are likely to take the form of partnerships, with the tax administration taking more of a facilitator role rather than just acting as a traditional regulator.

The positive contribution such developments can make to the overall functioning of the tax system was also explored in the 2008 FTA report *Study into the Role of Tax Intermediaries* (OECD, 2008). The report conceived and recommended the concept of "enhanced relationships" involving tax intermediaries, taxpayers and the tax administration. Interestingly, almost ten years on, three-quarters of survey participating administrations report offering "specialised services" to tax service providers based on such as relationship (see Table A.123).

Box 5.1. **Working with tax service providers**

In ***the Netherlands*** tax service providers play an important role in assisting SMEs to meet their tax obligations. The tax service provider will often be the primary advisor to the business offering a broad range of financial and business advice. The technological and service innovations in society have brought changes to the tax service provider "eco-system", with new entrants offering new services often integrated into the taxpayers' natural systems. The Netherlands Tax and Customs Administration meet regularly with representatives of tax service providers. These meetings allow discussion on developments within the tax administration, including updating on hot topics and the operation of the tax system generally. It also provides a forum that enhances mutual understanding and co-operation. These meetings increasingly are taking a more systems view of the tax interactions of SMEs.

Source: the Netherlands – Netherlands Tax and Customs Administration (2017).

Despite the proven benefits tax service providers offer in many jurisdictions, most tax administrations appear to have limited information on the operational workload of this group. Of the 55 tax administrations participating in the survey, most were unable to provide data on the number of returns prepared by tax service providers, with only 18 administrations for value added tax, 20 administrations for personal income tax and 21 administrations for corporate income tax gathering this information (see Table A.94). Without such information, it is not possible for the administration to properly monitor the performance of tax service providers, contrast their performance with the population as a whole, or have data to use for dialogue with (and perhaps regulation of) the tax service industry.

Regulation of tax service providers

Table 5.1 reports that just under two-thirds of the 42 administrations offering specialised services reported the existence of laws or regulations prescribing the registration and/or operations of tax service providers.

The level of involvement of tax administrations in the registration and regulation of tax service providers varies considerably. In some jurisdictions tax service providers are entirely self-regulated, generally based on frameworks set out by professional bodies representing all or part of the industry. Such frameworks often include strict professional

and ethical standards. In other jurisdictions, the government or the tax administration itself takes a more active role. This typically involves a registration process that allocates a unique identifier that must be used in its dealings with the tax administration.

Table 5.1. **Services and registration of tax service providers, 2015**

	Specialised services offered	Prescribed in law or regulation	Registration requirement with the tax administration	Online registration possible
No. of administrations	42	27	22	15

Source: Table A.123 Tax intermediaries.

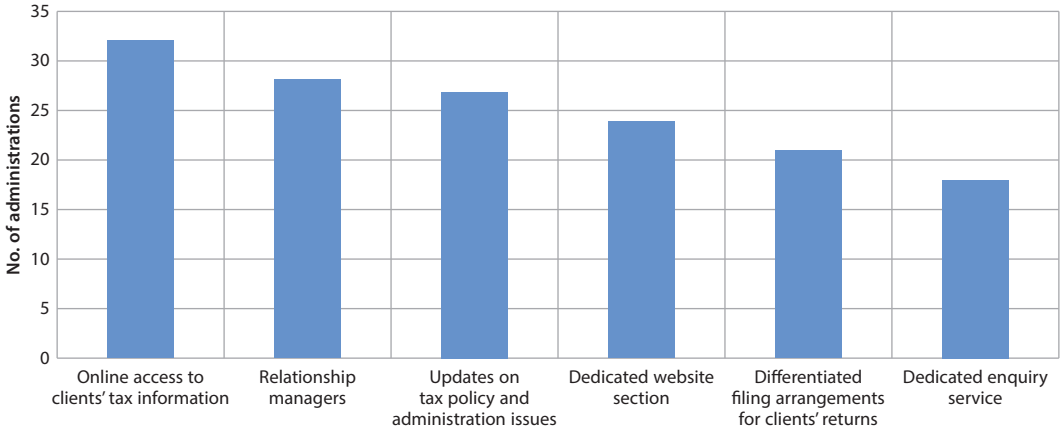
As tax administrations move towards more collaborative approaches to benefit from the knowledge, resources, reach and credibility of tax service providers, it is to be expected that there will be changes to regulatory approaches. This may include, for example, the introduction of methods for differentiating service providers based on the quality and accuracy of the services and products they provide. Similarly, there is likely to be an increasing need for standard-setting and regulation of new technologies to ensure that parties can rely on them and their supporting processes.

Services offered to tax service providers

Figure 5.1 outlines the range of specialised services offered to tax service providers by 42 of the surveyed administrations.

Two-thirds of administrations offering specialised services report having a *relationship manager* function to liaise with tax service providers and address their specific needs. One half reports routinely surveying satisfaction with the services provided, with almost two-thirds of these publishing the results (see Table A.120). Administrations report that survey data is used for management and business development. It merits mention – given the important role tax intermediaries play in supporting tax administrations and facilitating tax compliance – that up to a quarter of administrations that have tax service providers appear not to have introduced dedicated or specialised services to support these intermediaries (see Table A.123). This may be an area of opportunity for those tax administrations.

Figure 5.1. **Specialised services provided to tax service providers, 2015**



StatLink http://dx.doi.org/10.1787/888933546165

Source: Table A.123 Tax intermediaries.

New actors and technologies entering the market

The changing tax environment has two main aspects:

- ***A dramatic shift in the tax service provider market***. The market for bookkeeping, accounting and payroll software has changed dramatically over the last five years. Accounting software used to be regarded as expensive and unaffordable for all but the largest of SMEs. However new business models offering flexible and scalable plans at low cost are allowing even the smallest businesses to benefit. Improved ease of use with more intuitive interfaces and better functionality (for instance issuing and tracking of invoices or the automatic categorisation of costs) has also driven up-take particularly with smaller SMEs. The trend is particularly pronounced in advanced economies with high technology penetration. For example, the Danish Tax Administration reports that more than half of the business population now use cloud-based accounting software to manage their bookkeeping and tax affairs. At the same time, traditional systems targeting the higher end of the market are becoming increasingly sophisticated, offering greater transparency, more certainty and better integration with business processes.
- ***New technologies and approaches*** which are presenting administrations with new opportunities and new business relationships. These include digital payment systems, electronic invoicing, as well as potentially trust-enhancing technologies such as digital cash registers and devices that track sales, production or consumption at different stages of the value chain. The likelihood is that this change will only deepen and accelerate in coming years as these technologies mature and regulators look to help enable their potential. For example, a number of jurisdictions have begun to consider the possible uses in tax administration for blockchain, the technology behind Bitcoin, which offers the prospect of tamper-proof records, invoices and contracts.

New tax administration business models

The above-mentioned developments offer tax administrations a range of exciting new opportunities to leverage "smart devices" and data sources. This has the potential to significantly enhance upstream verification, increase the overall transparency of the tax system, and provide targeted services and interventions prior to or during the filing process. The data collected can also help identify changing economic activity. The implications as well as the opportunities arising from these developments have been explored in a range of FTA publications. For example, the report *Compliance by Design: Improving SME compliance by adopting a system perspective* (OECD, 2014) examines how tax administrations can leverage data and technologies in the broader tax ecosystem. While it is possible to imagine "hybrid" approaches, the report highlights two alternate strategies for doing so:

- The ***centralised data approach*** is focused on access to metadata and data that can be used for verification and other purposes. For example the extensive use of data from electronic invoicing and online cash registers for matching by the Federal Tax Service in Russia;
- The ***trusted chain approach*** is focused on strengthening the end-to-end process where data flows from individual transactions to the final tax "return". This can allow a high degree of reassurance that the return can be relied upon. The work with certification of point-of-sales solutions and book-keeping software in the Netherlands is an example of how tax administrations may work with tax service providers to create a trusted chain.

Beyond strengthening the end-to-end process from transaction to taxation, which is ambitious in itself, some tax administrations are now developing options for pushing information, services and business rules out into the ecosystem. This can involve integrating tax information, guidance and other functionality in the bookkeeping software. Such integration can enable any issues to be identified prior to or during the filing process potentially reducing the need for post filing audits (see OECD, 2016b). The example in Box 5.2 illustrates how Her Majesty's Revenue and Customs (HMRC) is publishing application programming interfaces (APIs) to support the development of third-party software within the context of its wider digital strategy.

Box 5.2. **Exposing business rules and APIs**

In the ***United Kingdom,*** HMRC is investing GBP 1.3 billion into a programme to make tax administration easier, quicker and simpler. This programme is already well underway. Transforming HMRC into a digital tax administration is allowing it to reduce the burden of tax compliance for taxpayers. Small businesses and individuals can now use digital tax accounts for a growing range of tax transactions, giving a personalised and increasingly real-time user experience. The ambition is to show exactly what is owed and to make the tax system easier to comply with. Ultimately digital tax accounts will replace annual tax returns in their current format. A key strand of HMRC's strategy is the requirement for most businesses to maintain their records digitally and to update HMRC quarterly. This will improve the levels of voluntary compliance, reduce amounts lost through error, and provide the environment for business to grow and thrive. The overall digital strategy is supported by published APIs to enable taxpayers, their agents and commercial software to transact with HMRC, encouraging the development of third party products.

Source: United Kingdom – HM Revenue and Customs (2017).

The focus on strengthening end-to-end processes and influencing the broader tax ecosystem has naturally led to increased collaboration with software developers. Box 5.3 illustrates how New Zealand and Denmark have collaborated with software developers to integrate functionality in third-party software.

Box 5.3. **Collaboration with software developers**

In ***New Zealand***, Inland Revenue concluded a successful pilot project in 2015 that allowed businesses to submit Goods and Service Tax (GST) returns through the accounting software of two providers that cover 75% of the SME accounting services market. In a survey of 422 pilot participants, 64% said the new service reduced their costs and 76% said it made it easier for them to ensure they were submitting correct information. Many suggestions also came forward in the trial (including from Inland Revenue) as to how to fix mistakes in tax returns online and to set up online payment plans to clear debt. The software providers released the GST filing service to all clients in mid-2016. Inland Revenue is now looking at digital options for Pay-as-your-earn and social payments.

Box 5.3. **Collaboration with software developers** *(continued)*

In ***Denmark,*** the Danish Tax Administration (SKAT) is collaborating with software developers to embed tax-related guidance and functionality in third-party accounting software solutions targeting small business. The long-term ambition is that transaction data flowing from banks to accounting systems should form the basis for a semi-automated process that integrates with SKAT's business processes. The first product of the collaboration will be released early in 2017 in the form of a comprehensive yet user-friendly bookkeeping guide accessible directly from third-party accounting software. Functionality for reporting and paying value added tax, which is the main obligation of most small businesses, is expected for release later in 2017.

Sources: New Zealand – Inland Revenue; Denmark – Danish Tax Administration (2017).

As tax administrations continue the journey to redefine their role and develop deeper partnerships across the broader tax ecosystem, they may find value in the implementation advice for engagement and involvement strategies contained in the *Together for Better Outcomes* publication (OECD, 2013), summarised in Box 5.4.

Box 5.4. **Advice for implementation for Engagement and Involvement approaches**

Start with what you have: Revenue bodies are already using E&I approaches in a variety of ways. To make further progress, it is advisable to build on the existing resources and capabilities, but think about scaling as opportunities arise and as the case for E&I approaches gradually become more firmly established and accepted.

Be genuine and consistent: Revenue bodies sometimes face scepticism about the sincerity of their desire to engage and involve taxpayers and stakeholders. Trust and legitimacy is enhanced as this scepticism is overcome. The opposite may happen, however, if the revenue body is perceived to not be sincere or to hold hidden agendas.

Be open and flexible: Engaging and involving taxpayers and stakeholders involves an element of unpredictability, as their views and perspectives will often challenge revenue body assumptions and challenge traditional processes. It is therefore important to be sufficiently open and flexible to pick up and act upon new insights, which will often lead to better outcomes and solutions.

Avoid overpromising and under-delivering: E&I approaches can sometimes generate expectations among taxpayers and stakeholders that can be difficult to meet. It is therefore important to carefully manage expectations by being clear on purpose, trade-offs and limitations.

Work back from outcomes: Performance metrics and incentive structures relying excessively on outputs can be a barrier to the take-up of innovative approaches. Working back from desired outcomes can, on the other hand, stimulate innovation and change. Consider how your organisation can benefit from focusing on its ultimate outcomes and how this can be reflected in metrics and incentives.

Box 5.4. **Advice for implementation for Engagement and Involvement approaches** *(continued)*

Celebrate successes and learn from failures: The benefits of a successful E&I initiative can often be intuitively understood. Celebrate successes to anchor learning generate further momentum for change. Accept, on the other hand, that innovative approaches sometimes involve a degree of calculated risk-taking and embrace the occasional failure as a learning opportunity.

Be patient and persistent: Revenue bodies may identify some quick wins, but as with other new approaches, it is necessary to "sow before harvesting". Commitment and investment is required to develop capabilities and manage change. Building trust and developing relationships with external stakeholders also takes time and effort. A long-term perspective is therefore important.

Source: OECD (2013), *Together for Better Outcomes: Engaging and Involving SME Taxpayers and Stakeholders*, http://dx.doi.org/10.1787/9789264200838-en.

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Chapter 6

Performance of tax administrations

This chapter summarises operational performance data for key areas of tax administration. In so doing it examines each of the major functions of the tax system:

- *An integrated* registration process *for taxpayers;*
- *Effective and low cost processing (*assessment*) of tax returns and tax payments;*
- *Timely and effective* support and services *to help taxpayers fulfil their obligations;*
- *Effective and timely* verification *interventions that confirm the accuracy of reported information;*
- *Effective and efficient interventions to* collect *overdue payments and returns; and*
- *Access to timely and cost effective tax* disputes *processes.*

This chapter concludes that overall performance by tax administrations remains strong. It also notes the significant challenges that lie ahead in utilising new technologies and business approaches to continue to decrease burdens and enhance compliance. This chapter also highlights a number of areas where administrations are invited to consider opportunities to improve performance and reporting.

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.

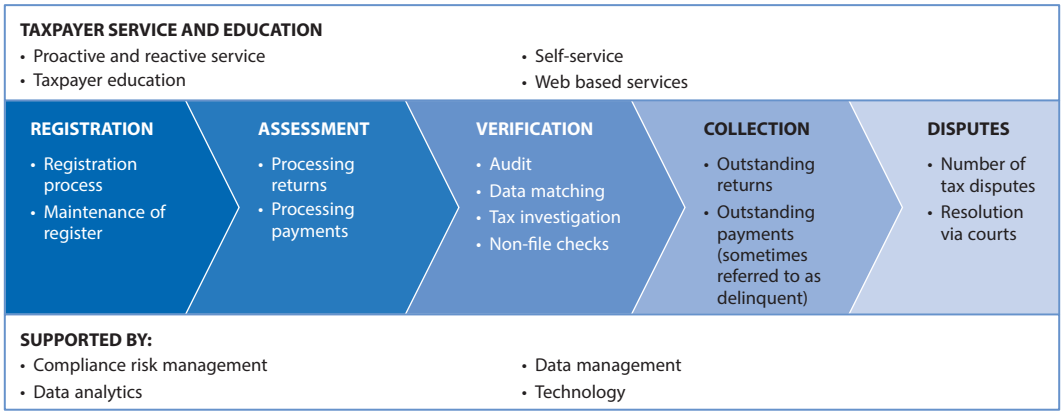
Introduction

This chapter provides an overview of reported operational data of the 55 tax administrations participating in this publication. It examines the major functions of the tax system as set out in Figure 6.1, and provides performance information and commentary on: the integrated *registration process* for taxpayers; effective and low cost processing (*assessment*) of tax returns and tax payments; effective and timely support and *services* to help taxpayers fulfil their obligations; effective and timely *verification* interventions that confirm the accuracy of reported information; effective and efficient interventions to *collect* overdue payments and returns; and access to timely and cost effective tax *disputes* processes.

High level observations on the functions of tax administrations participating in the survey are:

- ***Registration:*** most administrations report improved information on their potential taxpayer base. More on-line registration processes are available, increasingly connecting across government.
- ***Assessment:*** growth in using e-channels to file or pay is patchy. Relative levels of on-time paying and filing are low on average. Many jurisdictions still report managing large paper-driven processes.
- ***Services:*** telephone remains the major means of taxpayer inquiry. While a large number of administrations report high volumes of in-person inquiry. Some administrations are increasingly handling contacts through the use of contemporary services to improve and support self-service.
- ***Verification:*** electronic audit methods and the use of third party data are changing the way work is sequenced and performed. New compliance risk models are allowing a growing number of administrations to assess risk and make any necessary interventions closer to the transaction or "tax event".
- ***Collection:*** the upward trend in collectable tax debt reported in the 2015 edition has stalled, with more than half the administrations that provided information reporting decreases in the level of their collectable tax debt between 2014 and 2015.
- ***Disputes:*** many administrations have been active in improving processes and timeliness. The availability of management information is also improving although longer time series are required to identify overall trends.

Figure 6.1. **Overview of core tax administration functions**



Registration

A comprehensive system of registration and taxpayer identification is critical for the effective operation of the tax system. It is the basis for supporting self-assessment, value-added and withholding regimes, as well as third party reporting and matching. While the majority of administrations are responsible for the system of registration within their jurisdictions, they report that registration processes are increasingly being initiated outside of the tax administration through other government services. The active management of "tax registers" remains a priority area for tax administrations, with two-thirds reporting formal programmes in place to improve the quality of the tax register in the current year.

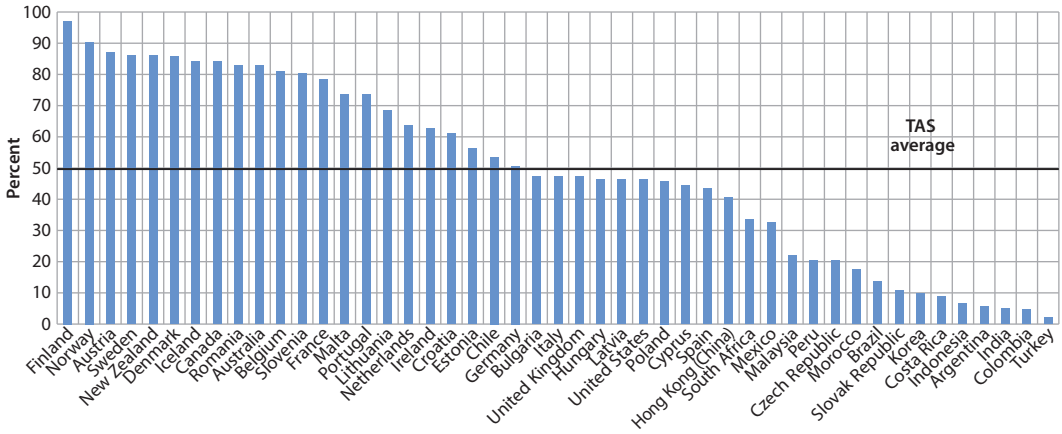
This section briefly comments on four issues of significance in tax registration: levels of registration, joined-up processes across government, identity management, and identity across borders.

Levels of registration

The fundamental importance of an effective tax registration system cannot be underestimated. Tax administrations need strong processes to both manage those taxpayers that are "part of the system" and to help them identify those yet to join. Further, they need to be able to monitor and determine actions and interventions in support of both individuals and corporate bodies to establish any liability to tax, even in systems where filing is not mandatory.

Figure 6.2 provides information on the rate of registered personal taxpayers as a percentage of the total citizen population. The rate would seem highest among those jurisdictions that report using the tax system for purposes other than just tax collection, this includes the management of social programmes.

Figure 6.2. **Registration of active personal income taxpayers as percentage of citizen population, 2015**



StatLink http://dx.doi.org/10.1787/888933546184

Notes: Percentage for Bulgaria relates to the year 2014.

Note by Turkey: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Source: Table A.5 Registration of personal income taxpayers.

Joined-up processes across government

Tax administrations still handle most of the registration for businesses (including value added tax – VAT) and for individuals. With governments looking to improve delivery of services to citizens, often by joining up processes, many administrations report moves to make tax registration part of other actions taxpayers undertake, such as registering for tax at the same time as registering a company or registering the birth of a child; and/or moves to use the tax number to allow taxpayers to access government services.

In making registration processes easier to access or in providing for the use of the tax identity number to access other services, it is important to not lose sight of the pivotal role that registration and tax identity numbers play in underpinning the tax system. Administrations would do well to ensure they assess the impacts any such changes may have on filing, payment, collection and reporting behaviour as well as the extent to which they improve access and lower administrative burdens.

In looking at how taxpayers can register, 46 of 51 administrations reported they provide more than one channel for taxpayers to use. Interestingly 70% now report that it is possible for individuals to register on-line, or through a mobile app. The majority for administrations report that other agencies – mainly other government agencies – may also be responsible for registration activities. Ninety percent of survey respondents indicated it is possible for taxpayers to register for multiple tax types at the same time (see Tables A.75 and A.78).

Box 6.1. **Registration and identification**

In ***Japan,*** in order to improve the fairness of the social security and tax system and to make interacting with government easier, all individuals and corporations now have a unique identifier from October 2015, known as "my number". *My Number,* issued to individuals by municipal offices and to corporations by the National Tax Agency (NTA), is required on declaration forms and statutory statements. The NTA expects that aggregation and matching of declarations and statements will also improve the accuracy and efficiency of the social security and tax system.

In ***Mexico*** the Tax Administration Service (SAT) has strengthened registration processes for taxpayers added to the Federal Taxpayers Registry (RFC). Citizens can now enrol on-line using a unique national registration code that contains identification data certified by the National Population Registry. This number is also used to access other public services such as social security. After completing the on-line registration process, the taxpayer completes the process at a SAT office using identity documents and biometric information. Recent changes have allowed employers to ascertain whether new employees have been registered. Where the employee has not registered this can now be done for them by their employer (provided that the employers has registered) without the need for to visit a SAT office.

In ***Italy***, the revenue agency is working on a whole-of-government digital agenda that includes developing a single ID sign-in for all government, municipal and public service portals.

In ***Denmark***, all businesses and individuals over 15 receive digital post from all public authorities in one mailbox, provided by government on a secure public platform. All private information from tax to health data must be sent through this channel. Individuals and business are obliged to open their secure mailbox and are prompted to do so through e-mail and/or text messages (optional) notifying them of new mail. A new version of the mailbox to be implemented in 2020 is now being planned. It will include the ability for each authority to include the mailbox interface in their digital services.

Box 6.1. **Registration and identification** *(continued)*

In ***New Zealand*** Inland Revenue worked with the agency responsible for birth registrations to develop an improved service where parents can apply and receive a tax number for their new-born child in a single process while completing the registration of the birth. This streamlined approach is in contrast to the previous process which involved the purchase of a birth certificate and the completion of multiple forms. This initiative has seen an increase of parents applying for their child's tax number before their fifth birthday from approximately 50% in 2012, to 94% in the current year, improving the timeliness of receipt of family tax credits.

Source: Japan – National Tax Agency; Mexico – Tax Administration Service; Denmark – Danish Tax Administration; Italy – Revenue Agency; New Zealand – Inland Revenue (2017).

Identity management

All tax administrations, whether required to by law or as a matter of sound business practice, put considerable effort into ensuring the security of taxpayer information. In addition to internal processes to prevent unlawful attempts to obtain information and to ensure taxpayers' rights are protected, all administrations have processes to ensure the person they are dealing with is in fact the taxpayer. Increasingly these approaches, which in many instances have now extended to multi-step authentication, are making use of biometric information, unique to the taxpayer.

Box 6.2. **Security and authentication**

In ***Denmark*** and ***Singapore***, individuals and business are provided national digital IDs allowing them to access a range of public and private digital services, including tax and banking. This serves to mitigate identity theft problems and simplify access to services. In ***Singapore***, in addition to the digital ID and password (Singpass), second factor authentication is required for access to all sensitive government services, such as tax filing. Citizens can choose second factor authentication by using a physical token or via their mobile. The platform is being extended to companies and intermediaries this year, significantly strengthening the security of government e-transactions.

In ***India***, the Central Board of Direct Taxes is leveraging federated identity authentication services to establish the identity of the taxpayer. These services are provided by government agencies or trusted private entities such as banks or depositories that are centrally regulated. In the first year itself around 17% of taxpayers filed their returns using such authentication with 8% of taxpayers filing using digital signatures.

In ***New Zealand***, Inland Revenue's voice biometrics introduced in 2011 provides secure verification enabling increased self-service and reduced manual support. Voice biometrics matches a stored voiceprint against the caller's voice. Registration for this service involves a manual authentication process and then a recording to secure the voice print. While providing a more secure system, by moving customers to self-service functions including IVR options it has resulted in savings of between 50 to 150 seconds per call, an increase in phone self-service levels and stronger support for new self-service offerings.

Source: Denmark – Danish Tax Administration; Singapore – Inland Revenue Authority of Singapore; India – Central Board of Direct Taxes; New Zealand – Inland Revenue (2017).

Tax administrations face similar challenges to other organisations in dealing with individuals or organisations that may misuse personal information to impersonate taxpayers in order to commit fraud. The on-going and, in many cases, organised nature of this activity is requiring administrations to devote considerable effort to dealing with tax-related identity theft. Details stolen in this way can be used to fraudulently obtain tax or VAT refunds or to access tax credits.

Box 6.3. **Identity protection**

In the ***United States***, the Internal Revenue Service (IRS) Identity Protection Personal Identification Number (IP PIN) is a six-digit number assigned to eligible taxpayers to prevent misuse of their Social Security number (SSN) on fraudulent federal income tax returns. Obtaining an IP PIN requires identification verification and immediate access to the taxpayer's email account and mobile phone. The IRS will then provide new IP PINs each year by post.

An IP PIN helps the IRS verify a taxpayer's identity and accept the taxpayer's electronic or paper tax return. Having an IP PIN prevents filing of a tax return by anyone other than the taxpayer. Any return e-filed with an incorrect or missing IP PIN will be rejected by the IRS system until submitted with the correct IP PIN or a paper version is filed. If a paper return is filed with an incorrect or missing IP PIN, the IRS delays processing any refund. If the IRS assigns an IP PIN, it must be used to confirm the individual's identity on the current federal tax return and any delinquent tax returns filed during the current calendar year. An IP PIN is only useful on specific IRS forms.

Source: United States – Internal Revenue Service (2017).

Identity across borders

Once the domain of multi-national businesses or those involved in international trade, increasingly small and medium enterprises (SMEs) and individual taxpayers are now earning income sourced outside their country of residence. Tax administrations are facing a raft of issues in supporting and responding to this growth in cross border activity, not the least of which being how they manage taxpayer identity and information flows across borders. Two international measures aimed at helping administrations better address the issues of managing identity and information flows across borders are:

- Within the European Union (EU) the European Commission has moved to enhance trust in electronic transactions in the EU's internal market by providing a common foundation for secure electronic interaction between citizens, businesses and public authorities. The Electronic Identification and Authentication Services (eIDAS) approach, which was introduced in 2014, is aimed at increasing the confidence taxpayers and tax administrations can have in dealing with information flows and being able to manage identity and registration issues across borders. EU Member States mutually recognise each other's electronic identification (eID) systems when accessing online services. This cross-border recognition makes eID from any EU Member State interoperable between all other Member States. This makes business transactions easier, faster and cheaper.
- The new global standard on Automatic Exchange of Information (AEOI) – the Common Reporting Standard (CRS) – together with the US Financial Account Tax Compliance Act (FATCA) provides for the exchange of non-resident financial account information with the tax authorities in the account holders' country of residence.

Participating jurisdictions that implement the CRS and FATCA send and receive pre-agreed information each year, without having to send a specific request. It is expected that the CRS and FATCA will enable the discovery of formerly undetected tax evasion. It will enable governments to recover tax revenue lost to non-compliant taxpayers, and will further strengthen international efforts to increase transparency and co-operation. A large number of jurisdictions have announced their plans to implement the new CRS. Around 50 jurisdictions will work towards having their first information exchanges by September 2017 with many more to follow in 2018.

Box 6.4. **Cross border identity management**

In ***Spain,*** the State Tax Administration uses a common platform for electronic identification, authentication and signature. The Cl@ve system allows electronic administration applications to define the desired level of quality assurance of authentication, based on the data they process and the security classification of the system. The system uses private codes (username-and-password systems) and electronic certificates (including the Electronic ID), supported by one-time-use PIN code sent via SMS. In order to use this identification system, the individual must register providing the necessary personal details. The PIN identification system allows individuals to submit personal income tax returns or examine pre-populated returns, or to enquire on the status of a refund claim. Going forward the system will incorporate the identification approaches of other EU Member States as they are integrated into the cross-border system of examination of electronic identities provided for in the European legislation.

In ***Portugal*** the Autoridade Tributária e Aduaneira (AT) has introduced a new digital service for obtaining Investment Tax Codes as part of its simplification initiatives. This regime, initiated at the end of 2009, created a tax regime for non-regular residents in order to support qualified professionals in high value-added activities working in Portugal. The regime also covered beneficiaries of overseas-based pensions. From August 2016, applications for registration are electronic and made exclusively through the AT website. The new process has significantly reduced the elapsed time for handling registrations, increasing taxpayer satisfaction and reducing administration costs.

Source: Spain – State Tax Administration Agency; Portugal – Autoridade Tribuária e Aduaneira (2017).

Assessment

The tax assessment function includes all activities related to processing tax returns, including issuing assessments, refunds, notices and statements. It also includes processing and banking of payments. These "processing" activities, as they are referred to in many administrations, continue to be an area of significant change and focus as administrations look to take cost out of high volume processes.

Pursuing higher levels of electronic filing and payment by taxpayers is enabling administrations to reduce their costs and to improve the services they provide to taxpayers. This function is also heavily involved in managing an expanding range of data that administrations are collecting electronically from a growing number of third party organisations. As well as updating information on the use of e-channels for filing and paying, this section will:

- outline administrations' efforts to provide pre-filled returns for individual taxpayers, including the expansion of this approach by some into "no-return regimes"

- discuss the level of on-time return filing and payment by administrations
- comment on the changing capability as tax administrations move from operating data capture activities to becoming data managers, in an effort to make more effective use of their data assets.

Use of e-channels for filing and paying

Table 6.1 provides summary information from jurisdictions that provided details of channels used by taxpayers to file and pay. This shows that while four-out-of-five business taxpayers (corporate and VAT) filed their returns electronically, this figure drops to just two-out-of-three for personal income tax return filers (on-line and deemed submission).

Table 6.1. **Return filing rates by channel (in percent)**

	Corporate income tax (CIT) – 35 jurisdictions		Personal income tax (PIT) – 35 jurisdictions			Value added tax (VAT) – 33 jurisdictions	
Year	Paper	On-line	Paper	On-line	Deemed	Paper	On-line
2014	22	77	33	55	9	15	85
2015	19	80	30	57	9	13	87

Source: Table A.8 Return filing channels.

When looking at the payment of tax in Table 6.2, although the number of administrations reporting information is small, almost 12% of taxpayers still pay in-person at the tax administration office rather than using on-line or agency services of the administration.

Table 6.2. **Payment rates by channel (for CIT, PIT and VAT)**

	2014		2015	
Channel type	No. of jurisdictions	%	No. of jurisdictions	%
On-line	15	39.8	15	41.9
Via agency	15	44.5	15	43.1
In Person	15	11.8	15	12.0

Source: Table A.10 Payment channels.

Given the volume of returns filed using paper as well as in-person payments, most administrations report taking steps to actively encourage more taxpayers to use electronic platforms. This will not only lower administration costs but also reduce taxpayer burden.

Pre-filled returns

One of the significant innovations in tax return process design over the last two decades has been the development of pre-filled tax returns, primarily for personal income taxpayers. The pre-filled approach involves administrations "pre-populating" the taxpayer's return or on-line account with information it has collected from third parties. The pre-filled return can be reviewed by the taxpayer and either filed "on-line" or in paper form. As the extent of pre-population is generally determined by the range of electronic

data sources available to the administration, it is critical to this approach that the legislative framework provides extensive and timely third party reporting covering all relevant taxpayer information. Advocates of pre-filling initially encouraged its use with individual tax regimes that allowed relatively few deductions and credits, and these only where they could be verified with third party data sources. Advances in rules based technologies and analytics now mean that the approach can now be considered more widely.

The pre-filled regime adopted by 11 jurisdictions (Belgium, Denmark, Finland, Hungary, Iceland, Lithuania, Malaysia, Malta, Norway, Singapore and Slovenia) further extends this approach to "deem acceptance" of the prepared return after the expiry of a notice period (see Table A.96). In their most advanced form, complete pre-filled returns are being generated for large proportions of the individual tax base. Many administrations report strategies to extend the range of data sources used to improve coverage of the regime and the quality of the pre-filled return. Of those jurisdictions that issue pre-filled returns, Estonia, Finland, Iceland, Lithuania, Norway, Peru, Portugal, South Africa and Sweden, all report coverage rates that approximate 100% for personal income taxpayers they expect to file a return (see Table A.6).

Figure 6.3 displays information provided by the thirty seven jurisdictions that in 2015 reported using pre-filled returns.

Figure 6.3. **Categories of third party information used in pre-filled returns, 2015**

StatLink http://dx.doi.org/10.1787/888933546203

Source: Table A.93 Return pre-filling categories.

With more data becoming available through the Common Reporting Standard it will be interesting to see how administrations look to use that information. Box 6.5 briefly describes how the IRS will use FATCA data.

Box 6.5. **Foreign Account Tax Compliance Act (FATCA) Data**

Overall, compliance is higher where there is third-party information reporting and/or withholding. For example, the IRS has found a 93% compliance rate in reporting income subject to substantial information reporting but only a 37% compliance rate in reporting income subject to little or no withholding.

Box 6.5. **Foreign Account Tax Compliance Act (FATCA) Data** *(continued)*

FATCA is an important development in combatting tax evasion by US persons holding foreign accounts and offshore assets. FATCA generally requires that foreign financial institutions (FFIs) and certain other non-financial foreign entities report foreign assets held by their US account holders or be subject to withholding on withholding on certain US sourced payments made to them. Under FATCA, to avoid being withheld upon, FFIs may register with the IRS and agree to report certain information about their US accounts. Additionally, US citizens or individual residents, certain domestic entities, and a very limited number of non-residents who own certain foreign financial accounts or other offshore assets must report those assets on their income tax returns. The enactment of FATCA, and the commensurate increase in awareness about reporting obligations has also had a significant impact on the number of taxpayers filing Foreign Bank Account Reporting (FBAR) disclosures. For example, in 2007, approximately 322 000 FBAR disclosures were filed. By 2015, following the first year of FATCA reporting by foreign financial institutions, FinCEN (the United States' Financial Intelligence Unit) received a record high 1 163 229 FBAR disclosures.

This third party reporting is expected to result in new approaches for identification and assessment of compliance risks. The third party reporting also supports existing IRS tax compliance programmes, which will provide for greater tax compliance and further hinder opportunities for offshore evasion.

Source: United States – Internal Revenue Service (2017).

On-time return filing

Even allowing for changes occurring because of pre-filled or no-return regimes, the filing of a tax return is still the principal means by which a tax liability is established and becomes payable. As a result, the on-time filing rate is seen as an effective measure of the health of the tax system as well as the performance of the tax administration itself.

Table 6.3. **Average on-time filing rates by tax type**

	2014		2015	
Tax type	No. of jurisdictions	%	No. of jurisdictions	%
PIT	39	86.4	36	85.6
CIT	40	81.5	35	78.7
Employer Withholding (WHT)	24	88.3	27	83.1
VAT – monthly filers	34	88.3	33	86.6

Source: Tables A.6 On-time return filing performance (PIT, CIT, Employer WHT) and pre-filling and A.7 On-time return filing performance (VAT).

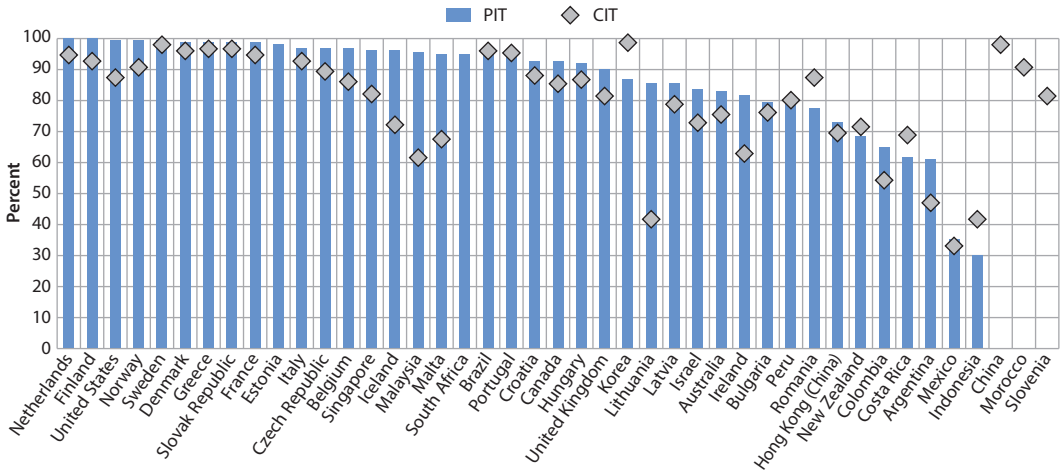
Table 6.3 summarises on-time return filing for those administrations able to supply information by tax type. Apart from corporate income tax where rates are surprisingly lower than the averages of other tax types, the data is remarkably consistent. A broader examination reveals two issues of note:

- Firstly, while there are clusters of similar performance for those administrations that operate similar systems (for example the use of extensive pre-filled regimes or

those from similar geographic areas), there are notable outliers. Brazil, for example, has on-time filing rates in excess of 95% across all four return types and as such stands out amongst not only tax administrations in the Americas but also across most survey participants. Conversely there are a small number of administrations whose performance in one or more return types is significantly below the averages in the table.

- Secondly, overall on-time filing rates that average between 78% and 90% may be lower than desirable and an area of concern given that most respondents operate tax systems that rely on voluntary compliance by taxpayers.

Figure 6.4. **PIT and CIT on-time filing rates, 2015**

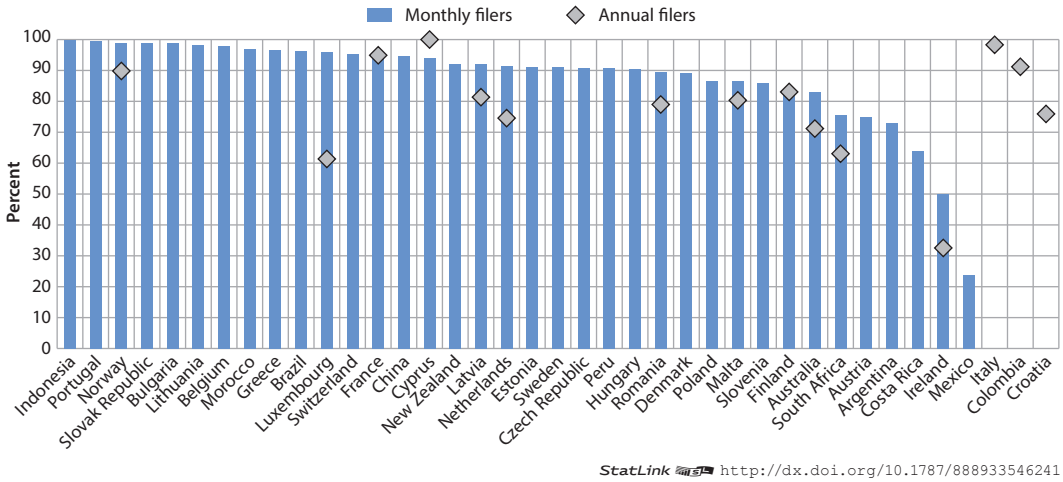


StatLink http://dx.doi.org/10.1787/888933546222

Note: PIT percentages for Bulgaria, Malaysia, Sweden and the United Kingdom, and CIT percentages for Denmark, Iceland, Korea, Malaysia, Sweden and the United Kingdom relate to the year 2014.

Source: Table A.6 On-time return filing performance (PIT, CIT, Employer WHT) and pre-filling.

Figure 6.5. **VAT on-time filing rates – VAT monthly filers vs. VAT annual filers, 2015**



StatLink http://dx.doi.org/10.1787/888933546241

Note: Percentages for VAT monthly filers for China, Indonesia and Morocco relate to the year 2014.

Source: Table A.7 On-time return filing performance (VAT).

On-time payment

Payment of tax constitutes one of the most common interactions between taxpayers and tax administrations, especially for businesses that are typically required to regularly remit a variety of payments covering both their own tax liabilities and those of their employees. Administrations continue to make progress in increasing the range of e-payment options available to taxpayers and to increase their use. This progress not only lowers the cost to the administration, it can increase on-time payments and reduce the number of payment arrears cases by providing improved access and a better payment experience.

For this edition of the Tax Administration Series (TAS), tax administrations were asked to provide details of on-time filing for the four major return types: PIT, CIT, Employer WHT and VAT. Less than half the administrations covered by our survey could provide this information and where they could a number advised there may well be issues with their estimates of those "required" to pay and file. The analysis and robustness of the conclusions drawn therefore need to be considered with care. That said, Table 6.4 shows:

- businesses are more likely to pay on-time than file on-time; while individuals are as likely to file on-time as they are to pay on time
- the on-time payment performance is more consistent with fewer outliers that the on-time filing
- while on-time filing and payments rates are similar (and low) for PIT taxpayers, the payment rates for CIT, Employer WHT and VAT are on average 8% higher than filing rates
- while average on-time payments rates in 2015 for "business" taxpayers (CIT, Employer WHT and VAT) of between 91% and 95% appear high, lifting these rates will continue to be an area of focus for administrations given the amounts of revenue involved.

Table 6.4. **Average on-time payment rates by tax type**

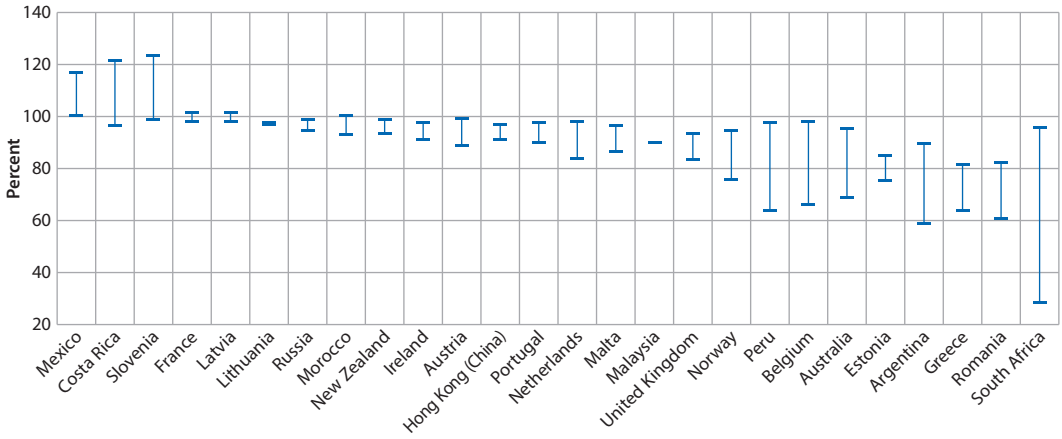
	2014		2015	
Tax type	No. of jurisdictions	%	No. of jurisdictions	%
PIT	20	84.3	22	84.1
CIT	22	92.2	25	91.9
Employer WHT	17	94.0	19	95.1
VAT	23	90.7	23	92.4

Source: Table A.9 On-time payment performance.

Whereas on-time filing rates provide a good measure of the health of the tax system and the operation of the tax administration, the use of on-time payment rates for this purpose are not as straight forward. In addition to the desire to pay, taxpayers need to have the financial means to do so.

It is a concern that many administrations were unable to report volume data for on-time filing and/or payment. While this information has not been previously requested in the TAS survey, it is important for administrations to know how many taxpayers are meeting their payment and filing obligations of their own accord. Given most have designed tax processes around voluntary compliance principles and that the cost of dealing with default increases markedly once voluntary actions by the taxpayer have passed, administrations are encouraged to improve the quality of information in this area.

Figure 6.6. **Range in on-time payment performance by tax type, 2015**



StatLink http://dx.doi.org/10.1787/888933546260

Note: On-time payments are expressed as a percentage of estimated payments expected by due date and can therefore be above 100%. The figure shows for each jurisdiction the range in on-time payment performances across the four tax types: PIT, CIT, Employer WHT and VAT.

Source: Table A.9 On-time payment performance.

Data management

Tax administrations have always been data rich organisations. Past editions of the series have commented extensively on their efforts to receive more data digitally. In many administrations work is now underway to convert non-digital data received from taxpayers, third parties, other agencies or from its own staff, into digital forms that are more accessible and tractable. This coincides with the advent of more affordable storage, including cloud options, greater access to an increasing amount of external data, and sophisticated advanced analytics techniques. Against this background, many tax administrations report they are re-thinking the management and governance of data in order to extract greater business value from their data assets.

In so-doing some report developing new data models to support traditional, largely structured data, as well as new unstructured data sets. They also report redesigning systems and approaches to ensure that more data sources are available for managing customer interactions and compliance risk processes. In this regard, just under half of administrations in this series report using automated risk profiling as part of the return and payment processing operations (see Table A.113). Where these automated activities are in operation administrations report they are increasingly occurring in real-time or near real-time. This allows them to support analytical processes that are prioritising work, supporting the delivery of contemporary services and improving business reporting. It is also ensuring processes allow the effective utilisation of data received from other tax administrations and that they pass on quality data to treaty partners.

These changes have led many to comment that in this regard the tax administration's "business" is becoming more analogous to contemporary data management, bringing with it demands for new capabilities, skills, and governance arrangements.

Box 6.6. **Data management and storage**

In ***Russia***, the Federal Tax Service (FTS) in 2015 operationalised its federal data processing system. The approach is based on a private cloud using network access to a shared virtualised resource. Data processing centres provide a reliable high-performance platform allowing FTS to consolidate and centralise all available data. Operating a single warehouse for all available tax data allows for improved data quality and provision of more effective information services to taxpayers. It has also allowed FTS to streamline cross-agency data exchange in the framework of whole-of-government approach to public services.

Source: Russia – Federal Tax Service (2017).

Taxpayer service

The timely and efficient provision of service is a critical part of tax systems based on voluntary compliance. The taxpayer service function proactively and reactively provides information and services to taxpayers. This includes responding to enquiries on the application of tax laws and providing public and in many cases private rulings as well as statutory determinations on the administration's view of the law.

Over the last two decades many tax administrations have found it advantageous in considering service provision to adopt a more holistic view of the tax system and of the taxpayer's interaction. This *customer centric approach* is helping many improve taxpayer access to the information and support they require to meet their obligations and/or claim their entitlements. Administrations working "with" the taxpayer to develop systems and processes report increased levels of participation, taxpayer trust and confidence in the tax system as a whole.

In considering their approach to service and investment choices, administrations find themselves operating on three broad fronts. Firstly, they must operate existing channels efficiently and in the process encourage more taxpayers to use lower cost channels (without a reduction in the quality of service). Secondly, they must develop new contemporary services that taxpayers are increasingly expecting to use in managing their tax affairs. While thirdly, they must expand their service approach to support delivery of wider government objectives and plans, many of which involve proactive approaches or more "joined-up delivery".

Against this backdrop it is not surprising there is a high degree of commonality in the topics included by the 50 administrations that reported having a taxpayer service and assistance strategy (see Table A.114). The highest priority areas, which are discussed in this section, are:

- better managing service demand
- supporting taxpayers by providing more self-service options that also reduce the tax compliance burden
- providing an improved tax rulings service (crucial to improve tax certainty)
- increasing taxpayer satisfaction
- compliance by design.

Managing service demand

In 2012, the Forum on Tax Administration (FTA) published *Working smarter in revenue administration* (OECD, 2012) which highlighted the demand management processes administrations had in place. It set out many of the steps they were taking to understand the root causes of service demand and how they were using this to either reduce demand or to shift it to more cost-efficient channels. The study drew attention to the need to strengthen the governance arrangements for managing service demand and encouraged administrations to improve reporting and measurement so as to better understand the root causes of demand.

Table 6.5. **Service demand by channel**

Channel type	No. of jurisdictions	2014	2015	Change
Telephone	38	294.9 m	290.4 m	-1.5%
In-person	27	129.3 m	126.7 m	-2.0%
Paper	20	24.3 m	24.0 m	-1.2%
Email	25	12.2 m	14.9 m	+22.1%

Note: The table only includes jurisdictions for which data was available for 2014 and 2015.

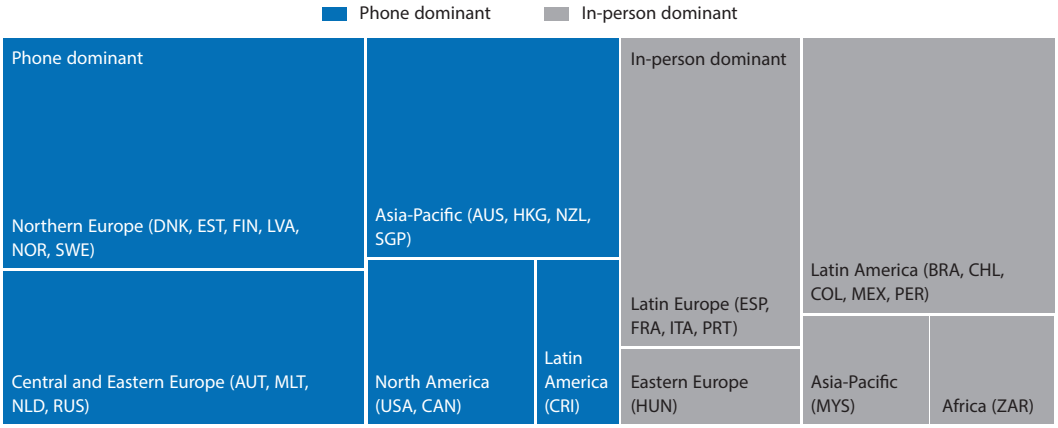
Sources: Tables A.116 to A.119 Service demand channels and performance.

While some progress has been made in the area of governance, much is still to be done to improve measurement and reporting of demand. As reported in the 2015 edition of the TAS, the vast majority of administrations are still unable to provide data for taxpayer contacts across telephone, paper, email, and in-person contact channels. Not only does this affect the ability to undertake any meaningful analysis of channel use, it raises questions about whether many administrations have all the data and information they require to effectively manage their service demands.

That said some observations of service performance can be made from the data included in Tables A.116 to A.119:

- Information provided by 38 administrations attributes 13.9% of their total tax staff numbers to handling registration and provision of taxpayer service.[1]
- Taxpayer contact volumes are large and still resource intensive despite the significant investment made in telephone technology and on-line portals. The phone channel remains the channel most taxpayers use to contact the tax administration in most jurisdictions (see Figure 6.7).
- Less than half of survey participants provided average resolution time for telephone (6 minutes in 2015[2]) and only about a fifth had similar information for in-person visits (11 minutes in 2015).
- Use of email by administrations and importantly taxpayers is increasing, with six administrations (Brazil, Costa Rica, Hungary, New Zealand, Singapore, and the Slovak Republic) reporting receiving more email contacts than paper.
- Despite initiatives in a number of administrations to scale back their office network, the volume of in person inquiries remains high.
- An interesting "clustering" pattern emerges when looking at the dominant service channels through a geographic lens, as illustrated in Figure 6.7.

Figure 6.7. **Dominant contact channel, 2015**



Source: OECD Secretariat analysis based on Tables A.116 to A.119.

While most administrations report extensive use of their portal and web services, further work is required to improve the survey instrument to better define key terms and identify useful performance data. Tracking web pages viewed, or screens accessed does not in itself present information that is of use in comparing service performance.

Box 6.7. **Managing demand**

Strategic approach to channel shift – In 2015, ***Ireland*** began implementation of its new customer strategy. A major part of this strategy sought to move customers, particularly its 900 000 business and 2.3 million personal taxpayers, from traditional contact channels to more efficient on-line services. Irish Revenue launched a new single point of access to all online services for personal taxpayers, rolling out new services for: tax clearance, secure payments, and registration for job and pensions. It also introduced an appointment service in a number of offices, and enhanced its phones service. Following an intensive promotion, Irish Revenue reported a 12% shift of taxpayers to online transactions for the six months to June 2016 compared to the same period in 2015; and a significant lift in call handling performance. 91% of all personal taxpayer calls (that comprise 70% of all calls) were answered within 3 minutes, while 88% of taxpayers calling to make an appointment were able to have their problems resolved without the need for an in person visit.

Reducing Face-to-face contacts – In ***France***, the Directorate Générale des Finances Publiques (DGFiP) began a pilot Contact Centre in August 2014 to deal with personal income tax queries. The Centre reduced the need for local contacts or in-person visits by the taxpayer. In March 2015, a second centre expanded the capacity. Results have been impressive with the centres processing 436 000 calls and 55 000 e-mails in 2015 with answer rates of 77% and 92%, respectively. The DGFiP consider the centres were responsible for reductions of between 40%% and 60% in the number of calls and e-mails fielded by local tax departments and have helped to significantly reduce in-person visits in the locations covered by the pilot. The DGFiP has since commissioned further centres and increased resourcing to the two existing centres. The goal is to provide coverage for 22% of France's tax households in 2017.

Box 6.7. **Managing demand** *(continued)*

Mandating use of e-channel – In ***Spain***, it is now mandatory for all companies to deal with the tax administration through electronic channels. Because of changes made with effect from 2 October 2016, only natural persons can now deal with the agency in-person. The law changes also means all notifications by the tax administration itself, must be by electronic means.

Using contact analysis – Since 2009, the ***United States*** has been gathering information on in-bound calls using Contact Analysis, a speech-analytics software tool. The IRS uses this tool to analyse recorded taxpayer calls to identify areas for improvement and ways to reduce the costs of providing taxpayer service. The tool is able to search recordings for specific words or phrases. The IRS recently used the tool to help it analyse taxpayer inquiries regarding FATCA. By identifying common topics and updating the public website it was able to proactively supply information to taxpayers, reducing taxpayer burden and the number of in-bound calls it would otherwise have had to deal with.

Skills based routing – In 2011 Inland Revenue in ***New Zealand*** implemented a natural language speech recognition system that enabled increased self-service and reduced manual support. The deployment enabled customers to state the reason for their call and upon recognition be routed to the most appropriately skilled agent. This skills based approach meant the overall rate of transferred calls reduced from over 30% to approximately 8% of calls.

Sources: Ireland – Office of the Irish Revenue Commissioners; France – La direction générale des Finances publiques; Spain – State Tax Administration Agency; United States – Internal Revenue Service; New Zealand – Inland Revenue. (2017).

Supporting self-service

In 2014 the OECD published *Increasing taxpayers' use of self-service channels* (OECD, 2014a). This report highlighted the pressures of declining budgets and rising taxpayer expectations faced by many administrations and proposed a framework for the evolution of tax digital self-service that promoted:

- monitoring and analysis to understand demand
- using user-design to create new digital services
- working with third party providers, embedding self-service elements, or using mandating or incentives to promote take-up
- directing taxpayers to preferred channels through communication and education
- developing metrics to allow self-service impacts to be assessed.

The report served as a pre-curser to the 2016 report *Technologies for Better Tax Administration* (OECD, 2016a), which explored how technology could help administrations better address tax compliance and service delivery, primarily through the use of big data, smart portal solutions and natural systems. The report stressed that alongside investment in technology, administrations needed to improve their understanding of customers and the wider "eco-system" in which they operate, and with how the tax system interacts with that. The report encouraged administrations to be more responsive and agile in delivering contemporary services and to look for opportunities to either embed tax requirements into third party systems or to use data and analytics to "move compliance upstream." This phrase reflects the desire for compliance with tax obligations to occur as close to

the transaction or tax event as possible, or to allow compliance where it naturally occurs for the taxpayer. The digital maturity model released in the report has since been used by 26 administrations to assess their operations. The results of this exercise will be released in autumn 2017.

In its 2016 report *Advanced Analytics for Better Tax Administration* (OECD, 2016b) the FTA outlined how tax administrations were extracting greater value from a wide variety of data sources. This is allowing them to better understand taxpayers and their requirements and to identify and tailor responses, including proactive services or system design changes, to more effectively prevent and treat compliance risks.

Box 6.8. **Supporting self-service**

Provision of digital services – In ***Canada***, the Canada Revenue Agency (CRA) has, since the launch of its first secure online portal for individuals in 2003, leveraged technological developments to expand its digital self-services. From those first limited generic services, the CRA today offers more than 40 digital services that allow a taxpayer to obtain personal tax information, such as their tax refund or balance owing, and to undertake important transactions such as paying taxed owed. Deposits can also be made individual accounts, enhancing the responsiveness of the tax system and convenience to the taxpayer. In 2006, it introduced a portal that allowed authorised representatives to perform tasks on behalf of an individual, and a range of applications that expanded digital services access to businesses. Transaction volumes and use have expanded rapidly – from 1.8 million successful logins in 2005 to more than 13.5 million across all three services in 2015. In February 2015, the CRA launched its online mail service to individuals. This allows the 4.5 million Canadians who to date have signed up for the service to receive an email notification when correspondence is available for viewing through their secure portal rather than by paper. The CRA has now commenced developing strategic partnerships with other government departments to leverage infrastructure and best practices to improve digital services for Canadians.

Taxpayer personal accounts – In ***Russia***, the online personal account of individual taxpayer's displays information about all personal income sources as well as all movable property and real estate in ownership of the account holder. It also allows taxpayers to make online payments of property taxes, file income tax returns and claim tax refunds. Taxpayers have access to an online tool for providing feedback of their disagreement about their property positions directly to a local tax office where the property is located and local taxes are paid. A local tax office makes an assessment of validity of such claims. As a result, the tax administration is receiving fewer complaints about the quality of data and taxpayers are more confident in using online payment tools. There are currently over 25 million users of the online personal account by individual taxpayers and the number is steadily rising.

Source: Canada – Canada Revenue Agency; Russia – Federal Tax Service (2017).

After initially being slow to exploit the opportunities presented by the growth of digital devices and data, tax administrations have been working hard to increase their web-based and true digital services they provide. As a result most administrations now report offering an expanding range of web based services, including the ability to register, file and pay on-line, and tools that include calculators and email. While most offer a digital mailbox, currently only two-thirds of administrations provide an integrated taxpayer account (see Table A.122). Some report exploring with third party providers how they can support embedded software or other arrangements that allow taxpayers a greater array of in-system support or other self-service options. In other approaches – the Australian Tax Office

(ATO) and the Inland Revenue Authority of Singapore both report using virtual or digital assistants to help respond to taxpayer enquires. The ATO assistant "Alex" understands common conversational language and can clarify and respond to questions.

Since the launch of the first mobile apps by a small number of tax administrations in 2011, tax apps have become an increasingly common part of the service offerings of many tax administrations. In most cases early apps simply made services designed for web-environments available via mobile devices. Administrations are now reporting the development of services specifically to operate on mobile devices. These are allowing taxpayers to file, pay and enquire "on-the-go". These approaches that are both easy to use and integrated with other systems taxpayers use in their everyday lives is making tax compliance easier, as well as lowering costs for tax administrations and improving their business efficiency.

Box 6.9. **Mobile app and tax**

In ***Australia***, the ATO has continued to enhance the functionality of its mobile app, which it launched in July 2013 to support individuals, small business and self-managed superannuation fund clients. The app offers a variety of tools and features, including key dates, enabling clients to add reminders to their calendar, report concerns (including whistle-blowing) and a tax withholding calculator. Individuals and sole traders can use the same voiceprint they use to access phone based services to access secure ATO online services on their mobile device. In 2015, the *myDeductions* tool was added to the app, allowing users to record tax deductions on the go. Using the camera on their device people can capture receipts and use location services to record work-related car trips for vehicle deductions, eliminating the need for paper records. From July 2016, taxpayers will be able to upload these deductions to their tax return. Features and updates are built using iterative design and are delivered in smaller releases. Features are continually tested with users and feedback incorporated into each release.

In ***Chile***, there are more than 27 million mobile devices (58.5 for every 100 inhabitants) connected to the internet. The *Servicio de Impuestos Internos* (SII) launched its first App for smart mobile devices in 2016. This app, which in its first day was among the five most downloaded in Chile, allows verification of the TIN of taxpayers and access mobile web-services. In the first quarter of 2017 the SII launched a new app, enabling the filing of income tax returns. This app had even better results in terms of download than the former. In 2016 the SII mobile web service received approximately 2.7 million visitors, which included requests and the issuance of electronic documents, filing of VAT and income tax returns, amongst others.

In ***Korea***, the tax administration is providing mobile services using Android and iOS operating systems. Mobile apps allow taxpayers to deal with many aspects of their tax affairs such as receiving information on filing and payment schedules as well as useful tax information. For small-sized entrepreneurs, smart phones allow the filing of pre-filled tax returns online. Entrepreneurs can also view the details of digital tax invoices issued and information about business partners. Individuals use mobile apps for deduction of expenses for tax settlement at the end of the year.

In ***Denmark*** the impetus for the development of digital services came from customer research that pointed to significant opportunities to improve how small business access and use information. To undertake this development the Danish Tax Administration (SKAT) reinforced its user experience and service design capability and applied agile methodology to overhaul website content and develop functions users wanted. This included a calculator for transport deductions and a simple web-app interface for filing and paying VAT. While it is still too early to assess the results, the experience so far has been positive.

Box 6.9. **Mobile app and tax** *(continued)*

In ***Peru***, the Peruvian administration (SUNAT) launched its first mobile app in February 2015. The device, available for both iOS and Android, provided 24/7 tablet and cell phone access to a range of services to facilitate tax compliance. These included those services mostly used by taxpayers, namely: invoice issuing, database queries, access to a virtual tax guide, access to administrative information and the ability to report tax evaders. This mobile app supported the national framework of e-government as well as SUNAT´s own strategic objectives. More customer orientated features were added during 2016 with new features to be incorporated in 2017 including registration for individuals supported by biometric identification. Considering there are more than 7 million Peruvians with smart devices and the award winning App SUNAT currently has just over one hundred thousand users, continued development is certain.

Source: Australia – Australian Tax Office; Chile – Servicio de Impuestos Internos; Korea: National Tax Service; Denmark – Denmark – Danish Tax Administration; Peru – Superintendencia Nacional de Administración Tributaria SUNAT (2017).

Most tax administrations that have a tax app report they have undertaken the development themselves, or in collaboration with a contracted third party. As a rule they have also built specific purpose "tax apps" rather than bundling tax requirements into other apps provided by third parties, for example banks, software developers, or return preparers. Projects like those at Her Majesty's Revenue and Customs (HMRC, see Box 5.2) or by New Zealand (see Box 5.3) offer new possibilities, including helping administrations to become more agile and responsive in helping to bring new services to market. Both administrations are looking to publish application programming interfaces (APIs) to enable taxpayers, agents and commercial software developers to transact with them differently, and in so doing encouraging the development of a wide variety of potential third party products.

Providing rulings

Consistent with taxpayers' right to be informed and assisted, it is now common practice for administrations to provide taxpayers with advice on how they will interpret the laws they administer. Rulings are an important area where administrations can not only provide effective service but also assist in improving the certainty of the tax system by advising taxpayers how it will interpret the tax law in particular situations:

- A ***public ruling*** is a published statement of how an administration will interpret provisions of the tax law in particular situations. They are generally published to clarify application of the law, especially where a large number of taxpayers may be impacted by particular provisions and/or where a provision has caused confusion or uncertainty. Typically, a public ruling is binding on the tax administration if the ruling applies to the taxpayer and the taxpayer relies upon it.
- A ***private ruling*** relates to a specific request from a taxpayer (or their tax representative) seeking greater certainty as to how the law would be applied by the tax administration in relation to a proposed or completed transaction(s). The objective of private rulings is to provide additional support and certainty to taxpayers on the tax consequences of more complex transactions.

While all jurisdictions reported operating a rulings system, ten of 55 reported they do not issue public rulings. Interestingly one-fifth of administrations that report issuing

public rulings report that these rulings *were not* binding upon them. All administrations except for Mexico and Turkey report issuing private taxpayer rulings. Private rulings *are not* binding on the tax administration in six of the jurisdictions surveyed (see Table A.115).

Two-thirds of tax administrations providing private rulings reported the existence of time limits, either imposed under the law or applied administratively for the making of rulings. The time limits applied vary widely, ranging from two weeks up to one year. Half of administrations report the ability to apply a fee for the provision of a ruling for some/all of the taxes administered by them.

Increasing taxpayer satisfaction

Tax administrations have been conducting taxpayer satisfaction surveys for more than 30 years. In 2015, 78% of participating administrations indicated that they measured taxpayer satisfaction across at least one of: individuals, business or tax intermediary segments. With 94% of administrations indicating that improving customer satisfaction is a high priority for their administration (see Table A.114), it does raise the question as to how those, not formally measuring taxpayer satisfaction, will assess their performance. For those that do measure satisfaction across one or all of the three segments, approximately two-thirds report having their survey externally administered, with a similar number making the survey results public.

Table 6.6. **Taxpayer satisfaction surveys by taxpayer segment, 2015**

	Survey conducted		Internally administered		Externally administered		Results published	
Segment	No. of jurisdictions	%	No. of jurisdictions	%	No. of jurisdictions	%	No. of jurisdictions	%
Individuals	42	76.4	36	85.7	27	64.3	26	61.9
Business	40	72.7	34	85.0	27	67.5	24	60.0
Tax Agents	27	49.1	23	85.2	17	63.0	17	63.0

Note: A number of administrations conduct several surveys for each taxpayer segment which are administered internally as well as externally.
Source: Table A.120 Taxpayer satisfaction.

Compliance by design

As reported, many administrations have made significant progress in the redesign of processes, and in some cases policy, by adopting a holistic view of the tax system and taxpayers' interaction with it. Administrations undertaking this approach report not only improved taxpayer access to the information and support they require, but it has, through working "with" taxpayer and industry groups, increased levels of taxpayer trust and confidence in the tax system, and reduced taxpayer burden. Box 6.10 provides examples of user engagement and involvement in design processes in Singapore and Finland.

Box 6.10. **User design and engagement**

In ***Singapore***, the Inland Revenue Authority of Singapore (IRAS) organised the first "Tax Hackathon" in September 2016. The aim was to co-create taxpayer-centred experiences for the SMEs, self-employed and individuals. To ensure that the opportunity areas were practical and relevant to the current experiences of taxpayers, IRAS conducted several rounds of focus group discussions with both external and internal stakeholders. Around 70 participants collaborated with IRAS to brainstorm and build working prototypes relating to the opportunity areas. Over three days, the event developed 19 creative and innovative working prototypes such as record-keeping and expense tracking mobile apps, personal tax dashboards and "chatbots". The outcomes showcased the power of co-creation with the coming together of start-ups, developers, designers, tax and accounting professionals, industry experts, students and IRAS staff.

In ***Finland***, Tax Finland will support the development of its MyTax customer portal with a range of user-centred tools and services. To do this it will apply "compliance by design" and "customer experience management" as guiding principles. It will also bring together advanced analytic techniques, design thinking, user-centred design methods and user testing skills. To support this approach it is introducing these disciplines to other development areas. It has begun promoting an awareness of service design and its benefits throughout the organisation (including idea and hypothesis testing through early and low-level prototyping and experimentation). It is also planning to establish a professional capability in design thinking and user design to enhance the usability and accessibility of its products and services.

Sources: Singapore – Inland Revenue Authority of Singapore; Finland – Tax Finland (2017).

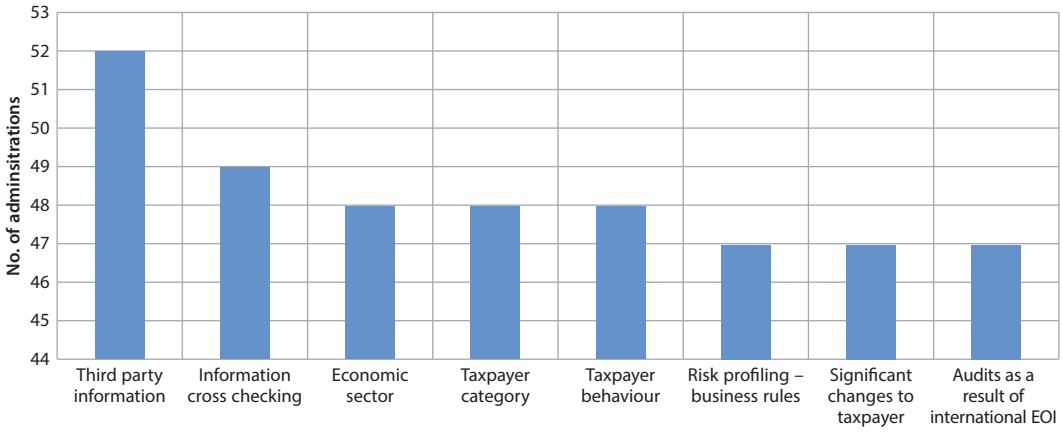
Verification

The verification function in tax administration has various names, but used here it encompasses those functions that assess the accuracy and completeness of taxpayer reported information. This function employs on average one-third of tax administration staff and verifies that tax obligations have been met, mainly still through the conducting desk or field based "tax audits." The undertaking of these and other "compliance actions" is critical in supporting voluntary compliance. This section comments on the following topical issues: case selection, information and access powers, coverage and results, collection of audit assessed debt, as well as work on tax and crime.

Case selection

The most common case selection criteria used by the 53 administrations that provided information on their verification function are set out in Figure 6.8. Of interest are the: number of external data sources now being used, including how much data is now sourced away from returns and forms filed by the taxpayer; and increasing sophistication of processes administrations are using to determine interventions. One-half of administrations now report the use of predictive risk based analytical models to identify cases (see Table A.167). Although not shown in the Figure, two-thirds of administrations now weight risk to include whether taxpayers are involved in base erosion and profit shifting or aggressive tax planning issues.

Figure 6.8. **Most common verification case selection criteria, 2015**



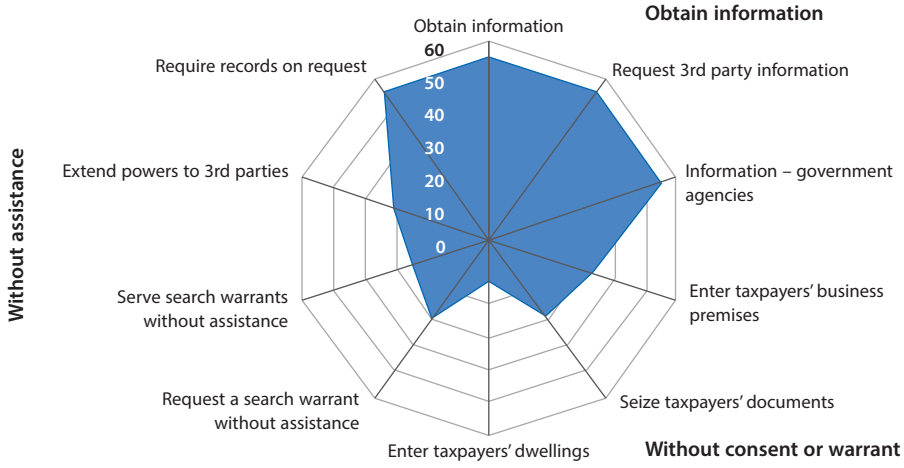
StatLink http://dx.doi.org/10.1787/888933546279

Source: Tables A.164 to A.166 Verification/audit case selection.

Information and access powers

The legislative framework in place regarding tax administrations generally includes provisions that enable officials to acquire information required for tax purposes from taxpayers and other parties and to be able to access to books and records. All 55 administrations report having the four powers to obtain information set out in Figure 6.9.

Figure 6.9. **Information and access powers, 2015**



StatLink http://dx.doi.org/10.1787/888933546298

Source: Table A.133 Information gathering powers.

When it comes to the exercising of powers "without consent or warrant", the picture is not as clear. Almost two-third of administrations report the ability to enter business premises; just over 50% the power to seize documents; but only 13 of 55 have the power, without consent or warrant, to enter the dwelling of the taxpayer. Some powers are varied where part of the dwelling is used for business purposes.

Just over 50% report that they can request a search warrant, without assistance, while just less than 50% can serve the search warrant themselves. When it comes to agency situations, surprisingly just over a half of administrations report that their legislation permits the Director General or Commissioner to extend information and access powers to third parties.

Box 6.11. **Information and Access powers**

In ***Australia*** the use of formal information gathering notices is necessary where third parties, such as financial institutions, provide private tax-related information to the ATO. This is also the case in some investigations and audit cases to establish relevant facts and evidence. In most circumstances, the ATO works with taxpayers and third parties to obtain the relevant information without having to exercise its formal powers. The ATO has published its access and information gathering manual that contains the policies and procedures relating to use of powers. In 2015, legislation was passed to consolidate and repeal many of the ATO's access and information gathering powers. The consolidation enabled the ATO officers to issue a single notice instead of "composite" or multiple notices to the same taxpayer covering each of the different taxes applicable. As a result, the client experience has improved, as the notices and the explanatory covering letters are more streamlined and easier to understand.

Source: Australia – Australian Tax Office (2017).

Coverage and results

The type of "compliance actions" undertaken by tax administrations to determine whether taxpayers have properly reported their tax liability is changing. In the past, administrations used risk based models to help them identify which cases in a population or segment should be subject to verification. The introduction of sophisticated analytical models are allowing administrations to better identify returns, claims or transactions which might require further review or be fraudulent (OECD, 2016b). Further these models, many of which can operate in real-time, are now allowing administrations to conduct automated reviews on all returns or transactions of a particular type.

Box 6.12. **VAT real time risk model**

In ***Ireland*** the Revenue authorities have expanded their risk management scope by incorporating real time risk analysis in their compliance and collection programmes. The new VAT real time risk approach, which was introduced to assess VAT risk and identify suspicious VAT returns by making better use of internal available data, is an example of a rules based approach that is improving prevention and detection of non-compliance. The VAT rules applied include primary controls as well as taxpayer specific data such as return and payment history, company status, and return and payment compliance for other taxes. Once the rules are applied, a risk score is produced, which is used to categorise cases as either green (low risk) with any VAT refund due being paid; orange (medium risk); or red (high risk) with intervention required by a staff member and any refund claimed being held until fully investigated. The success of this risk based approach highlights the importance of data analysis and risk management. In 2015, in excess of 58 000 red risk VAT cases were examined resulting in an indirect yield of EUR 168 million.

Source: Ireland – Office of the Irish Revenue Commissioners (2017).

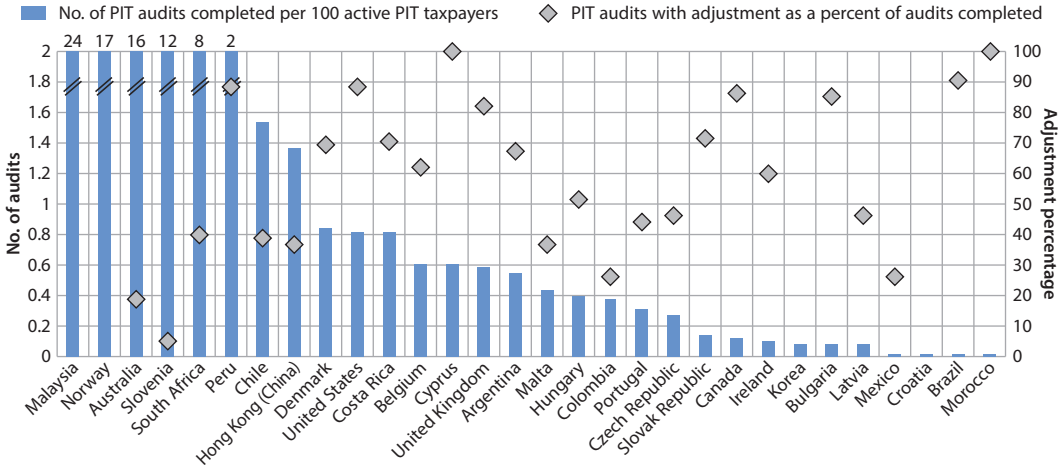
Some administrations are reporting the use of "automated machine actions" using rules-based approaches to treat some defined risks (e.g. automatically denying a claim, issuing a letter or matching a transaction). This "robotic" activity is replacing some of the audit actions or steps previously performed by people. While tax audits (including comprehensive, issue or desk audits) are still the primary verification activities, these rules based approaches are providing administrations with more effective and efficient ways to undertake some verification work.

These new approaches do, however raise the question of how to reflect "automated actions" in the performance information that administrations report. To include all checking would be to distort coverage, adjustment and yield rates. However where it replaces previously undertaken manual actions it would seem appropriate to both record the volume and reflect more accurately what administrations are now doing in this area, and to reflect the substantially reduced cost per audit. It is apparent from the data supplied that administrations are already taking different approaches to reporting. While this matter will be addressed for the next survey, care needs to be taken in using verification information contained in the tables which may not readily be comparable. That said there are some very general observations that can be made:

- While most administrations track verification by tax-type, a small number do not and instead measure audit results by audit-type. Regardless of approach, average adjustment rates are similar.
- Typically as coverage rates increase, the incidence of adjustment falls.
- Coverage rates across revenue types vary so markedly that further in-depth analysis would be required before any meaningful comparison can be made.

From the information reported on adjustment by audit type, while ratios fluctuate, comprehensive audits in general are most likely to produce an adjustment, with desk audits the least. Anecdotal evidence suggests that for those using electronic audit methods informed by advanced analytics, adjustment ratios are both higher and tend to converge, although this is influenced by how total actions are counted.

Figure 6.10. **PIT audit coverage and adjustment rates, 2015**



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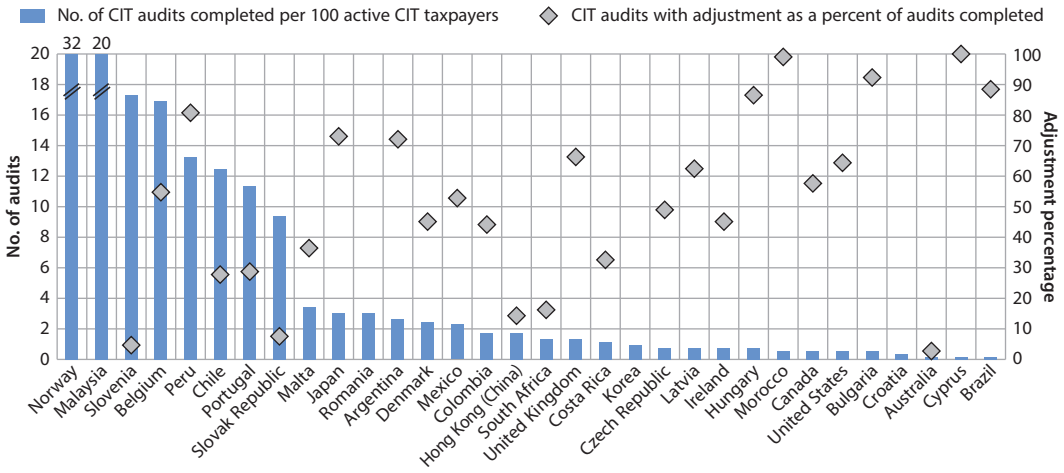
Note: For Bulgaria the number of PIT audits completed per 100 active PIT taxpayers relate to the year 2014.

Source: Tables A.15 Verification/audit – Activity per active taxpayers by tax type, and A.16 Verification/audit – Adjustment ratio by audit type.

Figure 6.11. **CIT audit coverage and adjustment rates, 2015**

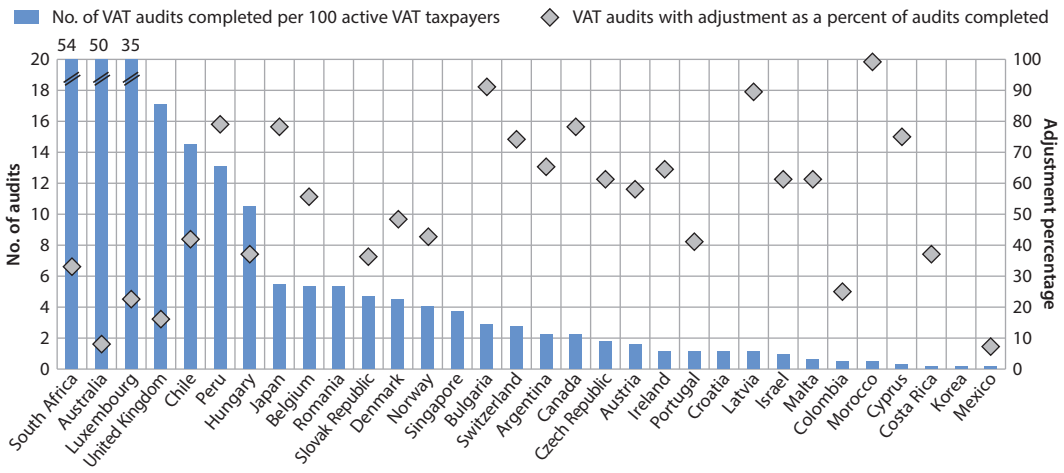


StatLink http://dx.doi.org/10.1787/888933546336

Note: For Canada and Japan the number of CIT audits completed relates to the total number of CIT taxpayers.

Source: Tables A.15 Verification/audit – Activity per active taxpayers by tax type, and A.16 Verification/audit – Adjustment ratio by audit type.

Figure 6.12. **VAT audit coverage and adjustment rates, 2015**



StatLink http://dx.doi.org/10.1787/888933546355

Note: For Belgium and Canada the number of VAT audits completed relates to the total number of VAT taxpayers.

Source: Tables A.15 Verification/audit – Activity per active taxpayers by tax type, and A.16 Verification/audit – Adjustment ratio by audit type.

While up to half of the administrations could provide data on verification adjustments for one of the five segments surveyed, only three administrations, Argentina, South Africa and the United States, could provide comprehensive data across all segments.

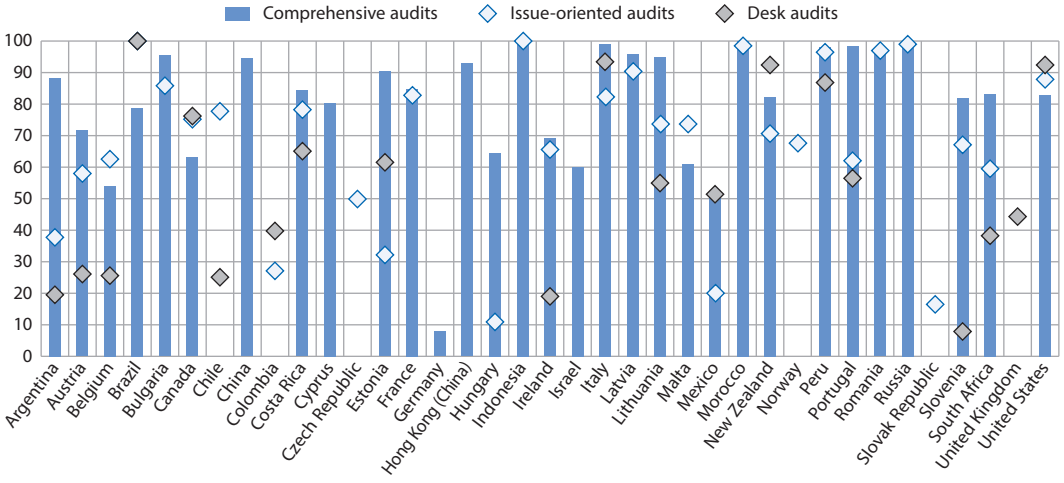
Box 6.13. **Innovation in VAT**

In ***Russia***, the FTS has implemented a system that allows it to monitor VAT compliance and the "creation of value added" on a nationwide basis. The approach is based on automatic cross-matching of all VAT paid with all VAT claimed across all transacting parties. All incoming data is processed and analysed mostly in real time, with only an eight hour delay across the country. The system allows FTS to zoom-in on transactions or VAT taxpayers and automatically identify related tax risks. It can then initiate a VAT tax audit that is assigned to inspectors. The system also allows it to monitor and measure performance of regional and local offices and of tax inspectors.

Implementation of the system became viable following amendments into the tax code that introduced mandatory digital filing of all VAT tax returns, VAT invoices and digital grand ledgers, and of the construction of new IT infrastructure concentrated around Data Processing Centres. FTS Data Processing Centres are capable of collecting, storing and analysing large amounts of data to provide a single platform for all tax administration business. 2016 results show an increase in VAT collection over 2015 of 8.5%, while in 2015 and 2014 the increase amounted to 12.4% and 16.8% respectively.

Source: Russia – Federal Tax Service (2017).

Figure 6.13. **Verification adjustment ratio by audit type, 2015**



StatLink http://dx.doi.org/10.1787/888933546374

Source: Table A.16 Verification/audit – Adjustment ratio by audit type.

Table 6.7 summarises verification adjustment by segment. Given the sample size, the results need to be treated with care. However it is surprising to see the relative order of average adjustments rates, with the High Net Wealth Individual (HNWI) segment having the lowest rate of adjustment 2015. This is only one dimension and needs to be put alongside other data to evaluate performance in respect of this critical segment – including the size of adjustments which been excluded from the table as this information is reported in local currency. It may though at least raise the question of how some countries select HNWI cases for review.

Table 6.7. **Verification adjustment rate by segment, 2015**

Segment type	No. of jurisdictions	Adjustment rate
Large taxpayers	27	56.26
SMEs	21	58.68
Employers	14	65.14
HNWIs	11	51.31
Other individuals	13	59.63

Source: Tables A.153 to A.157 Audit activity by segment.

Collection of verification assessed debt

As part of gathering segmented information on performance, administrations were asked to report the amount of tax assessed as a result of verification where that information was actually collected. The sample size is again too small to draw strong conclusions, including any assessment of the average percentage of tax assessed that is actually collected.

Administrations are encouraged to improve their tracking and reporting of the collection of tax assessed as a result of audit. An example of established processes for measuring tax assessed through verification is that undertaken in Spain by the State Tax Administration Agency (AT). While their data is confidential and therefore not included in the tables, AT has for the last decade utilised formal co-operation between tax audit and tax recovery services to ensure the collection of the taxpayer's debts, with processes commencing before formal assessments are made in order to reduce the collection risk.

Table 6.8. **Administrations that track the collection of verification debt, 2015**

	Large taxpayers	SME	Employers	HNWI	Other Individuals
Argentina	✓	✓	✓	✓	✓
Australia	✓	✓		✓	✓
Costa Rica	✓	✓			
Croatia	✓				
Greece	✓			✓	
Hungary	✓		✓	✓	✓
Italy	✓	✓			✓
Lithuania	✓	✓		✓	✓
Mexico	✓	✓		✓	✓
Morocco	✓	✓			
Peru	✓	✓		✓	✓
Romania				✓	
Russia	✓				
South Africa	✓	✓	✓	✓	✓
United Kingdom	✓			✓	
United States	✓	✓	✓	✓	✓
TOTAL	15	10	4	11	9
Jurisdictions reporting results	26	22	13	14	14

Source: Tables A.153 to A.157 Audit activity by segment.

Tax and crime

Tax crime occurs when people intentionally avoid paying tax or claim money they are not entitled to. Table 6.9 summarises arrangements for managing tax crime cases in the 37 tax administrations that report having a role in such investigations. Just over half of these administrations perform the whole investigation activity, with the balance playing a range of roles in prosecuting the case to conclusion.

Table 6.9. **Participation in tax and crime work**

No. of administrations that participate in criminal tax investigations		Management arrangement in situations where the administration participates partially		
Whole participation	Partial participation	Cases managed exclusively by other agency	Cases managed jointly by administration and another agency	Cases managed exclusively by administration
20	17	6	6	5

Source: Table A.135 Tax crimes.

Criminal activities are dynamic and adapt to take advantage of new opportunities for financial gain, frequently outpacing the legislative changes designed to combat them. Finding better ways to fight tax crime is a high priority. Along with money laundering, corruption, terrorist financing, and other financial crimes it can threaten the strategic, political and economic interests of jurisdictions. Countering these activities requires improved transparency and greater efforts to harness the capacity of different government agencies to collectively deter, detect and prosecute these crimes through a whole of government approach. Box 6.14 provides examples of activity in three survey administrations.

Box 6.14. **Tax and crime**

In the ***Netherlands*** the Fiscal Information and Investigation Service (FIOD) is the criminal investigation service of the Netherlands Tax and Customs Administration (NTCA). The FIOD role is to combat fiscal, financial-economic and commodity fraud as well as corruption and violations of integrity in the "financial world". It works closely with the Public Prosecution Service whose legislation authorises its investigations. This relationship allows consideration of using criminal law to prosecute cases in advance of the deployment of civil or supervisory powers and actions. FIOD works closely with other agencies and authorities. It is also increasingly using more sophisticated tools and techniques to analyse data and identify relevant information both within the Netherlands and outside its borders. By actively engaging citizens as well as the media, FIOD has been able to enhance the social impact of fighting financial crime.

In ***Austria*** a central registry has been established for all bank accounts held in Austrian financial institutions. The register contains the names of account holders, the account number and the name of the credit institutions, but not the balance of each account. As of October 2016 the register can be accessed by the tax administration for fiscal and fiscal penal purposes and by justice (courts, prosecutors) for penal purposes. The tax administration intends to access the register so as to assist in audit and tax collection cases. This measure was accompanied by the requirement to report to the tax administration capital flows of EUR 50 000 or more from bank accounts or securities accounts of private persons by financial institutions.

Box 6.14. **Tax and crime** *(continued)*

In the ***United Kingdom*** HMRC's approach is to use its whole compliance "toolkit" to tackle rule breakers, deter potential rule breakers, and reassure the compliant majority that action is being taken. HMRC has more than 16 000 civil investigators and is also a law enforcement agency, with comprehensive surveillance powers and powers of arrest. It works closely with all UK prosecuting authorities and with other law enforcement agencies to ensure a joined up approach across the whole of the UK Fraud landscape. Most tax evasion is dealt with through civil processes. HMRC has the ability to levy civil penalties that are broadly equivalent to fines levied by the criminal cases. Tax evasion is identified through the Evasion Referral Process. When deciding whether to investigate criminally, HMRC considers the nature and scale of the fraud and the availability of evidence. If a case is not considered appropriate for criminal investigation, it will be considered for civil investigation under Code of Practice 9, and the taxpayer is given the opportunity to make a full disclosure or face potential criminal investigation. This disclosure facility, with the underpinning of a criminal sanctions regime, is among HMRC's most powerful civil investigation tools and is used only by specialist teams.

Source: The Netherlands – Netherlands Tax and Customs Administration; Austria – Federal Ministry of Finance; The United Kingdom – Her Majesty's Revenue and Customs (2017).

As illustrated in Table 6.10, the resourcing and caseloads of tax and crime work show a remarkable consistency between years, when comparing the results of the administrations able to report information across both years.

Table 6.10. **Summary of tax and crime work**

	No. of Full-time equivalents in programme	Cases on hand	Cases referred for prosecution	Cases prosecuted
No. of jurisdictions	26	24	27	23
2014	12 330	17 216	11 218	5 710
2015	12 395	17 269	11 686	5 831

Note: With respect to the number of cases, Poland has been excluded from this summary given the distortionary effect of the large number of cases referred for prosecution and prosecuted.

Source: Table A.135 Tax crimes.

Collections

The collections function involves taking action against those who do not file a return on-time, and/or make a payment when it is due. All but four of the administrations (Chile, Iceland, Italy and Sweden) participating in the survey report having the prime responsibility for the collection of outstanding debt and as well as overdue returns (see Table A.35). Information provided by 42 of these administrations attributes 10.8% of their total tax staff numbers to the collection function (see Table A.20).[3] Even with the growth in "pre-filled or no return" approaches over the last decade, the filing of a tax return or declaration still remains the principal means by which a taxpayers liability is established in the majority of jurisdictions participating in this publication.

While more than three quarters of administrations reported that they "mostly or partially achieved" their outstanding return collection targets (see Table A.38), only six provided performance information across all return types and years. Accordingly the data table has not been included in the annex, and no comment on the return collection performance of administrations is possible. Although given that reported on-time filing rates averaged only between 78% and 90% in 2015 (see Table 6.3) it is highly likely that the volume of outstanding returns has on average decreased.

In looking at debt collection, the 2014 report *Working smarter in tax debt management* (OECD, 2014b) provided an overview of the modern tax debt collection function, describing the essential features as:

- *Advanced Analytics* – that makes it possible to use all the information tax administrations have about taxpayers to accurately target debtors with the right intervention at the right time.
- *Treatment Strategies* – the collection function needs a range of interventions, from those designed to prevent people becoming indebted, through to measures to support taxpayers in the making payment of debt and tough enforcement measures where appropriate.
- *Outbound call centres* – which make it possible to efficiently pursue a large number of debts.
- *Organisation* – debt collection is a specialist function and is usually organised as such. The right performance measures and a continuous improvement approach help drive desired outcomes.
- *Debtors Who Have Gone Abroad* – the proper and timely use of international assistance is crucial, particularly the "Assistance in Collection Articles" in agreements between jurisdictions.

This section of the report comments on tax administration performance in managing the collection of outstanding debt and on the information and access powers administrations have in this regard, It then provides an update on advanced analytics and treatment strategies, preventive approaches to debt being incurred and cross border collection.

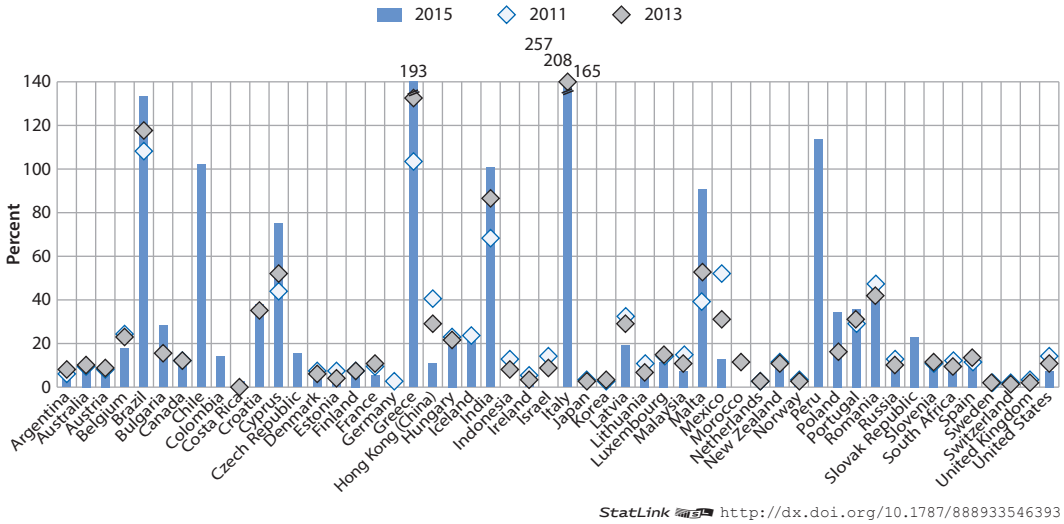
Performance in collecting outstanding debt

The range of actions undertaken by tax administrations to collect outstanding tax arrears continues to evolve. Advances in predictive modelling and experimental techniques as reported in the OECD report on *Advanced Analytics for Better Tax Administration* (OECD, 2016b) are helping many administrations better match interventions with taxpayer specific risk. The use of a range of intervention approaches is helping prevent debt from arising as well dealing with the collection of tax arrears. Outbound calling is now seen common practice and not just best practice, and administrations are starting to more actively use more of the collection powers granted to them by government.

Total outstanding tax debt remains very large, in the region of EUR 1.8 trillion (see Figure 2.1). Total tax debt as a percentage of total net revenue has, however, reduced over the last five years in 27 of 38 administrations able to report data for the 2011 to 2015 period. For survey and comparative analysis purposes, "total debt" is defined as the total amount of tax that is overdue for payment at the end of the fiscal year and includes any interest and penalties. The term includes tax debts whose collection has been deferred (e.g. as a result of payment arrangements). The average debt to net revenue ratio of 31.76%

in 2015 is heavily influenced by the very large debt figures of Brazil, Chile, Greece, India, Italy[4] and Peru, and to a lesser extent Cyprus, Malta[5] and Romania. If these jurisdictions are removed the average reduces to around 12.3% of net revenue.

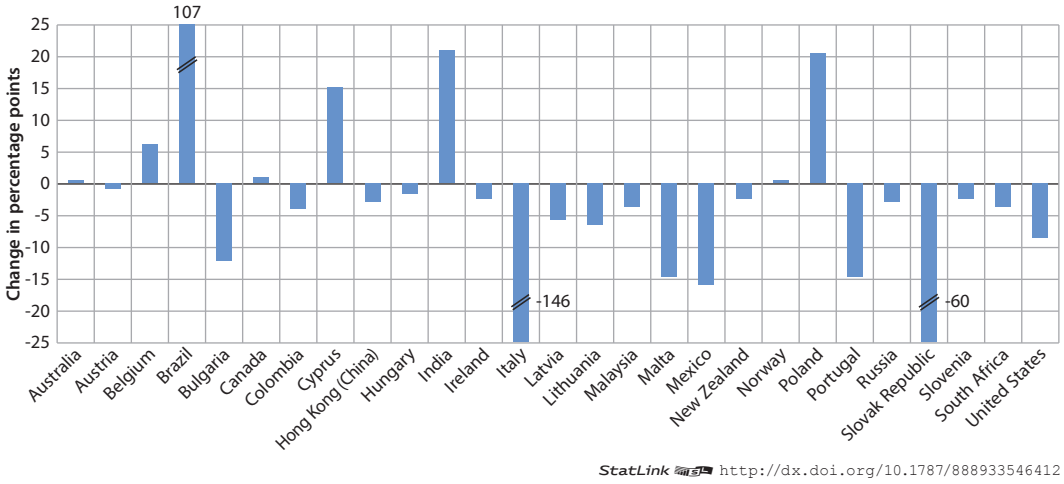
Figure 6.14. **Total year-end tax debt as a percent of total net revenue, 2011-15**



Source: Table A.175 Total year-end tax debt, 2011-15.

Looking at collectable debt across the 2011 to 2015 period, almost three-quarters of the administration's able to report data over that period (19 of 27 administrations) show reductions in collectable debt as a percentage of net revenue collected. "Collectable debt" is the total debt figure less any disputed amounts or debts which for other reasons are unable to be collected, but where write off action has not yet occurred (also referred to as "uncollectable debt").

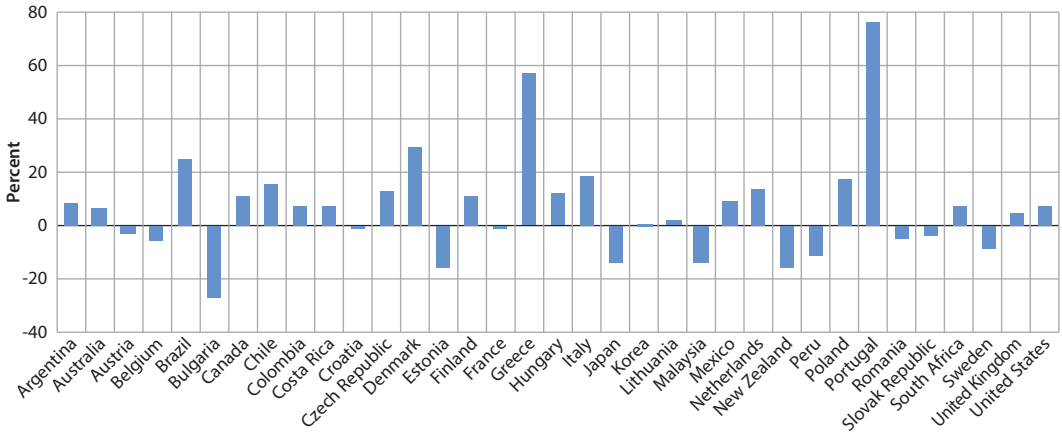
Figure 6.15. **Movement in total year-end collectable tax debt, 2011-15**



Source: Table A.176 Total year-end collectable tax debt, 2011-15.

In looking at the number of debt cases, volumes as a percentage of opening cases have increased between 2014 and 2015 in almost two-thirds of the administrations that reported both opening and closing inventory.

Figure 6.16. **Movement in tax debt cases between 2014 year-beginning and 2015 year-end**



StatLink http://dx.doi.org/10.1787/888933546431

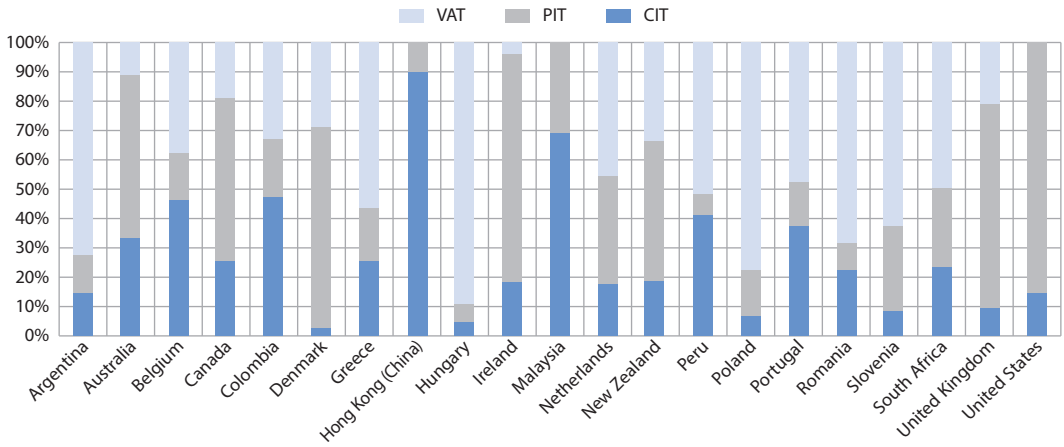
Source: Table A.129 Tax debt – Non-collectable tax debt and tax debt cases.

Most tax administrations have processes that prioritise the collection of "new debt". This is based on reasoning that this debt is more likely to be paid by the taxpayer, and that timely interventions are more likely to influence future behaviour, ideally seeing the taxpayer either paying on time or making contact with the administration in the event of any future inability to pay. While approximately half of the administrations surveyed were able to provide some information on the age of debt by tax type, only 21 provided information across all major tax types.

Table A.14 raise some interesting observations about the mixed relative performance of administrations in different revenue types that might benefit from further inquiry or study to understand the underlying causes or factors. For example, (1) while only 28% of Australia's VAT debt is over 12 months old, in Cyprus, Peru and Portugal more than 90% of their VAT debt in 2015 is older than 12 months; (2) the portion of CIT debt over 12 months in the United Kingdom is approximately one-third that of most other jurisdictions; and (3) the proportion of PIT debt over 12 months old in two-thirds of jurisdictions ranges between 70 and 100% of total PIT debt. Of course the answers may well be to do with the make-up of tax debt older than 12 months (see Figure 6.17) or the volume of non-collectable debt in these categories, something again that would reward further study.

Despite the best efforts of administrations and taxpayers, there will always be instances where tax due and payable cannot be paid. Most jurisdictions provide the Director General or Commissioner with the power to write-off tax due and payable in certain circumstances generally governed by law, regulation or departmental policy or operating instructions. General situations reported where administrations may undertake write-off action include: (1) where it is prudent to do so as part of accepting an arrangement that maximises the overall recovery of tax arrears, (2) where it is more efficient to do so than using administration resources to secure a larger repayment, (3) where the recovery would place a taxpayer in "serious hardship", (4) where a corporate entity is struck-off, or (5) as part of the administration accepting a creditor compromise or voluntary administration.

Figure 6.17. **Make-up of tax debt older than 12 months (CIT, PIT, VAT), 2015**



StatLink http://dx.doi.org/10.1787/888933546450

Source: Tables A.130 and A.131 Tax-debt by tax type.

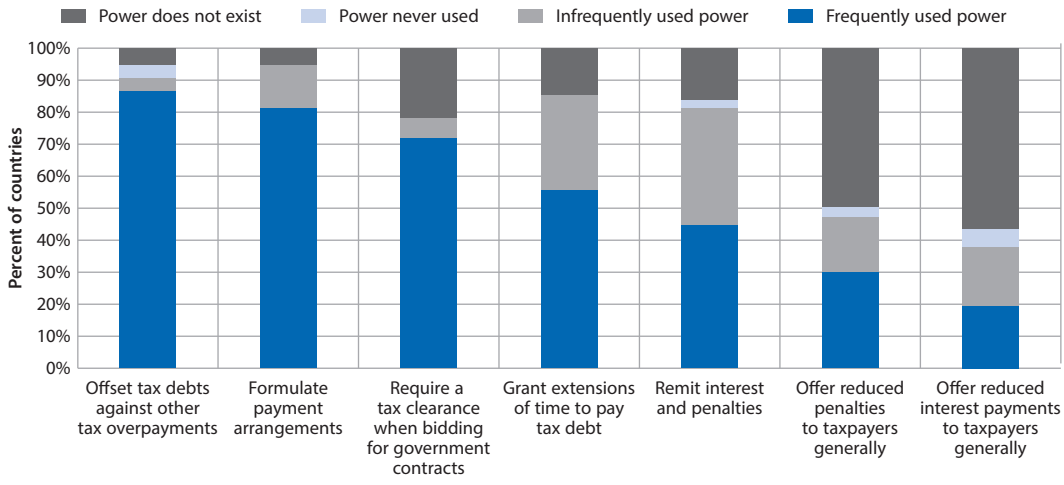
Information and access powers

The legislative framework includes provisions that enable tax officials to undertake certain actions in relation to the management of debt, the collection of amounts overdue and the enforcement of actions that can be taken against delinquent debtors. Figures 6.18 to 6.20 summarise this information for the all 55 jurisdictions in the series, looking at those powers they use to assist in managing, collecting and enforcing the debt.

Powers to assist in managing debt

Most administrations report the frequent use of powers that allow them to offset tax debts against overpayments from other tax types; formulate payment arrangements; and require tax clearances for businesses that contract with government.

Figure 6.18. **Powers to assist managing debt, 2015**



StatLink http://dx.doi.org/10.1787/888933546469

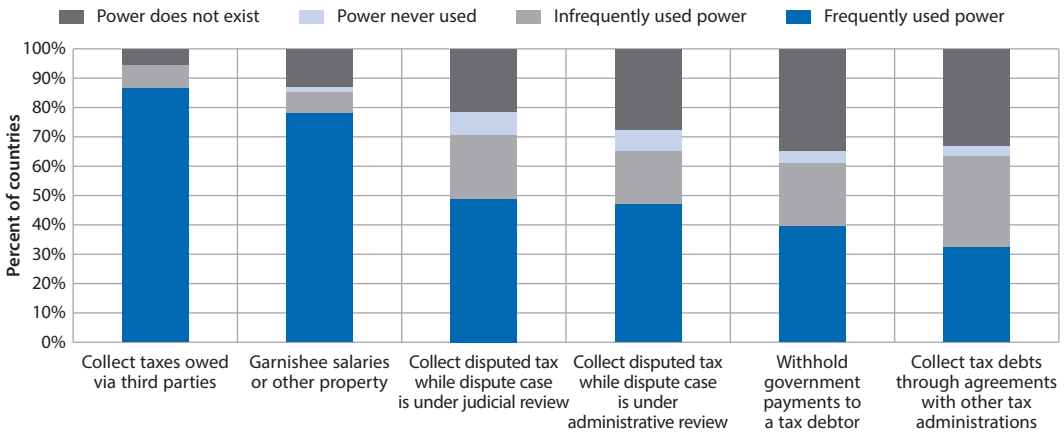
Source: Table A.125 to A.127 Debt collection powers.

Surprisingly however, one third of administrations report infrequent use of the powers they have to remit interest and penalties or grant extension of time for payment. Accordingly administrations may wish to reflect on whether there is opportunity to improve their effectiveness in this regard. While jurisdictions are evenly divided on policies that would allow their tax administration to offer reduced penalties and interest to taxpayers, generally, between 40% and 55% of those with these powers report that they do not use them or use them only infrequently.

Powers to assist collection

Administrations report extensive use of third party collection via banks and employers and in the use of garnishee orders over salaries and property. Approximately one-third of administrations report non-use or infrequent use of powers to collect disputed taxes while a case is under judicial or administrative review. One-third of administrations report they do not have the power to withhold government payments due to delinquent debtors or the ability to use treaties or other agreements to have other jurisdictions undertake collection activity. These jurisdictions may wish to consider these approaches given the success reported by jurisdictions that have these powers.

Figure 6.19. **Powers to assist collection, 2015**



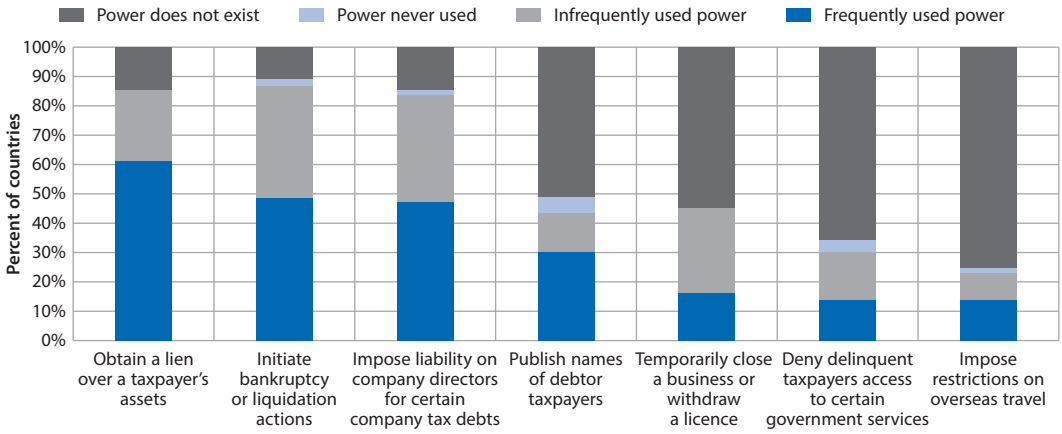
StatLink http://dx.doi.org/10.1787/888933546488

Source: Table A.125 to A.127 Debt collection powers.

Powers to assist enforcement of debt

Generally jurisdictions reported lower use of enforcement powers than those for *managing* and *collecting* debts with 40% of administrations reporting infrequent use across all powers in this area. Administrations are invited to consider whether their enforcement effectiveness may be improved by extending the use of some of these powers. While some administrations may consider powers to temporarily close a business, restrict travel, or deny a delinquent taxpayer access to services as unsuitable for use in their jurisdiction, these may be powers others may consider useful to add to their armoury. With one half of administrations having the power to publish the names of tax debtors (with appropriate criteria and controls), and two-thirds reporting success in the frequent use of these powers, these may also be areas jurisdictions that cannot currently take such actions may like to consider.

Figure 6.20. **Powers to assist enforcement of debt, 2015**



StatLink http://dx.doi.org/10.1787/888933546507

Source: Table A.125 to A.127 Debt collection powers.

Advanced analytics and treatment strategies

Tax administrations have used advanced analytics to inform the management of overdue tax returns and collection of tax arrears for more than a decade. This work has mainly used *prescriptive* techniques to determine how to communicate most effectively with taxpayers in default. In recent years however, administrations have begun to use *predictive* techniques to identify proactive and responsive actions to assist taxpayers to meet their obligations, or to determine the best intervention to secure a payment or a return when overdue. Box 6.15 describes once such use of predictive techniques in Belgium.

Box 6.15. **Predictive modelling**

In ***Belgium***, the Federal Public Service (FPS) Finance has developed a predictive model to detect the likely risk of business failure of legal entities and self-employed persons over the coming twelve months. It uses a predictive model to assign each company or self-employed person active in Belgium a credit score. The model runs on a database containing around 1000 variables originating both from internal sources of the FPS Finance and external data from other governmental agencies. The model differs from those used in the private sector as the data used to feed the model is drawn from the past fiscal behaviour of the taxpayer especially relating to Withholding tax and VAT of which non-payment is one of the first warning signs of business failure.

The model informs tax collectors on the solvency risk and hence the risk of default and assists decision making process to enable early recovery action to be taken, in line with the predicted risk of bankruptcy.

Source: Belgium – Federal Public Service, Finance (2017).

The report, *Advanced Analytics for Better Tax Administration* (OECD, 2016b) describes some of the successful approaches being used. These include modelling the risk that an individual or company will fail to pay as well as models that attempt to assess the likelihood of insolvency or other payment problems. Predictive analytics approaches have led to the sending of SMS messages to individuals considered a payment risk and determination of the best sequencing of interventions for particular groups of taxpayers.

In an effort to improve their efficiency the State Tax Administration Agency of Spain has developed IT applications that allow it to undertake bulk actions on debtors. These programmes gather debtors with similar characteristics and automatically issues attachment orders over selected assets. Similar approaches undertaken by Portugal and Peru are described in Box 6.16.

Box 6.16. **Automated enforcement**

In ***Portuga***l the Autoridade Tributária e Aduaneira (AT) has since 2005 implemented a range of electronic systems to support its enforcement and recovery procedures. These approaches allow it to manage the procedures in an integrated and automated model. The enforcement and recovery procedures are based on internet and web technology that communicates mostly by automated triggers with taxpayers, debtors and external bodies. This allows the electronic acknowledgement of debt, the automatic issuing of notifications, and the commencement of enforcement procedures. Such procedures include the automatic seizure and attachment, the sending of reminder notices and the publication of tax debtor information on its website. The system can also prevent debtors from competing in tender procedures to provide goods or services to public bodies. The electronic system also segments tax debtors, collecting information on the debtor into a "single view". This can bring together information on assets, key customers, suppliers, auditing procedures, administrative and judicial litigation, as well as relationships with other taxpayers and key contacts. These initiatives have helped AT continue to reduce its tax debt book significantly over the last decade.

In ***Peru***, the e-notification system implemented in November 2015 by the Peruvian tax administration (SUNAT) has improved administrative acts undertaken by SUNAT in support of payment and collection activity. Previous approaches were characterised by a high dependence on physical notifications, a process high in cost and low in effectiveness. The e-notification system was implemented as part of SUNAT´s strategic objective to facilitate voluntary tax compliance, as well as to increase levels of tax debt recovery. The full implementation involved legislative change and the acquisition of software solutions for customer and content management that were scalable, secure and efficient. New versions of the *Taxpayer Electronic Mailbox* and SUNAT mobile app (*App SUNAT)* were launched to facilitate taxpayer´s access to notifications. The new system has generated improvements in tax compliance, and administrative costs as well as improving transparency and communication. Since full implementation more than 900 000 taxpayers across Peru have received notifications of administrative acts through this channel. More than 2 million *Payment Orders* and 856 000 *Enforced Collection Resolutions* have been issued electronically, reducing the notification time from 8 days to only 2 hours. The number of customer complaints has decreased by 60% while tax collection from e-notifications has increased by 9.4%. SUNAT estimate administrative savings at around USD 7.8 million.

Source: Portugal – Autoridade Tributária e Aduaneira; Peru – Superintendencia Nacional de Administración Tributaria SUNAT (2017).

Preventive approaches

To maintain high levels of voluntary compliance and confidence in the tax system administrations must ensure that their debt collection approaches are both "fit for purpose" and in accord with community expectations of how the system will be administered. This means not only taking firm action against taxpayers that habitually non-comply, but also using "softer" more service-orientated approaches where taxpayers are willing to do the right thing but may not succeed. Increasingly, tax administrations are taking an end-to-end or systems view of their processes and researching the reasons why returns may not been filed

or payments made. They are also using information about the taxpayer previous history, to identify patterns and/or anomalies.

Armed with this information as well as other social, economic, industry or psychological factors that influence behaviour, many administrations have systematically overhauled their collection approaches. They have redesigned processes, added new payment channels and methods, and embarked on education campaigns, and trialled a variety of approaches aimed at changing "taxpayer behaviour," They have also incorporated advanced analytical techniques to help identify how and importantly when they should intervene across that broader system. Such interventions may take place well before a return or payment might be due. Box 6.17 describes how one administration is using such approaches.

Box 6.17. **Education and communication**

In ***Australia***, the ATO uses targeted education and communication to help taxpayers understand their tax payment obligations and encourage them to comply. The aim is to increase on time payment of tax and encourage those who did not pay on time to address the resulting tax debt as soon as possible, using self-help options where appropriate. With small businesses accounting for a large part of overall volume of tax debt cases, the ATO has a focus both on assisting businesses to prevent debt arising (including the provision of cash flow management tools) as well as providing self-help tools to assist taxpayers self-managing tax debts that do arise. The ATO runs social media and promotional campaigns to help taxpayers meet their tax obligations. The ATO website provides a range of online content to support and assist business owners to avoid debt by better managing their business, as well as encouraging them to contact the ATO if they are having difficulty paying…

Source: Australia – Australian Tax Office (2017).

Cross-border collection

As mentioned earlier, jurisdictions are divided over the use of powers to collect tax debts through tax treaties or agreements with other jurisdictions, with one-third reporting frequent use of this power, a second third using it infrequently or not at all, and the remaining third not having this power. With the effects of globalisation in tax set to continue, and in all likelihood increase, it may be timely for those administrations that do not have this power given the success reported by jurisdictions that do, to consider this approach.

Box 6.18. **Cross border collection activity**

In ***New Zealand***, Inland Revenue used customer insight and intelligence-led analytics to support the collection of outstanding amounts of arrears from student loan borrowers and people liable to pay child support that were living outside New Zealand. The three tiered approach involved working with private sector collection agencies in Australia and the United Kingdom that helped trace debtors, undertake collection activity and provide legal services. As such it was able to secure payment from a group of hard-to-find taxpayers. Secondly by improving information exchange with the Australian Taxation Office to help contact student loan borrowers in Australia it was then able to work with them about their obligations. Finally a proactive marketing and advertising campaign allowed it to reach hard-to-find student loan borrowers living overseas.

Source: New Zealand – Inland Revenue (2017).

Disputes

Effective access to tax dispute processes are an essential feature of a good tax system. They safeguard taxpayer rights and ensure appropriate checks and balances exist on the exercising of tax powers by administrations. All survey respondents, with the exception of Colombia and Costa Rica, report the existence of a forum or fora, for formal resolution of disputes. One-third of countries report having an Ombudsman service in addition to other dispute resolution processes (see Table A.169).

Box 6.19. **Appeal and review processes**

In ***Denmark*** while the Tax Appeals Agency, the National Tax Tribunal (NTT) and the appeals boards are organised under the Danish Ministry of Taxation (Skatteministeriet), they are independent in relation to SKAT. With effect from 1 January 2016 it is now only possible to have an appeal heard by one of the administrative appeals bodies. To further improve access and operation the procedural rules applying to these bodies have been harmonised and made as uniform as possible. An appeal fee is charged in all appeal cases, with the exception of debt collection cases and cases regarding access to documents. There is a possibility of getting a refund of costs for expert assistance in connection with the hearing of a case by an appeals body. It is also possible to have the decisions made by the administrative appeals bodies judicially reviewed.

Source: Denmark – Danish Tax Administration (2017).

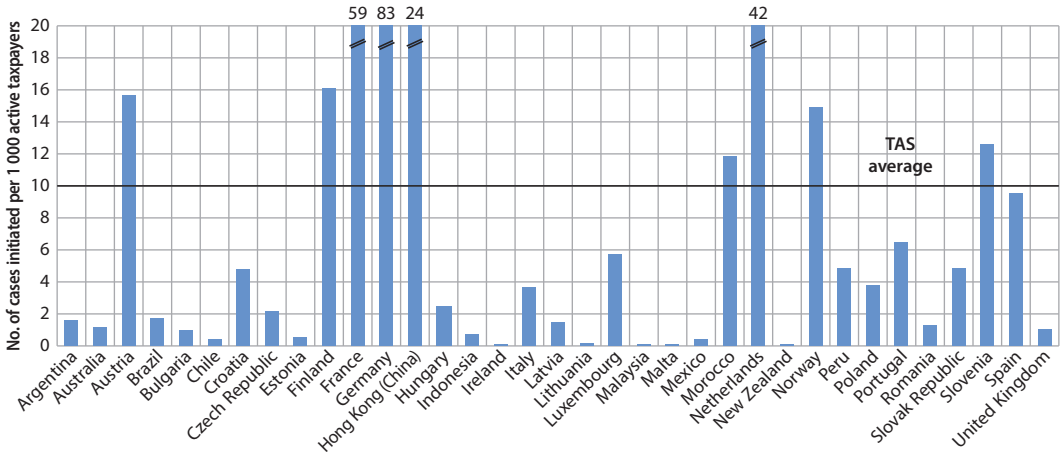
All jurisdictions report administrative review procedures operating in their jurisdiction. Eighty-seven percent of administrations report that administrative reviews can be conducted by the administration itself, with approximately two-thirds requiring the taxpayer to seek administrative review before their case can be reviewed by an external judicial body (see Table A.168). All but eight administrations (Costa Rica, Cyprus, Finland, Hungary, Italy, Slovak Republic, Slovenia and Switzerland) report that they have formal performance standards for the resolution of dispute cases using administrative review, with 85% reporting this standard as being "mostly met" (see Table A.38).

While tax administrations cannot generally control the timing of judicial processes, it is important to have sound reporting and monitoring of the tax dispute process to allow adjustments to be made where necessary. Since the 2015 TAS report, many administrations have been active in improving the level of management information available. As a result this report contains performance information on approximately two-thirds of administrations.

Figure 6.21 highlights the wide differences between jurisdictions in the use of administrative review arrangements. While longer term trend data is not yet available, the data from the 34 countries able to provide information for both years included in Table A.170 is remarkably consistent.

Figure 6.22 displays the changes in the number of review cases between the start of the 2014 year and the end of 2015, plotting information against the survey average for the 32 administrations able to provide volume information. This data will benefit from an extended time series that future surveys will make possible.

Figure 6.21. **Number of administrative review cases initiated per 1 000 active PIT & CIT taxpayers, 2015**

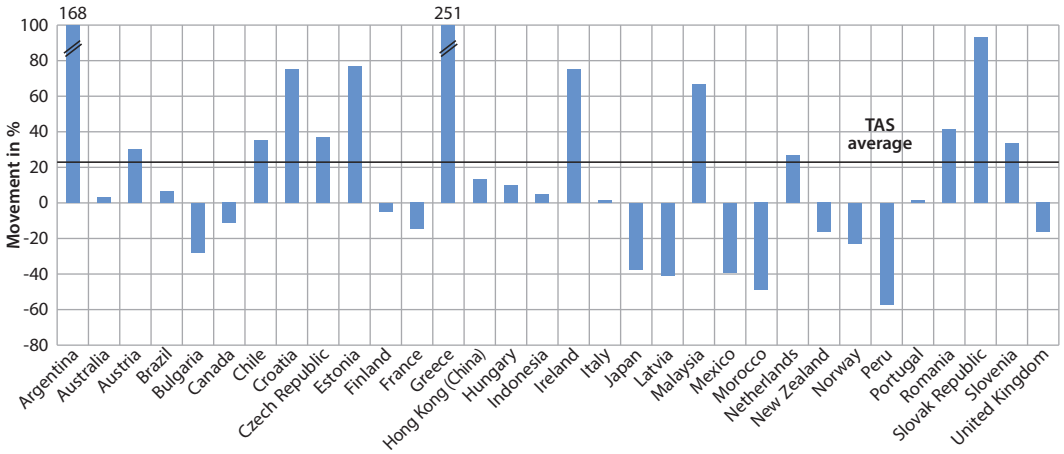


StatLink http://dx.doi.org/10.1787/888933546526

Note: For Luxembourg the figure relates to the total number of PIT and CIT taxpayers. For Bulgaria, Germany and Spain the figures relate to the year 2014.

Source: Table A.18 Dispute resolution – Administrative review cases.

Figure 6.22. **Changes in the number of administrative review cases at year-end, 2013 to 2015**

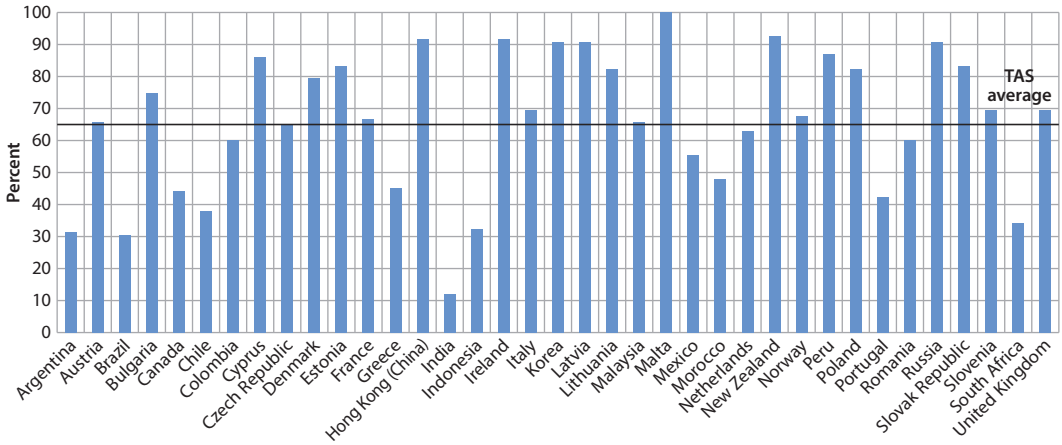


StatLink http://dx.doi.org/10.1787/888933546545

Source: Table A.18 Dispute resolution – Administrative review cases.

Differences of viewpoints between taxpayers and the tax administration on the correct amount of tax owed, including the facts relied upon or the interpretation of the law, are a normal part of tax administration. Reported information shows that where disputes do arise most are resolved between the various parties without the need for litigation. Figure 6.23 reports the performance of administrations for cases decided upon by the courts. As this is the first time that tax litigation data has been summarised in this way, further reporting is required before any conclusions can be reached.

Figure 6.23. **Percentage of cases resolved in favour of the tax administration, 2015**



StatLink http://dx.doi.org/10.1787/888933546564

Note: For India and Romania the figures relate to the year 2014. For South Africa, the underlying data includes cases finalised in the magistrate courts and in other ways, e.g. settlement, withdrawal or concession.

Source: Table A.19 Dispute resolution – Cases under litigation in relation to cases under administrative review, and success ratios.

Box 6.20. **Settling large tax disputes**

In the ***United Kingdom***, HMRC's published Litigation and Settlement Strategy sets out how tax disputes are resolved under civil procedures. It applies equally to small and large taxpayers. It makes clear that in any dispute with a taxpayer HMRC will only settle the figure of tax due by agreement where the agreement brings in the amount HMRC believes to be right under the law. If the right amount cannot be agreed, the dispute goes to litigation at the Tribunal.

HMRC's governance arrangements for taking decisions during tax disputes are set out in the published Code of Governance for resolving tax disputes. Decisions in large and sensitive disputes go to the Tax Dispute Resolution Board made up of senior tax professionals from across HMRC, which scrutinises and refers cases to three Commissioners, including the Tax Assurance Commissioner, with a recommendation to inform the Commissioners' decision. The Tax Assurance Commissioner has an explicit challenge role in decision making on cases. The Tax Assurance Commissioner is not responsible for HMRC's large business work and does not engage with taxpayers on their specific liabilities, nor does he manage caseworkers. As a result the Tax Assurance Commissioner is well-placed to provide this challenge role when key decisions are taken in large tax disputes.

Source: United Kingdom – Her Majesty's Revenue and Customs (2017).

It needs to be borne in mind that litigation is an important element in how *jurisprudence* develops. It is therefore necessary for administrations to strike a balance between only taking cases they know they can win (which a consistent measure of close to 100% success rate might suggest), and those cases that support the interpretation of the law, even though these cases may have a low success rate. Success rates of less than 30% might suggest administrations might consider greater use of "test case" approaches, or the use of alternative dispute processes, where these exist.

If the tax system is to provide certainty to taxpayers (and tax administrations) it is also important that dispute cases are handled in a timely manner. While no explicit information on the age of cases was gathered two general observations can be made:

- Seventeen of the 32 administrations that were able to report data for 2014 and 2015 for both the number of cases at year-end and the number of cases resolved during the fiscal year reported an increase in the number of cases on-hand.
- With the volume of cases decided during the year across most of those jurisdictions also increasing, the increase mentioned in point 1 must result in the volume of dispute cases rising.

It may be beneficial for administrations, if they have not already done so, to review their general performance in this area.

Notes

1. Note that the percentage is the average for the 38 administrations that were able to provide the breakdown of full-time equivalents by function across all functions (see Table A.20).
2. Note that the average excludes the average resolution time for Chile which would otherwise distort the overall average.
3. Note that this excludes data for Chile, Iceland, Italy and Sweden as they do not have the prime responsibility of the collection of outstanding debt.
4. The total tax debt includes considerable amounts of debt dating back to the year 2000. The debt is regarded as "bad debt" for several reasons, including cessation of business and death of debtor. The debt remains on the agency's books as cancellation procedures have been suspended by specific laws. Net of these "bad debts", the ratio for Italy would be substantially lower.
5. A significant proportion of the arrears are related to estimated assessments which are also issued to taxpayers who have left Malta without informing the tax administration. This issue, alongside the fact that the Maltese administration does not have a policy of writing off unrecoverable tax debt, leads to high levels of undisputed tax debt and high balances of tax arrears. In respect of direct taxation, the administration reports direct tax collection rates around 98% of the declared tax. Other tax types show similar rates.

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Chapter 7

Budget and human resources

This chapter describes tax administrations operating budgets. In so doing it comments on improvements in productivity and innovation that are helping many administrations manage the significant on-going financial pressure they face; and in some cases allowing them to fund the development new capabilities.

It provides information on tax administrations' workforce and sets out challenges administrations are managing in increasing their capability while managing a workforce that in general terms is reducing in size and on average getting older.

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.

Introduction

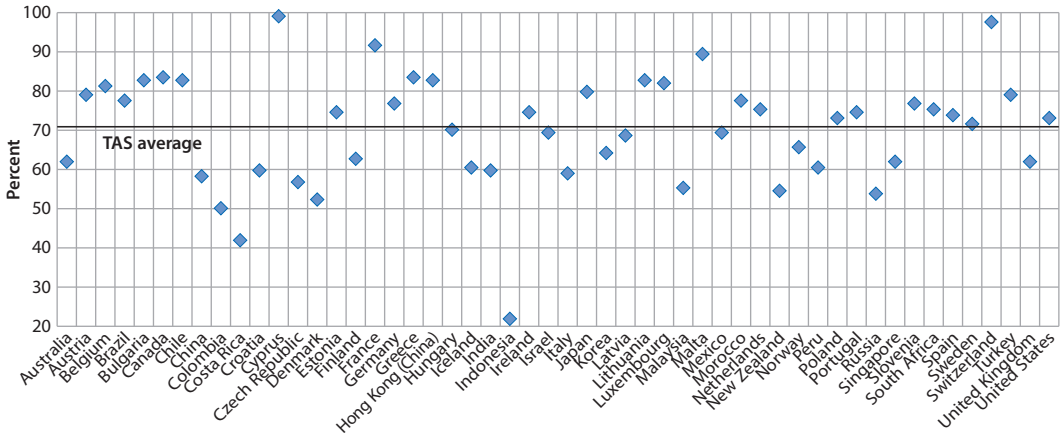
The role and nature of tax administration in many jurisdictions is changing. As tax administrations address the challenge of modernising systems and approaches to deliver more contemporary services and integrate new responsibilities, many report that they are also managing significant budget and human resource constraints. The changes, discussed in earlier chapters, go far beyond simply enhancing existing operations with new capabilities or adding new technologies to existing products and business processes. Tax administrations have to determine the critical capabilities they need to be successful, many of which are very different in nature and volume to the capabilities they now have. They also need a clear plan and approach to take them there.

Budgetary pressure

The overall level of resources devoted to tax administration is an important and topical issue for most governments, external observers, and of course tax administrations themselves. While the budgetary approaches differ, in most jurisdictions the budget allocated is tied to the delivery of performance outputs which are outlined in an annual business plan (see Table A.39). In a small number of jurisdictions (Argentina, Bulgaria, Italy, Peru and Spain), the annual budget of the tax administration or part of it is based on a "percentage-of-revenue-collected" formula (see Table A.52).

When looking at the budget figures as a whole, more than three-quarters of tax administrations in the survey report an increase of their overall budget between the years 2014 and 2015 (see Table A.49). The picture changes dramatically however, when compared to jurisdiction gross domestic products. Against this measure almost 60% of the administrations

Figure 7.1. **Salary cost as a percent of total operating budget, 2015**



StatLink http://dx.doi.org/10.1787/888933546583

Note by Turkey: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Source: Table A.25 Salary and IT cost ratios.

faced, in relative terms, declining overall budgets. This situation becomes starker when noting that most budget increases are linked to new responsibilities, programmes or the delivery of additional outputs and are not provided to cover increased operating costs.

The largest reported component of tax administration operating budgets is for the employment of staff, with salary alone accounting for an average 70% of operating budgets annually (see Figure 7.1).

Productivity and innovation

To meet the expectations of government and taxpayers for an efficient and effective tax system, tax administrations have long focused on business improvement and innovation. The Forum on Tax Administration (FTA) over the years has facilitated a number of studies aimed at assisting administrations to improve the cost-effectiveness of their operations. This publication, which is now in its fifteenth year, and other OECD publications like the "working smarter series" (OECD, 2012) produced between 2012 and 2014 have provided administrations with a range of strategies and frameworks, backed by examples, to support their efforts to reduce costs and increase the effectiveness of compliance and service activities.

This publication contains more than seventy examples of innovation from participating tax administrations. These include measures to increase the use of electronic services, delivery of new identity approaches, new uses of advanced analytics to manage risk and personalise service, as well as the introduction of new technologies, digital services and business transformations initiatives.

Box 7.1. **Tax administration economy and efficiency measures**

In ***Australia*** the Australian Tax Office (ATO) is transforming how their clients experience the tax and superannuation systems by providing contemporary and tailored services that make it easier for people to comply with their obligations. As part of this transformation the ATO is expanding its current Lean methodology and the "fail fast" principle to deploy a Scaled Agile Framework. The integration of this framework with agile methods is enabling the ATO to increase its delivery of analytics and behavioural insights to gain a greater understanding of payment behaviours. Applying these insights to better tailor services and interactions with clients improves the efficiency of the system by reducing the number of unnecessary interactions clients experience while engaging with the tax system.

Examples include: improving online services to enable individuals and sole traders to view, lodge and pay online; increasing access to online automated phone service payment plan facilities for a greater range of clients; continuing to automate preventative SMS payment reminders for those clients likely to pay late or not at all; adding a business performance check tool as part of the ATO app to allow business operators to quickly check the financial health of their business; and redesigning letters to include behavioural insight principles that encourage people to take timely action to manage their tax obligations and make potential consequences clearer for debt clients that choose not to engage with the ATO.

In ***Finland***, Tax Finland (TF) introduced Robotic Process Automation (RPA) technology which allows configuration of computer software to capture and interpret existing applications for: processing a transaction; manipulating data; triggering responses; and/or communicating with other digital systems. These applications or robots undertake defined activity in the same

Box 7.1. **Tax administration economy and efficiency measures** *(continued)*

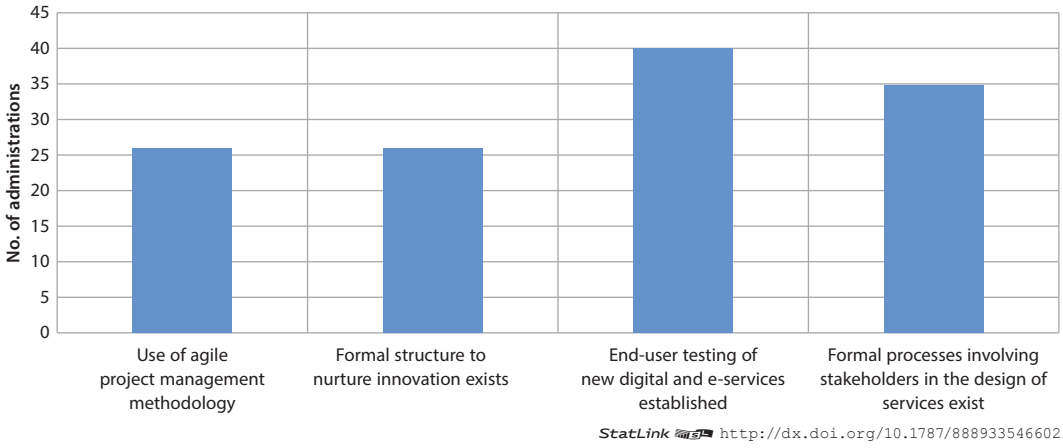
manner as a human. RPA is a feasible and cost-effective solution when the managed data is in a digital and structured format; the user is required to access multiple applications; and where tasks are repetitive, high volume and rule-based.

Following a feasibility study into the use of RPA which identified over 100 processes that could be options, TF selected 38 that it considered were best suited to test the RPA process. The use of RPA for these activities offered TF the potential to reduce the workload of these tasks by 52 person years of effort. Importantly it also offered the opportunity to improve the quality of this work and to reduce errors. TF have now completed the development of its first demo's robots using processes in tax audit work. The robot applications are being used to undertake data quality checks and to assemble data from different sources. The approach allows TF to also gather data from sources that are useful but are currently too time consuming for its tax auditors to collect. Based on the feasibility study results, TF will now undertake a proof-of-concept with a number of major processes utilising a range of different robot technologies.

Sources: Australia – Australian Tax Office; Finland – Tax Finland (2017).

Figure 7.2 summarises the approaches to innovation reported by tax administrations. Even though a significant number do not have formal structures in place to nurture innovation, a large numbers of administrations report engaging with customers and stakeholders in the design and testing phases of projects. A small majority report the use of agile project management methodologies, something which many acknowledge is helping to improve their speed of project delivery.

Figure 7.2. **Administration's approaches to innovation, 2015**



Source: Table A.44 Information technology solutions and innovation.

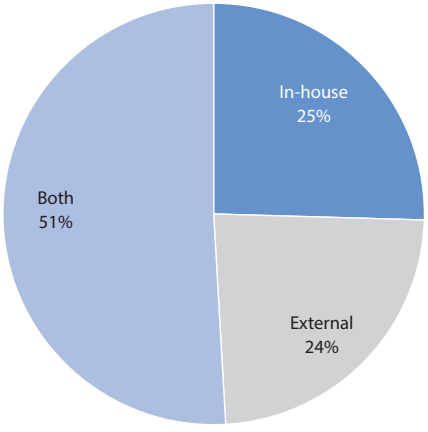
Information technology

Information technology (IT) expenditure is second only to salary cost in all administrations surveyed. Reported levels of IT expenditure do though vary enormously between administrations. For those administrations able to provide IT-related cost, more than 50% reported an annual operating IT budget exceeding 10% of the administration's total operating budget in 2015 (see Table A.25). While some of this variation can be explained by the different sourcing and business approaches, some cannot and point, at least on the surface, to investment levels that maybe too low to support the rapidly changing services administrations are increasingly being called upon to provide.

Most tax administrations still report in-house development of be-spoke IT solutions, although more are now reporting shared arrangements between themselves and external suppliers and developers (see Figure 7.3). The number of administrations reporting the use of commercial-of-the-shelf (COTS) solutions for their core infrastructure is less common (see Figure 7.4). While custom-built solutions by their nature tend to be regarded as "fit for purpose"; administrations are increasingly reporting being challenged by the cost and time-frames for making systems changes, especially in supporting the provision of contemporary services. Box 3.4 in Chapter 3 provides the experiences to date of Tax Finland as they replace their bespoke core legacy systems with a new COTS solution.

Interestingly in comparing the data provided by participating administrations for 2014 and 2015, two-thirds saw a decrease in their relative staff cost while two-thirds saw an increase in their relative IT expenditure (see Table A.25). This trend is likely to continue although staff costs may also increase in some areas as more specialist IT and data analytic skills, highly valued in the wider market, are sourced.

Figure 7.3. **Development of primary IT solutions, 2015**



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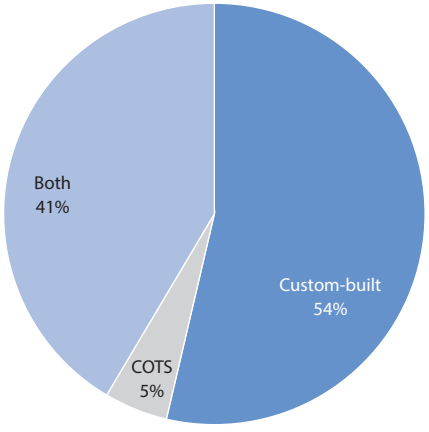
Source: A.44 Information technology solutions and innovation.

Figure 7.4. **IT from external/both: Product type, 2015**



StatLink http://dx.doi.org/10.1787/888933546640

Source: A.44 Information technology solutions and innovation.

Outsourcing

More tax administrations are reporting outsourcing arrangements to support business delivery and manage costs and improve efficiency. Using third parties to deliver services required for the conduct of tax administration operations is nothing new. Many administrations have previously reported arrangements for outsourcing IT, tax payment collection and processing and debt collection for some time.

Box 7.2. **Outsourcing debt collection, 2015**

In the **United Kingdom,** Her Majesty's Revenue and Customs (HMRC) has used private sector Debt Collection Agencies (DCAs) to supplement its in-house debt recovery capability since 2009. The panel of DCAs originally used under that arrangement was replaced in September 2015 by a government wide private sector debt recovery strategy. The Debt Market Integrator (DMI) is a Cabinet Office led project to create a single route to debt market services for government. HMRC initially intended to use two services: pre enforcement debt collection (telephone, letters, SMS and time to pay arrangements), and analytics (reviewing data & maintaining surveillance on debtors).

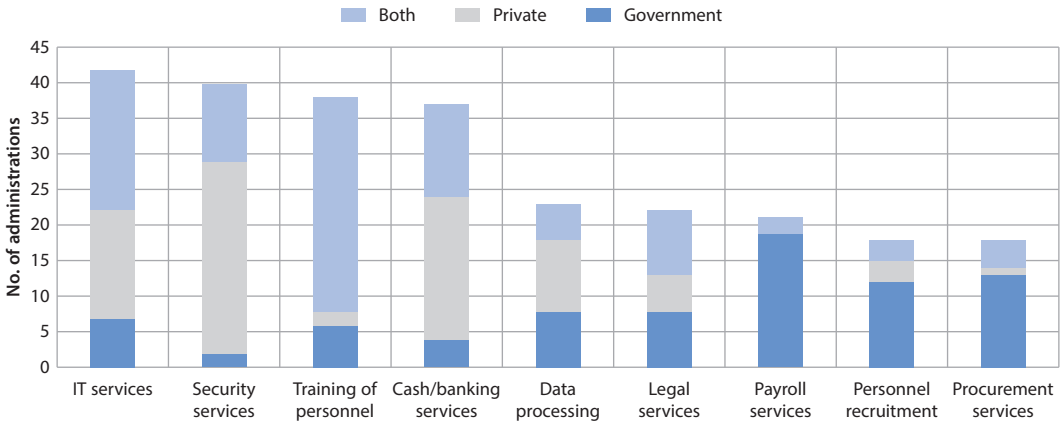
This has since been expanded and further services are being procured through this route. Shortly, HMRC will introduce personal visits to a customer's home address for some debts above a specific value. This is pre-enforcement activity, as set out above. The visits are designed to give customers who have not engaged with HMRC or DCAs previously, the opportunity for a face-to-face discussion about their debt, including the payment options available. DCAs employed through the DMI are subjected to rigorous checks to ensure they meet HMRC's standards of security and customer service. They are also open to robust audit and assurance checks by both HMRC and the DMI provider to ensure performance standards are maintained. This means that the private sector agencies operate under close supervision, according to the same rules and standards as HMRC itself. DCAs continue to be paid commission only on successful recoveries (payment by results), so no payment is made where there is no recovery.

Source: United Kingdom – HM Revenue and Customs (2017).

An emerging trend in the last five years has seen the establishment of "shared services" approaches across government, or arrangements between a tax administration and other government bodies. These moves to create centres of expertise reduce duplication and create economies of scale. They also allow governments to utilise excess capacity, lower total delivery costs, and increase resilience and flexibility, allowing agencies to more easily scale-up or down based on demand. In Canada, for example, all face-to-face contact is now managed by all-of-government sites, rather than tax specific sites. While in New Zealand, Inland Revenue provides accounting services to another government agency with work also underway to see how various government agencies can make better use of their individual call centre assets by working together to manage non-aligned call peak periods across agencies (OECD, 2015: page 193).

Figure 7.5 reports those common administrative functions or operations that are fully or partially outsourced. Not surprisingly, the majority of participating tax administrations have fully or partially outsourced IT services (76% of the administrations), security services (73%), training of personnel (69%) and cash/banking services (67%). There is a large gap between these four functions and the other commonly outsourced functions, with approximately one-third of administrations using third party providers for data processing, legal services and payroll services, recruitment of personnel and procurement services. While the private sector is often the preferred option for security and cash/banking services, other parts of the government are typically used for payroll services, personnel recruitment and procurement services. Further information on outsourced functions appears in Tables A.42 and A.43.

Figure 7.5. **Most common administrative functions/operations fully or partially outsourced, 2015**



StatLink http://dx.doi.org/10.1787/888933546659

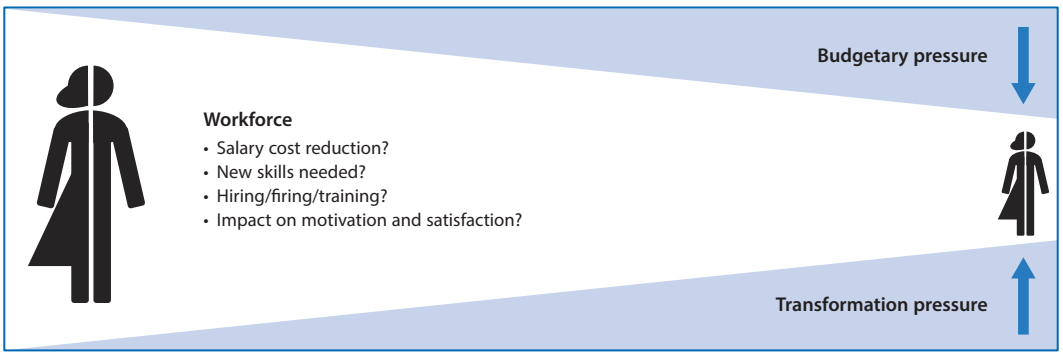
Source: Tables A.42 and A.43 Outsourcing of tax administration functions.

Workforce

The administrations included in this report employ approximately two million staff (see Table A.53) making the effective and efficient management of workforce critical to good tax administration. Having a competent, professional, productive and adaptable workforce is at the heart of most administrations human resource (HR) planning. With staff costs averaging 70% of operating budgets, any budget change invariably impacts on staff numbers. With many administrations reporting major business change, tax workforces are subject to further reduction.

The "double pressure" created from reduced budgets and technology change is a significant management issue for most administrations. The challenge is compounded for some which, due to contract restrictions or government mandates, find it difficult to strategically down-size their operations other than through the non-replacement of staff essentially leaving of their own accord.

Figure 7.6. **Double pressure on workforce**

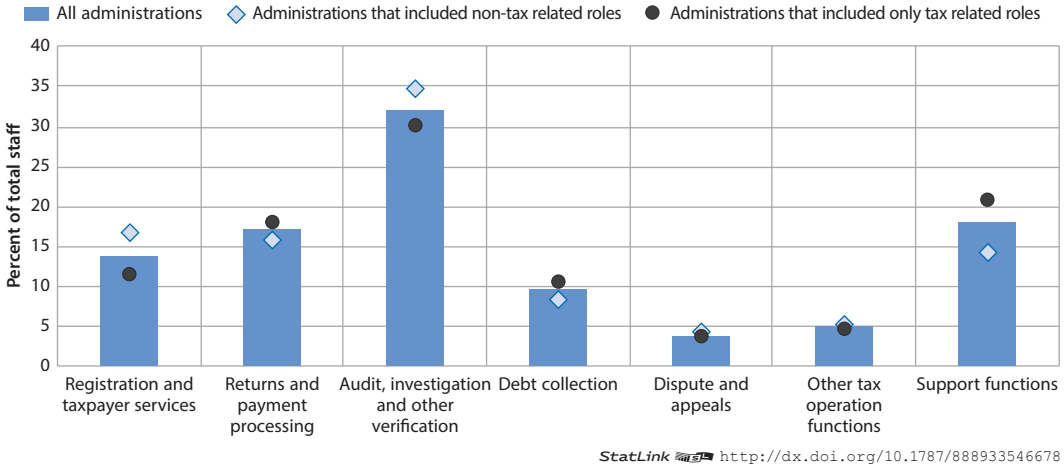


Further, with administrations needing to acquire new competencies or specialist capabilities different in nature to those they currently employ, there is some doubt as to whether some of the major practices used to date in managing change will be as effective going forward.

Staff usage by function

Figure 7.7 provides average allocation of staff resources across seven functional groupings used to categorise tax administration operations. Tax administrations were asked to provide the break-down for staff working on tax related roles only. However some administrations which have, a number of significant roles that are highly integrated, were only able to provide the break-down for all their functions including those which are not tax related. Figure 7.7 accounts for this by displaying the overall averages for both groups. Interestingly the differences between the two groups do not appear significant. While the detailed data for each administration in Table A.20 shows a number of outliers, generally the "Audit, investigation and other verification" function is the most resource intensive, employing on average one-third of tax operations staff.

Figure 7.7. **Staff usage by function, 2015**



Note: Excluding administrations that were unable to provide the break-down for all functions.

Source: Table A.20 Staff usage by functions of the administration in percent of the total tax administration.

Past editions of this series have reported audit staff numbers at a similar level for the last decade. With the significant changes that have occurred to date and that are on-going in most administrations, it is interesting that the percentage of staff engaged in audit and verification work has remained so static. This is all the more surprising given changes to compliances approaches. This includes the adoption of more personalised and tailored interventions, the move to monitor and intervene in compliance closer to "real-time" and greater use of third party data and matching, particularly to pre-fill return information. It does raise the question of when new and innovative practices in tax auditing will allow administrations to change their approach to audit. This issue will be addressed as part of OECD report *Audit in the 21st century* (OECD, forthcoming).

Staff metrics

The survey also gathered key data concerning the age profiles, length of service, gender distribution and educational qualifications of permanent staff of the total administration (i.e. including both tax and customs):[1] see Tables A.22 to A.24 and Tables A.53 to A.58.

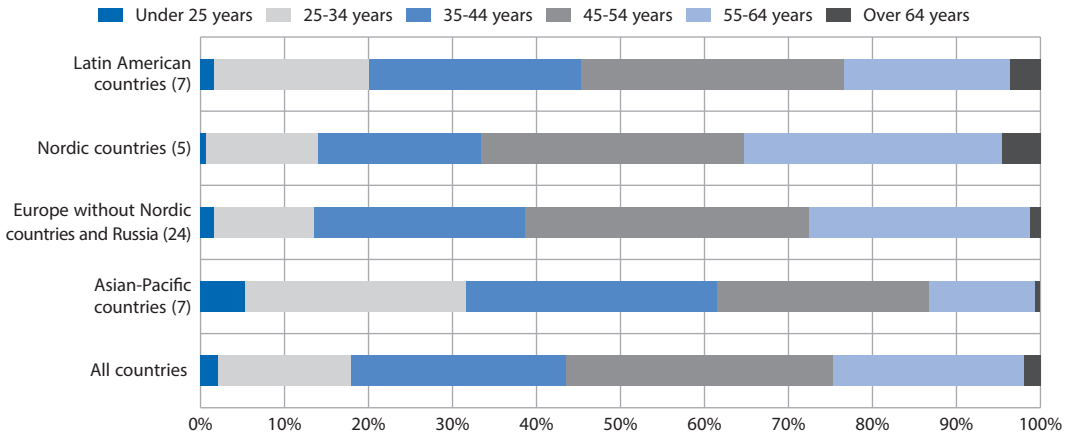
Age profiles

Drawing on the data provided, there are significant variations between the age profiles of tax administration staff when viewed across different geographical groupings. This may be the result of a complex mix of cultural, economic, and sociological factors (e.g. economic maturity, recruitment, remuneration, and retirement policies).

Figure 7.8 illustrates that staff are younger in Asian-Pacific administrations where, on average, more than 60% are below 45 years of age, whereas elsewhere this percentage is less than 50%. This is particularly the case in Nordic countries where this percentage drops to one third of staff. When looking at the detailed table in the annex (see Table A.22) a number of results standout, for example in Indonesia and Malaysia three-quarters of staff are below 45 years of age whereas for Spain the figure is less than 20%. Conversely, there are a small number of administrations where a significant percentage of staff is older, for example, in the Nordic countries where, on average, 35% of staff is 54 or older, 10 percentage points above the average of 25%. In Iceland, Italy and the Netherlands, more than 40% of staff is 54 or older.

Figure 7.8. **Age profiles of tax administration staff, 2015**

Percentage of staff by age bands for selected regional groupings



StatLink http://dx.doi.org/10.1787/888933546697

Note: Latin American countries: Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico and Peru; Nordic countries: Denmark, Finland, Iceland, Norway and Sweden; Europe without Nordic countries and Russia: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Portugal, Romania, Slovak Republic, Slovenia, Spain, Switzerland and United Kingdom; Asian-Pacific countries: Australia, Hong Kong (China), Indonesia, Korea, Malaysia, New Zealand and Singapore

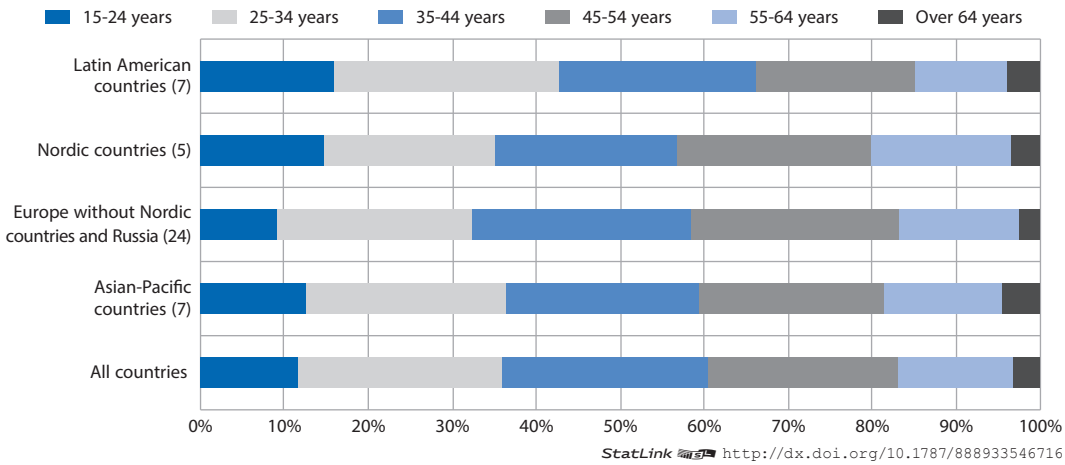
Source: Table A.22 Staff metrics – Age distribution; Calculations by the OECD Secretariat.

When comparing the age profiles of tax administration staff with the age profile of the relevant jurisdictions' general labour force, it should be noted that throughout all regional groupings, except Asia-Pacific, the work force 45 years and above is over-represented in administrations (see Figure 7.9). This outcome may well reflect how past administration

down-sizing has occurred, where staff leaving or retiring are not replaced until new full-time equivalent (FTE) numbers are achieved (natural attrition).

Figure 7.9. **Age profiles of general labour force, 2015**

Percentage of general labour force by age bands for selected regional groupings



Note: Latin American countries: Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico and Peru; Nordic countries: Denmark, Finland, Iceland, Norway and Sweden; Europe without Nordic countries and Russia: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Portugal, Romania, Slovak Republic, Slovenia, Spain, Switzerland and United Kingdom; Asian-Pacific countries: Australia, Hong Kong (China), Indonesia, Korea, Malaysia, New Zealand and Singapore

Source: International Labour Organisation (ILO) – Labour force by sex and age, ILO modelled estimates, July 2015, www.ilo.org/ilostat; Calculations by the OECD Secretariat.

Regardless of how this age profile has come about, it is clear now that the average age of staff in many administrations is at a level where it is already or soon will create challenges to manage. To further complicate this challenge, most administrations are facing on-going organisational change with a need to acquire the new skills to operate a heavily data driven modern tax administration while retaining key intellectual knowledge. The presence of these issues may account for why 70% of tax administrations feature age and other demographic characteristics of staff in their current list of HR management approaches (see Table A.62).

Length of service

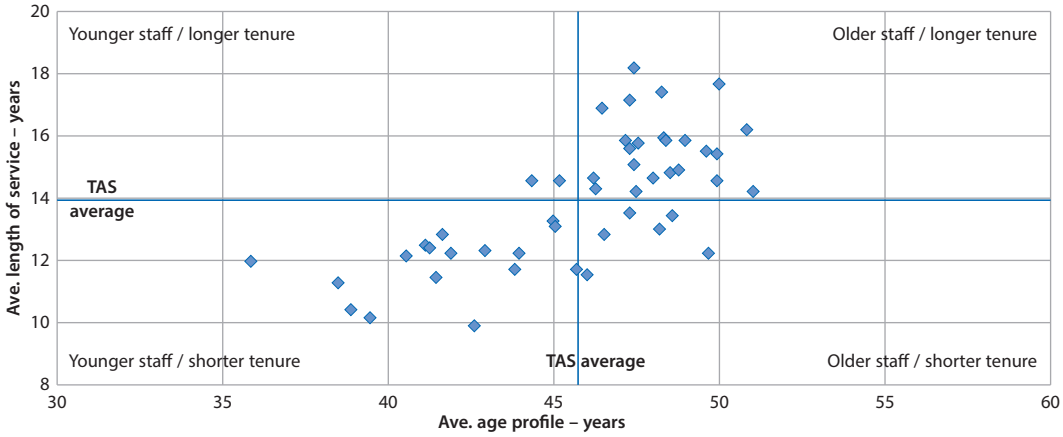
The difference in age profiles is also largely reflected in the length of service of tax administration staff. Figure 7.10 indicates that a significant number of administrations will not only face a large number of staff retiring over the next years, but that many of these staff will be very experienced, thus raising further issues about retention of key intellectual knowledge. The Figure also indicates that a small number of administrations have an above-average workforce age, while the length of service is lower-than-average (see Figure 7.10, Quadrant "Older staff/shorter tenure").

Gender distribution

In light of the strong public interest in gender equality, administrations were invited to break-down total staff and executive staff[2] by gender. As can be seen in Figure 7.11, while many administrations are close to the proportional line, typically female staff remains

proportionally underrepresented in executive positions and significantly underrepresented (see oval) in a number of administrations.

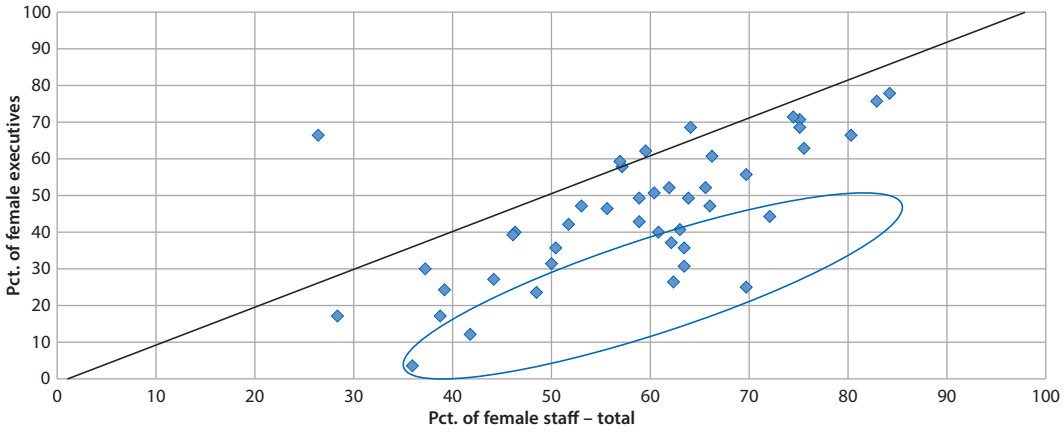
Figure 7.10. **Average length of service vs. average age profile, 2015**



StatLink http://dx.doi.org/10.1787/888933546735

Source: Tables A.22 Staff metrics – Age distribution and A.23 Staff metrics – Length of service; Calculations by the OECD Secretariat.

Figure 7.11. **Percentage of female staff – total female staff vs. female executives, 2015**



StatLink http://dx.doi.org/10.1787/888933546754

Source: Table A.24 Staff metrics – Gender distribution and academic qualification.

Staff attrition

Staff attrition, also called staff turnover, refers to the rate at which employees leave an organisation during a defined period (normally a year). High attrition rates may result from a variety of factors, such as downsizing policies and/or lack of recruitment, demographics or staff dissatisfaction. An organisation's attrition rate should be considered together with other measures, such as the hire rate, which looks at the number of staff recruited during a defined period.

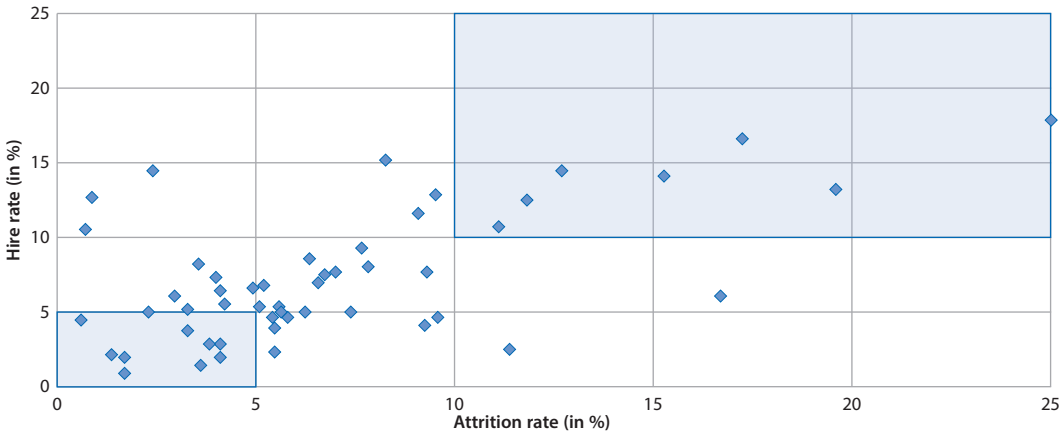
While a high attrition rate combined with a low hire rate is usually associated with a general downsizing policy – and may therefore be accepted – administrations should be concerned where both rates are high. Recruitment is costly, not only the recruitment process itself but also the cost and time for training and supporting new staff members, and the

significant down time before new staff are fully operational or able to perform at the highest level. Having high attritions rates are generally to be avoided.

Having attrition rates that are too low may also not be ideal either. Where an organisation is growing a low attrition rate may be accepted. However, in situations where both the attrition rate and the hire rate are low, an organisation may not have the ability to recruit new skills as all positions are filled. This could be an issue particularly, for administrations undergoing transformation and are, therefore, in need of staff with skills that are different from what is currently available within the administration.

While what is considered a "healthy" attrition rate differs between industry sectors or jurisdictions, and the general economic conditions also influence this judgement, average attrition rates for Tax Administration Series (TAS) participating administrations of between 7.0% in 2014 and 6.9% in 2015 and hire rates of 6.4% in 2014 and 7.3% in 2015 (see Table A.21) would seem to present a reasonable range for tax administrations of between 5% and 10%. When looking at the specific administration data, it becomes apparent however, that "attrition and hire" rates cover a very broad range. Figure 7.12 shows the relationship between tax administration attrition and hire rates. It illustrates that there are a number of administrations with attrition *and* hire rates well above 10% (upper-right box), while others show very low attrition *and* hire rates (lower-left box).

Figure 7.12. **Attrition and hire rates, 2015**



StatLink http://dx.doi.org/10.1787/888933546773

Note: Attrition rate = number of staff departures/average staffing level. Hire rate = number of staff recruitments/average staffing levels. The average staffing level equals opening staff numbers + end-of-year staff numbers/2.

Source: Table A.21 FTEs in relation to citizens and labour force, and attrition and hire rates.

Human resource management

Given the challenges addressed earlier in this chapter, particularly in obtaining new capabilities while dealing with an aging and shrinking workforce, success will often come down to the way staff are engaged, managed and led. With 84% of the tax administrations surveyed reporting the existence of a formal HR strategy that sets out their key plans and objectives in management of its people, there is considerable benefit for those that have not already established this practice to do so, and incorporate HR approaches adopted by the majority of tax administrations.

Table 7.1. **Human resource management approaches, 2015**

Percent of administrations

Human resource management approach includes…						
HR strategy	Specific training plan	Specific recruitment plan	Demographic characteristics	Policies for flexible working arrangements	Specific leadership and talent management programmes	Time reporting system
84%	95%	73%	69%	73%	76%	78%

Source: Table A.62 Human resource management.

For those that have an HR strategy, the importance of preparing existing staff for the challenges ahead has been recognised. Almost all administrations have a plan that provides for the upskilling of existing staff, and 3 out of 4 have specific leadership and talent management programmes. Interestingly though, administrations do not put similar emphasis on recruitment even though high quality recruitment processes allow the acquisition of critical skills and new talent to be brought in.

Box 7.3. **Succession planning and leadership programmes**

In ***Malaysia***, to ensure its future sustainability and competitiveness, in 2011 the Inland Revenue Board (IRBM) commenced the CEO Incubator Programme (CIP). Based on the principle that "future leaders are made today", the programme is a key tool in IRBMs succession planning policy for talent search, classification and continuous development programmes. The CIP starts with the Search Committee identifying and selecting high performing talent. Individuals selected undertake personality profile analysis before being invited to join the programme.

CIP modules and syllabus are developed in collaboration with local universities and are specifically tailored to IRBM requirements around three main competencies: global focus and strategic thinking; leading and managing change; and effective stakeholder engagement. The programme which is divided across three levels: Talent Development; Senior Development; and Advanced Development focuses on accelerating leadership skills through competency based courses, rotational job experiences, coaching and mentoring and value added courses. Exposure to comprehensive work experience and continuous transfer of knowledge both locally and internationally is also provided.

Successful talent will fill posts identified as either: key leadership posts (5 posts); key critical posts (28 posts) and critical posts (230 posts) based on vacancies IRBM's development programmes will indicate readiness level of each person to fill the vacancy available, with candidates evaluated through performance monitoring and 360˚ feedback. Since its inception most of IRBMs key positions have now been made via the CIP process.

Source: Malaysia – Inland Revenue Board of Malaysia (2017).

Human resource autonomy

As set-out in Chapter 3 on institutional arrangements, tax administrations require sufficient autonomy and power in relation to recruitment, development and remuneration to ensure the effective and efficient operation of the tax system. While the majority of administrations report having high degrees of autonomy for all HR related matters, a portion of administrations only have autonomy in some areas, and some have no

autonomy at all. Further, as mentioned in previous editions of the TAS, even where tax administrations have autonomy, there are often regulatory or budgetary constraints that may inhibit the effective use of these powers. Accordingly, there is considerable variation in the extent of the autonomy tax administrations enjoy in HR matters (OECD, 2015: 149).

As can be seen in Table 7.2, the degree of autonomy remains largely consistent across the different areas, with the exception of "Placement of staff within a salary range" which is significantly below the ratings of other HR powers administrations typically have. The inability of more than a third of the administrations to set remuneration for existing or new staff could be a concern when hiring new people or trying to retain existing staff in areas where administrations must increasingly compete with the private sector. This may be a particular concern in the areas of digital technologies, information management, advanced analytics, behavioural science and critical IT capabilities.

Table 7.2. **Human resource autonomy, 2015**

	Percent of administrations: Degree of autonomy concerning…						
Degree of autonomy	Determination of work requirements	Appointment of new staff	Promotion of existing staff	Skills and qualifications required for appointment of promotion	Determination whether work is carried out by permanent staff or contractually	Placement of staff within a salary range	Termination of employment
Autonomy for all staff	80%	76%	76%	73%	69%	55%	69%
Autonomy for some staff	16%	16%	18%	22%	16%	11%	20%
No autonomy	4%	8%	6%	5%	15%	34%	11%

Source: Table A.59 Human resource autonomy.

Staff satisfaction and performance management

Effective performance management is an essential ingredient in any successful business. Such systems provide staff with an understanding of expectations for their work and how they can personally contribute to the success of the organisation they are working for. The importance of relating individual objectives and behaviours to the overall objectives and values of the administration is essential. Further, performance management systems allow organisations to identify gaps in the skillset of staff members and to develop specific approaches to address this. Almost all tax administrations report that they have performance management systems in place, and most of these include specific objectives for each staff member (see Table 7.3). However, while individual development plans are important, one-quarter of the administrations do not include them in their performance management system.

Conducting regular surveys to gather employee perceptions of the workplace and HR management to better inform decision making in these areas is of particular importance in times of change. Measuring staff engagement, satisfaction and motivation, sharing the results of surveys of these areas with staff, and involving them in the selection, design and implementation of changes has proven a successful formula to increase productivity in a number of tax administrations. Most administrations report conducting periodic staff satisfaction surveys, although the frequency of surveys varies (see Table 7.3). Almost all of those tax administrations who survey staff also share survey results with staff and most also consult with staff when considering responses to survey findings.

Table 7.3. **Staff satisfaction and performance management, 2015**

Percent of administrations

Staff satisfaction, engagement and motivation				Performance management			
	If yes,				If yes,		
Periodic staff survey	Assessment of staff engagement	Results shared with staff	Staff engaged when responding to assessment	System in place	Includes individual development plans	Includes specific objectives	Evaluation at least annually
76%	86%	90%	79%	89%	73%	86%	96%

Source: Table A.60 Staff satisfaction and performance management.

Remuneration

Over three-quarters of tax administrations report that staff remuneration levels are tied directly or broadly to wider public sector pay scales, while almost one-quarter report that they have their own unique pay system (see Table 7.4). Further, more than two-thirds reported that remuneration can be linked to performance. For those that can link performance to pay and reward, good performance can typically result in increased remuneration (92%) while poor performance will less often result in reduced salary (45%) or the denial of annual increments (63%). There are a small number of administrations that report being unable to reward good performance.

Table 7.4. **Remuneration, 2015**

Percent of administrations

Pay scales				If yes,		
Tied directly to normal civil/ public sector pay scales	Tied broadly to normal civil/ public sector pay scales but there is some flexibility	Unique	Performance linked to pay and reward	Good performance can result in increased remuneration	Poor performance can result in reduced salary	Poor performance can result in denial of annual increment
47%	29%	24%	69%	92%	45%	63%

Source: Table A.61 Remuneration.

The nature of the reward mechanisms vary greatly and include individual or collective salary increases, flexibility to adjust salary scales, promotions, individual or collective bonuses, and non-monetary rewards.[3]

Capability change

The changes tax administrations are managing at present, whether technological, international, policy or budget driven are significant. The level of change prompted one tax Commissioner recently to state that managing the technology change was the easy bit. The thing that was keeping him awake at night was how to create the new culture taxpayers expected, and how to transition staff through this change.

All tax administrations report a strong focus on strengthening their ability to manage and implement change. Further, they are investing in new capabilities to support their ability to implement change more rapidly and to support the development and adoption of new services and products, particularly involving digital technology. Box 7.4 summarises the approaches taken by two administrations to managing future skills acquisition.

Box 7.4. **Capability change**

In ***Canada*** the Canada Revenue Agency (CRA) employs more than 40 000 employees, relying on diverse skill sets to effectively execute its mandate. Recognising the need to keep pace with technological change, address emerging challenges, and seize new opportunities, the CRA anticipates and identifies the necessary skill sets required to meet these challenges through the Agency Workforce Plan. The latest Plan is calibrated to anticipate the shift in the CRA's work from transaction-based to knowledge-based activities, and to account for the upcoming challenges associated with an aging workforce. While the Agency Workforce Plan identifies and articulates the Agency's recruitment plan over a three year planning period, the long-term planning horizon extends beyond the medium-term to 2025 and 2030. This longer-term outlook provides the necessary context in which medium-term plans are developed.

The CRA uses a consultative process to identifying future skill sets that begins at the programme level, as they are uniquely positioned to anticipate and identify future challenges and the requisite skill sets needed within their functional areas. This process takes into consideration a review of the current workforce, a "skills gap analysis", and an external environmental scan to better calibrate future skill sets with anticipated external developments (e.g. economic, business, technological) and to better target, recruit, and retain skilled individuals in a competitive labour market.

Recognising the value of bringing a multi-disciplinary approach to bear on complex tax issues, the Agency has identified individuals with knowledge in accounting, economics (including behavioural economics), intelligence, data analytics, and advanced technology as highly valued assets to the organisation. These skill sets will position the Agency to better hire, develop and retain the right talent, understand taxpayer behaviour, enhance voluntary compliance, and to develop approaches to address challenges presented by new forms of economic activity and technological developments, such as digital currencies.

In ***Singapore,*** the Inland Revenue Authority of Singapore (IRAS) drew on new opportunities to further transform IRAS by refocusing and recalibrating its HR capabilities, strategies and action plans so as to better meet the rising expectations of a digitally savvy population for high quality service and swift policy implementation. The following four areas have been identified as critical to professionalise IRAS' HR team in support of a future-ready workforce in IRAS: Strategic workforce planning (capability to better identify our core and future capabilities, and redesign our structure, processes, and training plans); HR analytics (using data intelligently, to gain deeper insights and make better decisions); Design Thinking (to anticipate, co-create and customise solutions to meet staff needs); and Digitalisation (to design and deliver convenient digital services to staff). Some of these capabilities are also applicable to key job families in IRAS.

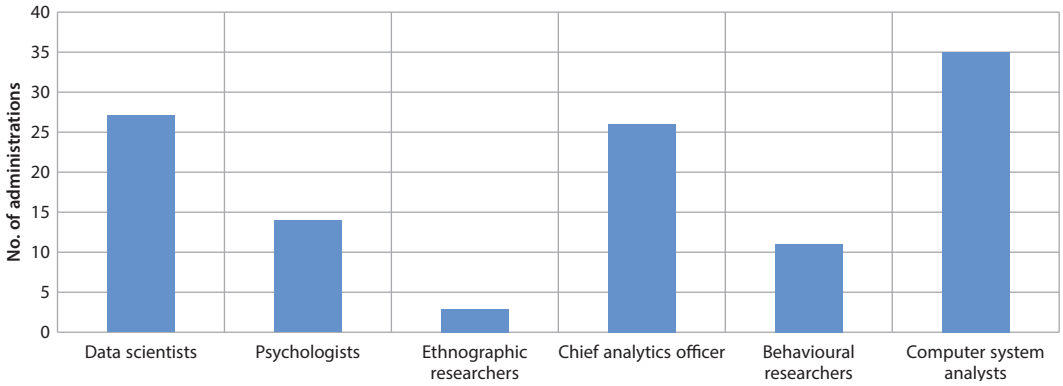
Sources: Canada – Canada Revenue Agency; Singapore – Inland Revenue Authority of Singapore (2017).

Eighty-five percent of the participating administrations have indicated that they assess current and future capability needs. However, only two-thirds of them have a formal plan to address gaps or formal targets to increase capability (see Table A.63). Figure 7.13 shows that a large number of administrations have commenced lifting their IT and analytics capabilities and now employ data scientists, chief analytics officers and system analysts. This finding is not surprising in a world that is becoming more focused on using data. There is likely an opportunity, however, for other administrations that are not hiring these capabilities to reconsider the importance of such positions to enabling modern tax administration.

While recruitment is one option to obtain new skills, tax administrations still report a strong focus on growing the capability of their existing staff through training. The need to increase capability internally is particularly important where employment conditions,

contractual requirements and remuneration levels, make it difficult to hire skilled staff, particularly, when competing with private sector for skills.

Figure 7.13. **Number of administrations having specialised positions, 2015**



StatLink http://dx.doi.org/10.1787/888933546792

Source: Table A.63 Future capability needs.

Most tax administrations reported they have engaged in arrangements with educational institutions to provide accredited training on tax technical subjects (71%) and/or non-tax technical subjects (58%). Further, some have engaged with large corporate taxpayers/traders to develop the commercial awareness of their technical staff (22%) – see Table A.63. The previously reported approach of a number of OECD jurisdictions of professionalising the public sector through increased access to university-accredited training for public service professions is still evident.

Once a major recipient of technical assistance from international organisations and other tax administrations, China's tax administration (SAT) is now playing a major role in the delivery of tax administration capacity building. Box 7.5 describes its role over the last three years.

Box 7.5. **Delivery of tax administration capacity building**

In **China**, SAT in co-operation with Ministry of Commerce, has organised training programmes for tax officials from Asian and African developing countries. In 2016, regular training events have been jointly organised for more than 200 tax officials from 54 developing countries. Together with the OECD, SAT has established the 5th OECD Multilateral Training Centre in Yangzhou, China, the only centre to date established in a non-OECD member jurisdiction. The centre, which was opened in 2015, has provided six training programmes for 80 tax officials from 20 developing countries by the end of 2016, covering topics focusing on tax treaty issues, base erosion and profit shifting, international tax avoidance and value added tax.

SAT has co-chaired with the Canada Revenue Agency the FTA work on capacity building that culminated in the delivery of the OECD report: *Tax Administration and Capacity Building – a Collective Challenge* at the FTA Plenary in Beijing, China in May 2016. The contribution of SAT has greatly facilitated the work of the Capacity Building programme with its particular dual status as both recipient and provider of technical assistance in tax administration over three decades.

Source: China – State Administration of Taxation (2017).

Notes

1. In the section on *Staff metrics*, tax administration includes both tax and customs staff of the administration.
2. As the survey did not provide a definition for "executive staff "administrations used their own definitions.
3. See examples included in Notes to Table 4.3. in the Tax Administration Series 2013 (OECD, 2013: 167).

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Part II

Topical issues in tax administration

The chapters in Part II should not be reported as representing the official views of the OECD or of its member countries. The opinions expressed and arguments employed are those of the author(s).

Chapter 8

Advanced analytics

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"Advanced analytics" encompasses a set of techniques to uncover insights from data to inform decisions and to test policies and interventions. From its initial use in the selection of cases for audit, the scope of advanced analytics applications has broadened significantly, as has the amount of available data. Tax administrations now use analytic techniques to inform a wide range of actions, including optimising debt-management processes, improving filing rates and quality, delivering better taxpayer service, and understanding the wider impact of policy changes. Moreover, many of these applications now support real-time (or near real-time) operational processes.

This widening of the field has given rise to a range of new organisational and technical challenges, from establishing appropriate governance and project-management structures, to building representative datasets and selecting suitable modelling techniques.

This chapter summarises how Forum on Tax Administration (FTA) administrations are using advanced analytics today and outlines the principal management and governance challenges they face.

What is advanced analytics?

Advanced analytics is the process of applying statistical and machine-learning techniques to uncover insights from data. The aim is to better inform decisions about the deployment of resources and the design of interventions and policies. Most advanced analytics projects fall into one of two categories:

- ***Predictive analytics:*** This aims to anticipate likely problems by looking for patterns in historical data. For example, it can help to identify what aspects of a tax return are most likely to be inaccurate, or find significant anomalies in a particular tax return compared to other returns from similar taxpayers. This allows administrations to consider preventive measures (for example rephrasing a question, producing better guidance or pre-filling with third-party data) and helps in the selection of individual cases for audit.
- ***Prescriptive analytics:*** The techniques used in prescriptive analytics aim to uncover causal relationships, that is whether particular actions caused or just coincided with a change in taxpayer behaviour. For example, does a particular style or type of communication make a difference to on-time filing or does it make no significant difference? Prescriptive analytics thus allows for easier testing and refining of different (and often costly) compliance interventions.

It is worth noting that prediction based on previous examples or revealed behaviours as well as causal inference are ordinary, everyday tasks carried out by administrators and policy makers using their experience and judgement. The use of advanced analytics techniques simply carries out these tasks with more reliance on data rather than human judgement (which can show bias and be highly subjective). As the size and breadth of data sets increases, this gives tax administrations the opportunity to uncover a greater range of insights which might not otherwise be apparent. This can be the case for example where anomalies in a pattern may not be very significant at an individual level, but may be very large overall; or where there are long-held and ingrained assumptions about causality driving decisions which turn out not to be supported by the data.

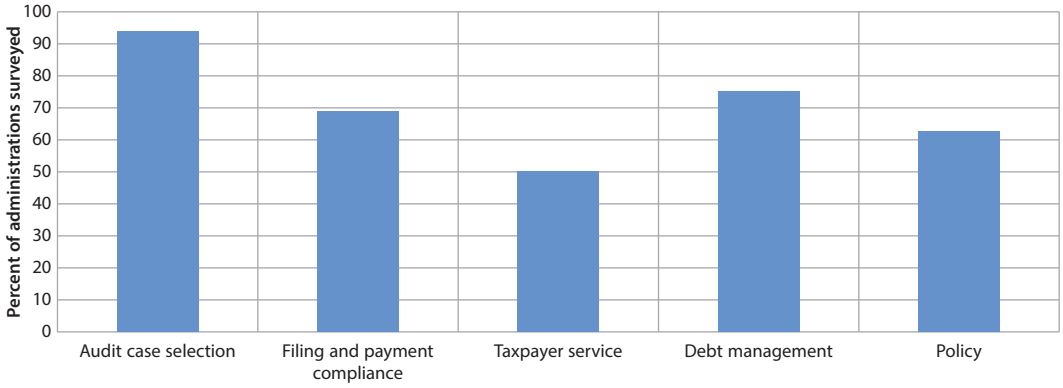
Application of advanced analytics

A key factor in determining the success of an advanced analytics project is the care taken to understand the nature both of the business problem at hand, and of the data available to address that problem. This assessment will determine the right analytical approach to be taken – whether to use supervised or unsupervised learning techniques, prescriptive modelling approaches, unstructured data, explanatory modelling, or other approaches. Administrations that take proper care over this decision will greatly improve their prospects of developing useful insights.

From its initial use by tax administrations in the selection of cases for audit, the scope of advanced analytics applications has broadened considerably. Analytic techniques are now used across all tax-administration functions and activities, with many administrations now using them to support real-time or near real-time processes.

The following figure provides an overview of how 16 FTA administrations have allocated their advanced analytics efforts across different operational areas.

Figure 8.1. **Use of advanced analytics**



StatLink http://dx.doi.org/10.1787/888933546811

Source: OECD (2016), *Advanced Analytics for Better Tax Administration: Putting Data to Work*, p. 20, Table 2.1, http://dx.doi.org/10.1787/9789264256453-en.

Audit case selection

For most tax administrations, the first use of advanced analytics was in assisting with the selection of cases for audit or verification. Standard advanced analytics techniques and approaches are well suited to this type of activity as they enable administrations to learn directly from the outcomes of past interventions. For example analysis of previous audits which have resulted in large adjustments might show that there was a pattern of particularly high or low values in some components of the tax return. This might then provide a basis for future audit selection (with further testing to check the validity of those insights). The set of techniques which allow administrations to identify such characteristics fall under the heading of supervised learning.

Where administrations have used such techniques with a broadly representative sample of taxpayers, this has proved to be a highly effective approach. However, where the sample used does not adequately reflect the wider population, supervised learning techniques may give unreliable results since the model developed can only learn about a particular segment of cases. In such scenarios, administrations have begun to apply techniques that identify anomalous taxpayers or returns by comparing outcomes across relevant peer groups (as opposed to learning from past interventions). While these models will not always target risk accurately (since some anomalies may be perfectly innocent), they are capable of uncovering wholly new insights into non-compliance. Such approaches generally fall into the category of unsupervised learning.

Filing & payment compliance and debt management

While not used as widely as in audit case selection, advanced analytics techniques are increasingly deployed to improve filing and payment compliance and the settlement of arrears. The analytical approaches used in these areas tend to be quite different from those used in pure case selection. In these, the task is not to predict how a taxpayer will behave in the absence of intervention, but how they might behave in response to a particular intervention. To tackle this problem administrations are beginning to build models that learn from the outcomes of controlled experiments in order to identify which cases should be subject to intervention, and which specific interventions should be carried out. This category of analysis usually referred to as "prescriptive analytics".

Box 8.1. **Data mining models for non-filer programmes**

In ***Canada*** the Canada Revenue Agency (CRA) continues to refine its predictive models developed to assist in managing its non-filer programmes, which undertake a range of actions to obtain overdue returns. The models improve selection and prioritisation of cases, allow better workload management and improve business information and reporting. In its first year in operation, one of the non-filer models was responsible for the assessment of CAD 127.6 million of additional taxes. The CRA has also developed several other models to improve programme effectiveness and enhance taxpayer services by predicting self-resolution (i.e. which taxpayers will file without intervention) and responsiveness to a specific compliance action.

In addition to predictive techniques, CRA applies *prescriptive analytics* (methods which focus on finding the best course of action for a given situation) to support improved strategic and operational programme delivery. Prescriptive analytics is used to enrich the CRA's understanding of the non-filer population, optimise operational processes, and direct the application of compliance activities, allowing for more fact-based decisions. Complementing the use of predictive models, the non-filer programme is expanding its use of behavioural economics through nudge experiments to influence taxpayer compliance behaviour. "Nudges" are carefully designed interventions intended to steer people towards better decisions by altering the way that different choices are presented.

Source: OECD (2016), *Advanced Analytics for Better Tax Administration: Putting Data to Work*, p. 25, Box 2.1, http://dx.doi.org/10.1787/9789264256453-en.

Taxpayer service

The use of pro-active messaging, calling, and other interventions in anticipation of potential non-compliance has paved the way for administrations to look more closely at how advanced analytics can improve service delivery for taxpayers. Such uses are set to become of greater importance to tax administrations in the coming years as compliance and verification moves upstream. Wider use of "unstructured" data (e.g. customer emails, call transcripts, etc.) can help significantly in these efforts. This can uncover areas of common confusion or lack of knowledge, for example of filing deadlines or of how the tax rules work in particular areas. This then allows tax administrations to consider and test different interventions with different audiences in mind, for example proactive contacts with particular groups of taxpayers, different types of media (which may be appropriate to particular age groups) or the production of guidance among other things. Using advanced analytics in this way can also help in the design of machine rules, for example in telephone menus, or identifying the most effective way to present information on web pages.

Box 8.2. **Text mining of inbound emails**

In ***Singapore***, the Inland Revenue Authority of Singapore (IRAS) in 2014 began using text-mining techniques to analyse the content of emails received from taxpayers. The objectives of this project were to identify the nature of taxpayer inquiries and highlight important changes and trends that might require response. Text data from taxpayer correspondence was extracted, cleansed, and structured to derive patterns and insights. Close collaboration between the analysts and business users during the course of the project enabled findings to be contextualised and thereby improved the text mining process.

Box 8.2. **Text mining of inbound emails** *(continued)*

As a result, the IRAS was able to uncover insights, otherwise locked in textual data, on issues pertinent to taxpayers, for example in one project, text-mining helped to identify the common queries taxpayers had after an existing tax policy was changed. Based on this analysis, IRAS was able to launch timely and targeted campaigns, provide more guidance on its website, and proactively initiate updates to taxpayers impacted by the changes. These approaches reduced the need for taxpayers to contact the IRAS.

Ongoing tracking of the nature of email enquiries combined with the IRAS' existing analysis of structured data has helped the IRAS to identify trends on particular topics and to pre-empt or reduce contacts, thereby improving service delivery for taxpayers. Text mining has now replaced the manual tracking of email enquiries, which has saved time and improved staff productivity. It has also enabled the IRAS to track the nature of enquiries more objectively, avoiding the inconsistencies of interpretation typical of manual tracking.

Source: Singapore – Inland Revenue Authority of Singapore (2017).

Policy evaluation

Although most analytics work is carried out to support operational activity and decision-making, tax administrations are increasingly using analytics to assist in decision-making in relation to strategy and policy. The most common analytic applications in this field aim to evaluate or anticipate the impact of changes in tax policy. In general, the techniques used in this area come under the heading of explanatory modelling, since the main objective is to understand and explain the relationship between specific variables, rather than to predict the overall outcome. While it is often difficult to gauge the accuracy of such models, the approach can be effective where used to test a clearly articulated theory of behaviour.

An example of the use advanced analytics for policy assessment is China's creation of a general-equilibrium model to measure the economic and social impact of the introduction of a value added tax (VAT) in 2012. This model played a key role in the policy reform process by enabling the Chinese tax administration to trace the effects of the VAT changes on tax revenue, industry structure, social welfare, and a wide variety of other economic indicators.

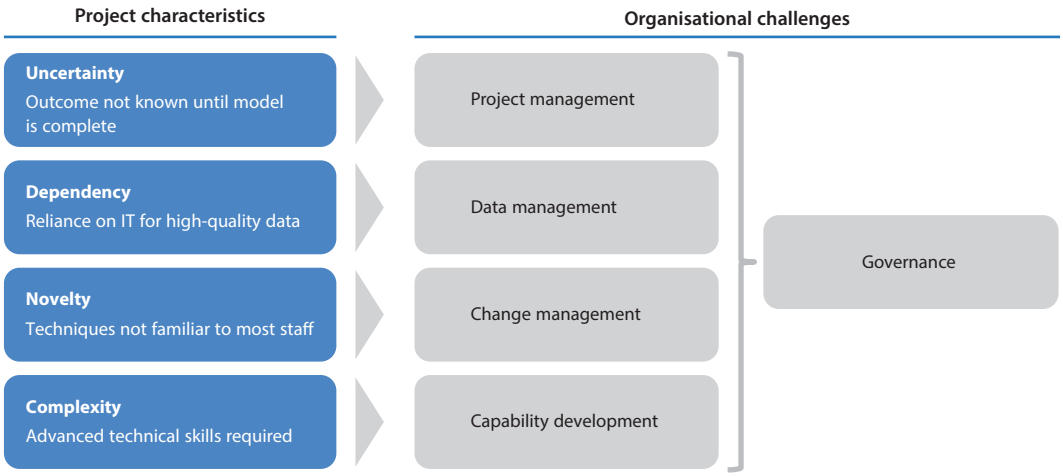
Organisational management of advanced analytics projects

Figure 8.2 illustrates how four key characteristics of advanced analytics projects give rise to major organisational and governance challenges.

Governance

Analytics governance requires a strong focus on integrating the business, information technology (IT), and analytics perspectives, and managing the uncertainty inherent in most advanced analytics projects. Many tax administrations have established integrated governance bodies to prioritise, resource, and oversee analytics projects. By consolidating analytics governance in a single, permanent body, administrations can begin to build expertise and experience across multiple projects.

Figure 8.2. **Key characteristics of advanced analytics projects**



Box 8.3. **Centralised governance of advanced analytics**

In ***Ireland*** in 2015, the Office of the Revenue Commissioners established a senior management group to prioritise and oversee all advanced analytics initiatives across the organisation. Prior to this, governance was organised on a project-by-project basis. While a number of effective models were introduced under this system, the absence of a centralised, permanent governance structure made it difficult to build organisational momentum behind analytics, and to maintain and upgrade the models that had been built.

The new senior management group – the Revenue Analytics Group (RAG) – is led by the Chairman of the Revenue Commissioners, and consists of representatives from the business, analytics, and IT functions. The RAG also has direct links into the key operational and IT governance bodies, the latter of which oversees the advanced analytics budget. Business intelligence initiatives are governed through a separate but linked structure.

This structure provides cohesive governance of all of Revenue's advanced analytics work: it aligns analytics projects to organisational priorities; it ensures that the analytics function works within the appropriate infrastructure; and it co-ordinates the activities of multiple units to ensure that analytics initiatives deliver a strong return on investment.

Source: OECD (2016), Advanced Analytics for Better Tax Administration: Putting Data to Work, p. 39, Box 4.1, http://dx.doi.org/10.1787/9789264256453-en.

Project management

The nature of advanced analytics projects (which are essentially an attempt to find a pattern that may or may not exist) creates significant uncertainty in relation to benefits and timelines. In many ways, advanced analytics initiatives are closer to research and development work than to ordinary IT or business projects. For analytics functions to deliver value, administrations must find ways to manage this uncertainty. Most administrations address this problem by using iterative, "test-and-learn" approaches in order to gather regular feedback and deliver incremental improvements. Many have taken an exploratory approach to project prioritisation and management, tending to begin work on a wide range of areas, and narrowing their focus only as it becomes clear that a particular project is likely to yield results.

Data management

To get the most out of advanced analytics, it is essential that administrations recognise that "big data" may not be "useful data". Advanced analytics models can only learn from the data they are applied to. If this data is inaccurate, or incomplete, or subject to selection bias, then the value of any resulting model will be severely limited, regardless of the volume of data available. To address this issue, administrations should develop strategic approaches to data collection and management. Instead of seeing data simply as the residue of operational processes, administrations must treat it as an asset to be actively managed and developed. To this end, administrations may wish to consider sampling programmes, randomised controlled trials, and similar data-gathering exercises. In addition, administrations should invest in the development of data dictionaries to ensure that analysts and business users can fully understand the information they are working with. Finally, administrations should actively look to domestic third-party sources and data acquired through new sources, for example automatic exchange of information initiatives, to develop a more rounded picture of taxpayer characteristics and behaviour.

Change management

Administrations are deploying a variety of approaches to ensure that advanced analytics models are successfully brought out of the laboratory and into the field. These include demand-side measures such as training operational staff in understanding analytical principles, and supply-side measures such as establishing specialist change-management units dedicated to analytics implementation. Perhaps the most promising approaches are those that combine demand and supply-side elements. In Norway, for instance, an analytical project will proceed only if the prospective business "client" is willing to second a member of staff to act as project manager. This ensures close collaboration between analytical and operational staff, and also imposes a useful check on the project prioritisation process.

Building capability

Finally, the inherent complexity of the modelling process creates challenges in relation to capability development. Tax administrations are working hard to secure and retain resources with the skills to assemble, clean, transform, and fit models to large datasets. These skills are scarce, and very much in-demand both in the private sector and academia. The need for highly-skilled technical staff is especially acute for administrations that wish to take advantage of the flexibility and low cost of open-source statistical programming languages (as distinct from commercial software packages). While competition to recruit analysts is intense, tax administrations do have certain competitive advantages: they can offer large and varied datasets, a diverse set of interesting analytical problems, and the opportunity to use advanced analytics to serve a wider public interest.

Next steps

Advanced analytics is now well established as a core capability in the decision-making and work-management approaches of advanced tax administrations. Its importance will only continue to increase as new data sources become available, including specific tax data such as that received through enhanced automatic exchange of information as well as data from non-tax sources, including other parts of government. It is also important that tax administrations keep abreast of how advanced analytics is being used across public

administration and business and consider what insights or lessons this may offer them for their own work.

The nature of advance analytics – essentially the automated search for useful patterns in large data sets – means that success is not guaranteed and many seemingly promising initiatives may turn out to be dead-ends. Care is therefore needed in selecting projects, designing analytical approaches, curating data, and evaluating results. Administrations must be prepared to make a substantial investment of time and effort if they wish to turn raw data and computing power into practical, actionable insights.

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Chapter 9

Co-operative approaches to tax

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Over the last decade an increasing number of tax administrations have adopted co-operative compliance programmes for large businesses. These are based on openness, disclosure and transparency between the tax payer and tax administrations and on the principle of trust. For business these programmes provide a higher degree of tax certainty at an early stage, enhance their internal understanding and management of risk and can lead to a reduction in compliance costs, particularly those associated with disputes, as well as reputational benefits. For tax administrations the main benefits are improved assurance of tax, reduction in disputes, increased awareness of business concerns and changes in business models as well as better allocation of resources.

This chapter examines developments in co-operative compliance approaches and the scope for multilateral initiatives which may help increase tax certainty more widely, helping to promote investment and growth.

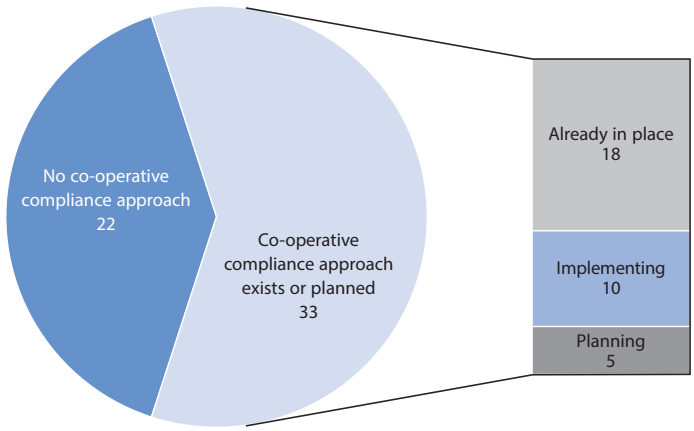
Mutual or conflicting interests

In the past the relationship between tax administrations and large businesses, particularly multinational enterprises (MNEs) could often be characterised as adversarial, with the former looking to maximise tax collected and the latter seeking to lower the total incidence of tax.

-While this may sometimes be the case, in particular in the face of the aggressive tax planning undertaken by some entities, as a general proposition this view is too simplistic. It ignores that businesses and tax administrations are part of the same social and economic framework and that tax is integral to that on an ongoing basis, covering both the revenues raised and the costs imposed by tax collection. While views may not always be aligned, for example on the interpretation of aspects of tax law, tax administrations and large businesses share a common interest in making the tax process as simple, transparent and cost-effective as possible, improving tax certainty and freeing up productive resource while paying the appropriate amount of tax and ensuring public trust.

This shared interest lies behind the development and implementation in 60% of the 55 countries that responded to the tax administration survey of programmes for co-operative compliance (see Figure 9.1). These programmes are aimed at providing greater certainty for large businesses which choose to participate in such programmes and at allowing tax administrations to apply their resources effectively and efficiently to this important group of taxpayers (which have the most complicated tax affairs).

Figure 9.1. **Co-operative compliance approaches – Existence and implementation status, 2015**

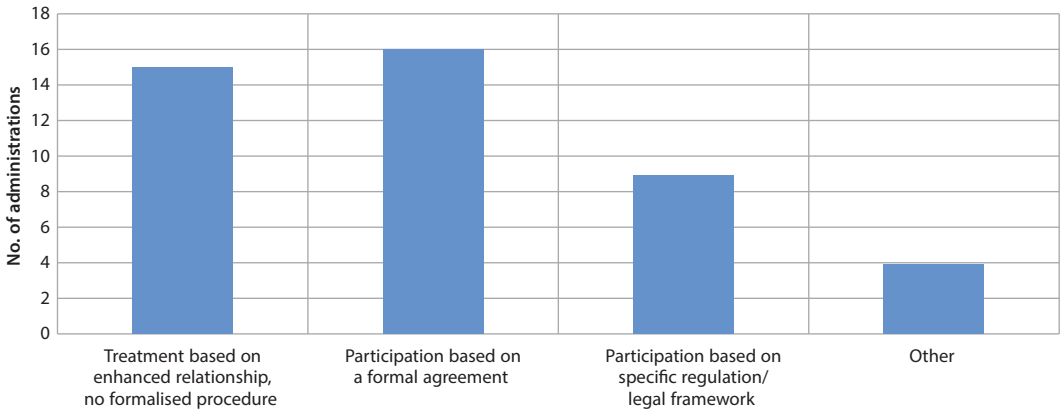


StatLink http://dx.doi.org/10.1787/888933546830

Source: Table A.141 Co-operative compliance – Existence and nature of the model.

Co-operative compliance programmes will not be suitable for all taxpayers. In some cases, taxpayers may not wish to invest the resource needed to fulfil the conditions of entering such a relationship, which needs to be across a group, preferring alternative controls. This might be the case, for example, if such programmes are not available in all the main jurisdictions in which a group operates. On the tax administration side, it may be considered inappropriate to establish such relationships in sectors which have been more characterised by aggressive behaviour or where they do not yet have a good understanding of the risks, for example those resulting from changes in business models. In addition, entry into such programmes may not be considered appropriate based on taxpayer's previous behaviour unless and until a tax administration is confident that the sources of such behaviour have been addressed and appropriately controlled.

Figure 9.2. **Nature of co-operative compliance programmes, 2015**



StatLink http://dx.doi.org/10.1787/888933546849

Note: Administrations were able to make multiple selections.

Source: Table A.141 Co-operative compliance – Existence and nature of the model.

Risk management and taxpayer behaviour – the background to co-operative compliance

Taxpayers differ in many regards, including ownership structures, governance regimes, internal organisation, complexity, amounts of tax payable, industry or international orientation; and perhaps most importantly their attitude towards payment of tax which influences their decisions around strategy, transparency and/or the tax control they are willing and able to achieve.

The risk management approaches of tax administrations are increasingly looking to factor in these differences in attitude. This is not only as regards technical tax matters, such as complex transfer pricing arrangements, but also the behavioural risks of the taxpayer. This influences how administrations respond to the taxpayer, including any tailored interventions that are deployed, and how specific compliance risk interventions are used to support increased and sustainable compliance.

At the taxpayer specific level, tax administrations will take such decisions based, inter alia, on the actual compliance behaviour of the taxpayer, including the control measures it has taken. In this regard relevant information includes, among other things: information about tax strategy; the existence and quality of any tax control framework; self-monitoring activities; engagement of tax intermediaries; and assurance statements by senior management.

Box 9.1. **Use of legislation**

In order to influence taxpayer behaviour, in particular the understanding and management of tax risks, the United Kingdom has taken legislative measures that target the tax processes of large businesses. Under this legislation, businesses with a turnover of over GBP10 million or a minimum of 20 employees have to appoint a Senior Accounting Officer. The Senior Accounting Officer has the main duty to ensure and certify that the company establishes and maintains appropriate arrangements to allow tax liabilities to be calculated accurately in all material respects.

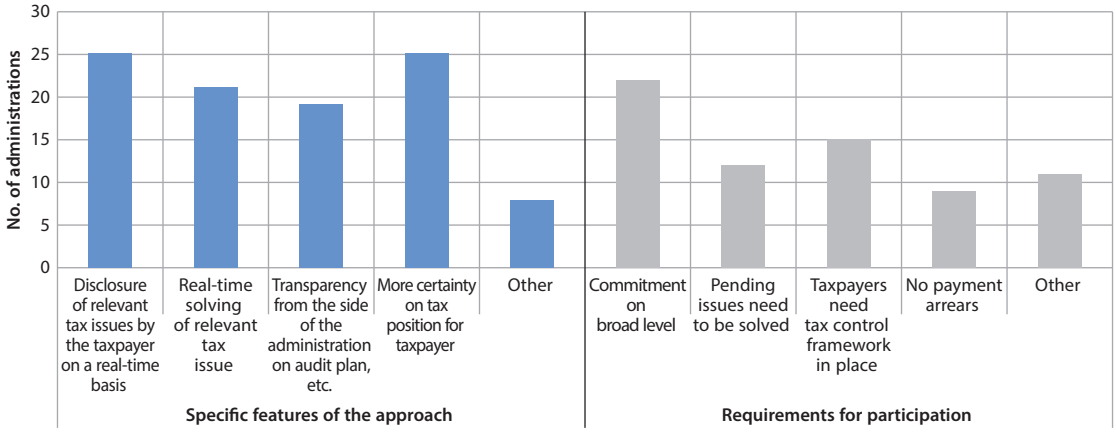
Box 9.1. **Use of legislation** *(continued)*

Very large businesses, whose turnover in the previous tax year was above GBP 200 million or whose balance sheet was over GBP 2 billion, are required to publish their tax strategy. The tax strategy should explain the business's tax arrangements, attitude to tax planning, including the role of external advice, the risk level and the approach to working with Her Majesty's Revenue and Customs (HMRC). Information from the Senior Accounting Officer and the tax strategy are used in the overall risk management process by HMRC.

Source: United Kingdom – HM Revenue and Customs (2017).

Tax administrations' general approach to compliance strategies for what they perceive to be lower risk large businesses has increasingly been formalised under voluntary co-operative compliance programmes. These rely upon an agreed set of commitments, demonstrated behaviours and actions by taxpayers which, taken together, give a high degree of reassurance as to the control of tax risks and ultimately the reliability of tax returns. Such programmes do not, though, give a more favourable tax outcome to participants. Tax administrations are of course required to administer laws and regulations for all taxpayers in an equal manner. Rather such programmes shift the emphasis of compliance away from, in broad terms, auditing after filing to reliance on the assurance systems of businesses coupled with a high degree of transparency towards the tax administration. This also allows, in some circumstances, for greater certainty to be provided to business in relation to specific approaches or transactions as part of upfront engagement and a system of "no surprises". Like all compliance strategies they are aimed at ensuring that the right amount of tax is paid at the right time. Figure 9.3 sets out both the specific features countries include in their programmes and the requirements for participation. It shows that board level commitment and the existence of a tax control framework are the most common requirements.

Figure 9.3. **Co-operative compliance programmes: Features and requirements, 2015**



StatLink http://dx.doi.org/10.1787/888933546868

Sources: Tables A.142 Co-operative compliance – Participation and specific features of the approach and A.143 Co-operative compliance – Requirements for participation.

Co-operative compliance approaches also require tax administrations to adapt the way they interact with business. The commitment of business at senior management levels needs to be mirrored with a similar commitment within tax administrations. In addition an essential component of the co-operative compliance approach is that tax administrations must actively involve and engage the taxpayer, their representatives and other stakeholders in the evaluation and development of compliance approaches. This will include consideration and discussion of appropriate guidance and how to minimise burdens.

Box 9.2. **Use of tax risk management**

The Australian Tax Office (ATO) has published a tax risk management and governance review guide on its website. The guide was developed primarily for large and complex organisations, tax consolidated groups and foreign multi-national corporations conducting business in Australia, but the principles can be applied to a corporation of any size if tailored appropriately. The guide is focussed at two levels; board-level and managerial level responsibilities. ATO comments that within organisations that have good corporate governance processes in place many of the identified key controls will already exist. In addition if ATO needs to assess the tax governance processes, a strong tax control framework will give confidence that tax risks are well managed and an assessment is likely to take less time and resource than otherwise.

Sources: Australia – Australian Tax Office (2017).

Tax control framework – the central pillar

One of the findings of the OECD report *Co-operative Compliance: A Framework* (OECD, 2013) was the centrality of tax control frameworks to co-operative compliance programmes. This was reaffirmed in the light of the further experience of tax administrations in the report *Co-operative Tax Compliance: Building Better Tax Control Frameworks* (OECD, 2016). A Tax Control Framework (TCF) contains a set of actions and processes which allow large businesses to control, and be seen to control, the core elements of their tax position. The six essential building blocks of a TCF are:

- ***The tax strategy***, which should be clearly documented and owned at Board level.
- ***Comprehensive application of the TCF***, such that it governs the full range of the business's activity.
- **Clear responsibility**, with clarity that the Board is accountable for the design, implementation and effectiveness of the TCF and that the tax department's role and responsibility is clearly recognised.
- ***Governance*** documented, with a system of document rules and reporting which allows risks and anomalies to be identified and the effectiveness of the TCF reviewed periodically.
- ***Testing, monitoring and maintenance*** to ensure compliance with the TCF.
- ***Assurance*** – which can be seen as the overall result of the TCF – which should be capable of providing assurance to stakeholders, including tax administrations, that tax risks are subject to proper control and that tax returns can be relied upon.

While the existence of a TCF is central to giving a high-degree of comfort to tax administrations in how a business controls risk, it cannot be seen as a sole proxy of co-operative compliance but needs to sit in within a context of mutual transparency and engagement. In fact, almost half of countries that responded to the tax administration survey reported it as a requirement for participation in the programme (see Figure 9.2). It also needs to be subject to review of its effectiveness (including ensuring that over time tax administrations do not lose objectivity). Such reviews can be performed in different ways, for instance through the review of a self-monitoring report, reviews by third parties, or an audit of tax returns or particular tax risks.

Tax intermediaries can also play an important role in assurance of co-operative compliance. While they are not generally involved in the preparation of tax returns, they are frequently involved in providing advice about tax structures, including the adequacy of internal controls, and opinions on uncertain tax positions. Further, intermediaries are often involved in assisting a large business in setting up and implementing their tax strategy and TCF.

Several tax intermediary organisations have also set up multidisciplinary teams that combine corporate governance, accountancy and information technology. This is an interesting development and one that may offer benefits to both large businesses and tax administrations, particularly if this work expands and broadens the scope of their work to more holistic services on the overall tax policy and tax position of large businesses.

Exiting co-operative compliance

Despite a business's efforts to ensure compliance through investment in its TCF and self-monitoring, tax returns still can contain errors or issues can arise, such as differing legal interpretation, where parties might hold differing positions which might result in a legal case. By itself this is not necessarily a reason for terminating a co-operative compliance relationship provided that the overall framework remains robust and reasons for any errors are identified and rectified.

However, since co-operative compliance is a voluntary programme both parties have the option to end their participation. In the Netherlands a number of co-operative compliance arrangements have been terminated by mutual agreement and in a very small number of cases by unilateral action. If an arrangement is to cease, it is preferable that this occurs by mutual agreement, as this allows both parties to discuss how the tax affairs of the business will be managed going forward, given that the tax administration will need to adapt its compliance approach, for example undertaking a wider range of audit activity, requiring different information etc. Clarity on that can help in reducing burdens and minimising tax uncertainty.

In general revenue bodies have noted the following reasons for mutually ending an agreement:

- differing expectations about service levels
- insufficient investment in a TCF by a large business
- changes in the strategy of a large business, for example a change in attitude to risk or the taking of aggressive tax positions, or
- where significant issues are suspected or where serious enforcement action is being taken.

Next steps

As co-operative compliance approaches are built on the mutual interests and established processes of the parties they are able to readily respond to changes in legislation or regulation. This has seen them already being adapted to accommodate the requirements of initiatives like country-by-country reporting and other outcomes from the OECD/G20 Base Erosion and Profit Shifting (BEPS) project into the TCF of the taxpayer and into the risk assessment systems of tax administrations.

The 2013 *Co-operative Compliance* report recommended the development of multilateral co-operative compliance programmes. The changing international landscape, including as a result of the outcomes of the BEPS project, is leading to a stronger interest within tax administrations as to how they can co-operatively assess multinational enterprises and the opportunities for joint or simultaneous audit. This is partly with an eye to reducing the number of disputes coming into Mutual Agreement Procedures (MAP).

Against this background a number of members of the OECD's Forum on Tax Administration have agreed to pilot an international compliance assurance programme (ICAP) which builds on the principles of domestic co-operative compliance programmes. This project pilot will involve undertaking a co-ordinated multilateral risk assessment on a small set of low and medium risk MNEs.

The ICAP process is designed to be a swifter and internationally co-ordinated way of assuring the activities and transactions of MNEs, while isolating quickly key risk areas for further attention. The underlying drivers of this pilot are to test whether this may help minimise MAP disputes by increasing collaboration and co-operation between a MNE and multiple tax authorities at an early stage; to increase tax certainty for business; and to positively influence taxpayer behaviour. The pilot will also involve using the new country-by-country reporting on a multilateral basis for ICAP risk assessment which will also inform the wider use of this new information set in risk assessments for large businesses in general, in particular as regards transfer pricing.

Following the pilot, it is intended that there would be an assessment of the pros and cons of a broader roll-out, participation in which would be a decision for individual tax administrations.

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OECD (2013), *Co-operative Compliance: A Framework: From Enhanced Relationship to Co-operative Compliance*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264200852-en.

Chapter 10

Insights from innovations in tax debt management

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Tax administrations focus on achieving a high level of tax compliance on the premise that prevention is better than cure. This is especially the case when it comes to tax debt and the minimisation of arrears and write-offs. Traditionally debt management has focussed on approaches that produce better debt recovery performance. Increasingly tax administrations are investing in research to enable them to develop policy approaches that help avoid tax debt being incurred in the first place or avoid tax debt increasing through supportive interactions with taxpayers.

This chapter provides an overview of some of the innovative approaches and strategies of tax administrations in this regard where the common theme has been around tailoring interventions more closely to the specific circumstances of the taxpayer.

Innovation in tax debt management

In the past innovation has in the main focused on better ways to collect tax debt once incurred, for example by sequestering bank accounts, increasing penalties or court processes and insolvency proceedings. With advances in technology and the range of "data tools" now at the disposal of tax administrations, there is an increasing trend towards the development of policy or administrative approaches that help to avoid tax debt being incurred, or enable more taxpayer specific interventions to be made when they do incur tax debt. These "tools" have led to a new wave of innovation, based around experimentation, segmentation and campaign approaches as administrations seek not only to collect what is outstanding but to change behaviours, including as regards future compliance.

In its publication on *Working Smarter in Tax Debt Management* (OECD, 2014) the OECD provided an overview of the modern tax debt collection function. This chapter will explore some recent examples of innovation in debt management using the major themes set out in that publication.

Use of advanced data analysis in tax debt management

Risk in the context of debt management is generally defined as the "exposure to non-payment". While debt risk analysis in many administrations is still under development, many countries are now able to point to evidence and research to highlight its effectiveness.

Within debt management analytical techniques are increasingly being used to enable the streamlining of operational processes and improvements in compliance, including through innovative campaigns. Predictive modelling uses a wide range of techniques which, through a process of pattern "fitting" and systematic trial-and-error, aim to discover regularities in historical data. In the debt management context, traditional modelling and experimentation was focussed towards identification of high risk debt cases. However, substantial gains have been made in the use of predictive modelling to identify those who are most likely to respond to an intervention. Oftentimes there is overlap between these two groups, but the differences have given tax administrations a better understanding of taxpayer behaviours, highlighting cases where traditional intervention is not likely to yield results and identifying new more productive approaches, including as regards early interventions. For example the Australian Tax Office (ATO) developed a predictive model which led to a range of interventions, including the use of SMS nudges. This has been highly successful in improving on time payments.

Box 10.1. **Debt risk modelling**

In ***Australia*** the ATO uses a payment compliance analytical model identifies when a client's bill is "unlikely to be paid"; an SMS may then be issued to nudge prompt payment. In 2015-16 this approach resulted in just under AUD 1 billion being paid on time by clients who had a previous pattern of not paying or paying late. For the ATO, risk-based analytical models are increasingly driving client interactions. The Next Best Action model, currently under development, will determine a customised treatment path that increases the likelihood of debt prevention/resolution. Purposeful First Action, which has been implemented as the first component of this model, focuses on improving the timeliness and outcomes of our initial interactions with clients once they're in debt.

Box 10.1. **Debt risk modelling** *(continued)*

In ***Sweden*** the Swedish Tax Agency's involvement with risk modelling in debt commenced in 2007 when it used data mining combined with the insight of experienced tax collection area managers to build a risk model. This model, which was piloted before being rolled out in January 2010, is still the basis for its debt modelling work today. The system does not provide a risk-score for non-payment to the case handler, but does provide them with information on why the case assigned has been identified for action. Case handlers are encouraged to use their entire debt collection "toolbox" (from withdrawal of the certificate of tax compliance through to filing for bankruptcy). The predictive model uses the signal to identify work items for the case handler, who can make informed decisions on what measures to take. The model has been subject to on-going improvement. The latest enhancement will signal to staff whether there is a significant payment risk before an audit commences. These measures have helped Sweden maintain a very low payment loss rate – currently 0.22 % of the total tax debt.

Source: Australia – Australian Tax Office, Sweden – Swedish Tax Agency (2017).

Segmentation

As part of the increased use of data analytics, a number of tax administrations have experimented with "unsupervised segmentation". These techniques, which fall under the broad heading of "cluster analysis", seek to identify groups of taxpayers who are similar to each other in some significant respects, and dissimilar to the other groups identified. These projects have often provided interesting general insight into the taxpayer population, but have typically not shown a strong practical impact as the segments identified have not had obvious business applications.

An alternative approach, looks to group taxpayers based largely on their predicted response-to-intervention. If all taxpayers respond in the same way to a given intervention, then there is little practical value in segmentation; where there are large and consistent differences in response-to-intervention, then segmentation is worthwhile, and should follow the observed differences in response. This approach is likely to create multiple segmentations – ultimately, each type of intervention may require a different segmentation of the taxpayer base. A further alternative approach taken by the ATO which has segmented taxpayers into two categories: propensity to pay and capacity to pay.

Box 10.2. **Segmentation**

In ***Ireland*** between 2006 and 2009, the tax debt available for collection rose by 82% due to the economic downturn; in 2006, debt available for collection in Ireland amounted to EUR 792 million rising to EUR 1 443 million in 2009. To prevent further escalation of the debt, the Irish Office of the Revenue Commissioners ("Revenue") established a risk model where customers were segmented into one of five tiers based on the risk exposure to Revenue. The tiers were based on liabilities of the tax returns filed with a threshold level for each tier with the highest potential liability segmented to tier 1 with the lowest to tier 5. This provided for the identification of high risk customers and the establishment of a more focussed approach towards customers. Also, Revenue invested heavily in new information technology infrastructure called "Arrears Case Analysis Tool" to examine and prioritise debt available for

Box 10.2. **Segmentation** *(continued)*

collection primarily by reference to case size age of debt collection stage and risk rating. This segmentation of cases and use of data analytics attributed to a significant reduction of the debt available for collection. Between 2009 and 2015, the debt available for collection fell by 43%.

In late 2016, the authority is revising their segmentation process for debt management by categorising the customers by "Value to Revenue" (VTR). A VTR, assigned to each customer, is calculated by using a range of data sets (returns, estimates, payments etc.) over the previous 2 to 4 years to produce an annualised value of the customers' liability to Revenue. This annualised value is segmented into VTR thresholds values.

Source: Ireland – Office of the Revenue Commissioners (2017).

Behavioural approaches

Innovative behavioural approaches building on a better understanding the behaviour of tax payers who default and use that understanding to build appropriate interventions, which may be multi-faceted even in the case of a single taxpayer. Education and communication are cited most commonly in respect of strategies for influencing behaviour, however other approaches focussed around building trust and positive perceptions of tax administrations are also considered strong influencers.

The Belgian tax administration has recently conducted field experiments with randomised controlled trials to test different methods of lifting tax compliance. The project was run in consultation with the Oxford University and London School of Economics in the United Kingdom. A large trial with a population of 250 000 debt cases was used involving nine different types of letters. The control group received a simplified standard letter while the other eight groups received the same letter with different additional phrases giving a specific nudge, including: an explicit penalty message and a public good message aimed at raising the "moral costs" of non-compliance. All the letters were structured to communicate simply, with a clear and strict tone, but in a way which supported positive behaviours.

Strong results were achieved with an average increase of 18.2% in payments within 14 days. It was found that the most effective letter in this experiment was the one that used an explicit penalty nudge. This letter realised an increase of 21%. Overall the project concluded that behavioural nudging works well in raising tax compliance, and is very effective in achieving more timely payments.

Campaign based activities

Outbound calling

In the private sector innovations focussed towards changing behaviours have been targeted through established and dedicated call centres. This has led many countries to establish similar centres for tax collection activities, with calling campaigns featuring in the core operations of many tax debt management areas. For instance, Sweden uses outbound calls to target new "high risk debtors"; this approach has resulted in more than 80% of debtor's contacted making payment. In New Zealand, early interventions by

outbound call centre agents had resulted in an increase in immediate payments and time-to-pay arrangements, resulting in earlier collection of tax debts.

Box 10.3. **Outbound call campaign**

In ***Canada*** the Canada Revenue Agency (CRA) runs a focussed outbound calling campaign which includes use of its debt call centre and automated dialling. Its annual campaign is run in October each year, with bi-annual campaigns also run in May and November. The focus of these campaigns is those individuals on instalment payment programmes who were charged interest in the last year and have also missed an instalment payment in the current year. Individuals for the campaign are selected by a data mining tool, which assigns a score of 0 to 100 predicting the likeliness of the taxpayer making a payment. Those with a score of 10 to 80 (individuals most likely to respond to a nudge) are likely to get a call.

Over the last few years, results of these campaigns have shown that taxpayers contacted (otherwise expected to be non-compliant) made instalment payments for a value of CAD 80-112 million. Compared to control groups, a higher percentage of taxpayers paid their taxes during the taxation year when they were called by the CRA. The campaigns also showed positive results but sensitivity regarding the timing of campaigns was identified. It was noted that in the May campaign, more payments were received than the November campaign. This was mainly attributed to the fact that by November, taxpayers focus is mainly on outstanding balances rather than current liabilities. Another factor acknowledged is the closeness of the May campaign to the holiday season.

In the ***United Kingdom***, staff dealing with phone calls have direct access to real-time queue and service level statistics. This helps them identify quieter times when it would be best to carry out tasks other than handling calls (e.g. improvement and training activities). The central resource and workflow team also monitor real-time statistics to respond to the busier periods by employing call routing to bring in more people to meet demand so Her Majesty's Revenue and Customs (HMRC) can provide the best customer service. Every call outcome is recorded and classified allowing managers to discuss resolution rates, the quality achieved, and the outcome of the call. A range of call and outcome information is displayed on each team's performance board for discussion. Staff are empowered, and take satisfaction, in carrying out continuous improvement activity, aiming to resolve a case at the first point of contact but also educate and support customers to be compliant and willing to engage with HMRC in the future.

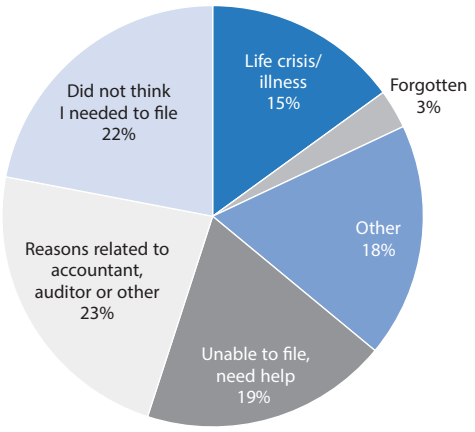
Source: Canada – Canada Revenue Agency; United Kingdom – HM Revenue and Customs (2017).

Non-filers and outbound calls

In 2015, Tax Norway carried out a phone campaign aimed at increasing filing. It was organised as a randomised controlled trial among entities which were around three months late in submitting their return and which had already received a reminder letter. The primary finding was that personal phone calls influenced many non-filers to file. Calls to self-employed taxpayers resulted in 9% submitting outstanding returns, with 6% of corporations also filing after receipt of the call. There were also very useful supplementary findings as to the reasons why taxpayers had failed to file, as illustrated in Figures 10.1 and 10.2. The findings confirm that a one-size-fits-all compliance strategy is very unlikely to be the best use of resources. For example, taxpayers reporting that they did not think they needed to file as a reason for non-compliance will be unresponsive to any type of compliance campaign.

Figure 10.1. **Phone campaign results – self employed, Norway**

Self-employed: Why have I not yet filed?

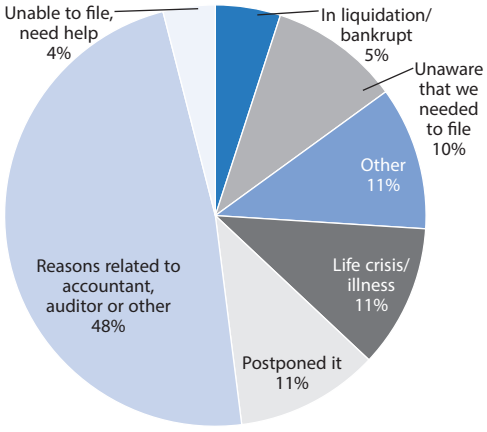


StatLink http://dx.doi.org/10.1787/888933546887

Source: Norway – Norwegian Tax Administration (2017).

Figure 10.2. **Phone campaign results – limited companies, Norway**

Limited companies: Why have we not yet filed?



StatLink http://dx.doi.org/10.1787/888933546906

Source: Norway – Norwegian Tax Administration (2017).

Reminder calling

Results from a phone campaign conducted by the Federal Public Service in Belgium in 2016 also indicated that phone reminders do influence taxpayers to pay sooner. This campaign was designed specifically to: improve taxpayer's compliance both for current and future debts by influencing their payment behaviour; quickly recover the unpaid taxes; and increase tax recovery with restricted staff resources. Specifically it was found that while the payments made after a phone reminder would on average have been paid anyway, this would have occurred only following other actions which would incur costs. The added value of the service, comparing the proportion of the debts paid with intervention, to the proportion of the debts paid for a control group, was recorded at EUR 23 million corporate income tax and EUR 13 million in value added tax.

Next steps

Effectively managing the collection of tax debt is one of the major tasks undertaken by administrations. Since the publication of the report *Working Smarter in Tax Debt Management* (OECD, 2014) many tax administrations have begun using advanced analytics, tailoring treatment strategies for prevention and enforcement, using outbound calling to support debt collection and prevention campaigns, examining their organisational and operational models, and working together to address debtors resident in other jurisdictions.

The range of performances described in the Collections part of Chapter 6 clearly illustrate that there is a lot more administrations can learn by continuing to share their experiences and practices. There are also tangible gains to be made as well through increasing the co-operation between administrations to use tax treaty powers or other agreements between countries to work together in the collection of "cross border debt."

With total debt levels still approximating EUR 1.8 trillion (see Figure 2.1) administrations will need to continue to search for innovative approaches using risk management techniques to prevent debt arising and to collect tax arrears for efficiently.

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Chapter 11

Using digital delivery to enhance the integrity of tax systems

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Developments in digital technology and in the analytical tools available to tax administrations will facilitate fundamental changes in the way that tax is assessed, verified and collected. This has the potential to increase compliance while reducing burdens significantly, including direct costs, and freeing up resources for more productive activities. Tax administrations are at different stages of digital maturity and will profit from exchange of best practices and practical experience, in particular in the light of the pace of technological change, the associated change management issues and the proliferation of legacy systems.

This chapter looks at the building blocks of digital delivery, in particular robust identification of taxpayers and integration of natural systems, and suggests further work on measurement of outcomes.

Digital delivery and the evolution of compliance

Current tax administration is largely a mix of rules-based activities based around actions or processes that are normally are undertaken after the fact, and still in most countries rely heavily on the taxpayer to provide information normally in the form of filing. It is characterised in general by a high degree of complexity in areas which continue to require considerable interaction between taxpayers and tax administrations, often in-person or paper based. This can be prone to errors and misreporting (both accidental and deliberate). The size of the workload and the impact is large; with OECD Forum on Tax Administration (FTA) members reporting that around 14% of their staff is dealing with more than 450 million taxpayer inquiries annually (see Chapter 6 on operational performance).

Time and cost spent by taxpayers on tax administration will, in general, divert resources away from alternative productive activity, thereby representing an opportunity, or welfare cost. Of itself, reductions in the burden involved in complying with obligations to report and to pay tax also have implications for the degree of tax compliance. This can be both directly through increased accuracy and certainty and indirectly by helping to shape attitudes to compliance.

The shared goal of tax administrations, within legal and administrative constraints, is to maximise compliance with the least opportunity/welfare cost, and with cost effective administration. Over time, this means designing the tax system to make it more understandable and easier for taxpayers to comply, while minimising the opportunities for those seeking to stretch the rules or commit fraud.

Advances in technology and much greater access to data, as well as the ability to use that data more effectively, have the potential to fundamentally alter this equation, reducing the burdens arising from tax administration for compliant taxpayers while increasing compliance overall. Some of the underlying challenges and opportunities have been set out in a number of OECD reports, including *Right from the Start* (OECD, 2012); *Tax Compliance by Design* (OECD, 2014) and *Technologies for Better Tax Administration* (OECD, 2016).

As digital delivery is used more, traditional compliance approaches must also evolve. If a tax administration has designed and delivered its digital services effectively, then taxpayers should experience greater tax certainty and have improved trust and confidence in the system, which may improve overall levels of compliance. This may also present new opportunities for tax authorities to shift from post-event audits to "upstream compliance" and early intervention activities.

There are also significant change management aspects associated with a shift to greater digital delivery, to embed new technology and skills. In particular there will be a capability shift from post-event auditing expertise, to systems design and earlier, upfront assistance. Building, maturing and maintaining skills in digital literacy, support and client service will become increasingly important.

Stronger identity security

The starting point for the effective use of digital technologies is a comprehensive and robust system of registration and identification. At its core, the integrity of a tax system as well as the ability to reduce burdens (for example by supporting self-service, voluntary compliance, withholding and third party reporting) relies on knowing both who the taxpayer is and, where third parties are involved, what their relationship is to the taxpayer. This is also critical to reducing non-compliance whether through error, fraud or by activities taking place in the non-observed economy.

Digital technology is increasingly providing new and secure ways for taxpayers directly, or through third parties (including other parts of government) to establish and prove their identities at lower cost, more quickly and with greater certainty. Recent developments include:

- Australia's ***Document Verification Service*** **(DVS)**. This is a national secure system that checks and matches government issued credentials (for example, drivers' licences) in real-time. It is available 24-hours a day, and provides confirmation of taxpayer credentials without requiring a face-to-face or paper-based interaction. The Australian Taxation Office (ATO) also utilises the DVS for requests to update date of birth details made on-line and over the phone and in procedures for compromised identities (Office of the Australian Information Commissioner, 2014). It provides a fast and secure way to verify the identity of the taxpayer, thereby protecting both the government and the wider community from identity crime (Document Verification Service, 2016).
- ***Voiceprint authentication*** is used by a number of tax administrations (OECD, 2016). A voiceprint is inherently more secure than other credentials, as it is unique to each individual. Digital technology matches features of each voiceprint differently to the human ear, and can detect with high accuracy if the voiceprint matches the taxpayer (Australian Department of Human Services, 2016). Technology is also used to convert each voiceprint to a "hashed" series of numbers and characters (a numerical algorithm which cannot be reversed) meaning a stolen voiceprint is useless.
- Many countries provide taxpayers with ***unique digital identities*** for accessing government, and in some cases private sector services. In Belgium since 2009, citizens over the age of 12 have been issued an eID, which as well as providing online security for day-to-day activities like online shopping, library loans or as a train ticket allows the secure lodging of tax returns. In Denmark 4.5 million citizens have a NemID, a common login to securely lodge tax returns and access other government services, as well as services provided by some private companies, including Danish banks. In Singapore all citizens over the age of 15 can apply for a SingPass ID to use government online services, including tax services.

As well as enhancing the delivery of various interactions between the tax administration and taxpayer, certainty of identity is also necessary to establish a taxpayer's overall tax position, which is critical to improve overall compliance and reduce the associated burden.

A taxpayer's overall tax position often includes multiple income sources, a range of offsets or benefits, multiple expenses, and potentially multiple relationships with other entities (for example, in the case of a business there will be relationships with suppliers and purchasers). The ability to map tax-related data to the right taxpayer, and to match and understand a complex set of information is impossible without certainty of identity and relies on having a mature digital capability.

By way of example, in Canada, the Canada Revenue Agency (CRA) can trace and match data to link corporate entities to major shareholders, their value added tax, payroll and importer accounts as well as to foreign affiliates and associated transactions. Company proprietors are also linked to their spouses and family, and income levels benchmarked against appropriate comparators. Using digital technology, a sophisticated data matching system like this can map large, disparate data sets to the right identity and allow wider analysis to be conducted of the data as a whole.

Integration with natural systems

Digital delivery also provides a mechanism by which tax authorities can integrate tax services with the "natural systems" that taxpayers use in other aspects of their day-to-day activities. Natural systems in this context encompasses the range of tools and recording systems used by taxpayers, such as business and accounting software, banking services and payment systems, point-of-sale systems, use of intermediaries, third party applications etc. Integration of such information, including by supporting the development of third party apps and software, has the potential to significantly reduce reporting burdens and improve the way in which data is collected. Examples of such integration include:

- The introduction of a ***Single Touch Payroll*** service by the ATO through business payroll software. This will require large employers to report to the ATO each employee's salary, wages and tax withholding and superannuation at each payroll event (currently only reported annually). Employees will also have access to the reported information that relates to them, providing them with visibility throughout the year of their income, tax and superannuation amounts. By using digital technology to embed this tax service into the natural system of the employer (in this case, the payroll components of their business management software) the data can be automatically provided with little or no effort. Single Touch Payroll will be available for all employers from July 2017 and will be mandatory for large employers from July 2018.
- New Zealand Inland Revenue also delivers ***integrated digital services*** via accounting and financial systems to encourage seamless service delivery and improved compliance. Some online accounting products are integrated with online banking, reducing double-handling of bills and reconciliation of invoices, with the option to file Goods and Services Tax (GST) returns directly to the Inland Revenue Department.
- The Federal Tax Service of Russia has also introduced an ***e-Registration requirement*** for cash registers which will help to verify tax accounting procedures at the point of sale. This will enable the tax administrations to automatically validate data, track and match certain information related to sales, and provide better data for audits in close to real time.

Brazil is among a number of countries that have ***mandated e-invoicing***: electronically sending, receiving and storing invoices between suppliers and buyers (either business to business or business to government). This has helped establish a national digital bookkeeping system, "SPED", which enables direct reporting of annual income taxes and other tax information. The Brazilian tax administration can now review, assess and act on some information almost instantly, including issuing penalties in near real-time. As a result, the number of audits, their assessed value and total tax collected has significantly increased. There is also greater overall reported participation in the tax system.

Increasingly, tax administrations are also applying digital end-to-end solutions to design integrated services that extend beyond the tax system itself. For instance, in Australia the ATO is also responsible for administering the country's superannuation system and has used digital technology to deliver its "Super Stream" service. This service introduced standard electronic messaging for the exchange of data and payments from employers to superannuation funds, and leverages the employees' Tax File Numbers to ensure payments are made correctly. For the December 2016 quarter approximately 32 million transactions were made through the Super Stream service, to the value of AUD 70 billion. This service has strengthened the integrity of the system, providing greater assurance for 11 million

employees entitled to superannuation contribution payments. In November 2016, Super Stream won the "Gold Award" in the Institute of Public Administration Australia (IPAA) Prime Minister's Awards for Excellence in Public Sector Management.

Emerging technology

As highlighted by the OECD in its report *Technologies for Better Tax Administration: A Practical Guide for Revenue Bodies* (OECD, 2016), the challenge facing all organisations including tax authorities is keeping pace with ever evolving technology and, as necessary, rethinking how services and delivery can be changed to best utilise that technology. This needs to be done, though, with a clear focus on the end objectives of reducing burdens, including on the tax administration budget, while increasing compliance.

For example some tax administrations are currently exploring the opportunities presented by the use of blockchain technology. This new technology is, in essence, a distributed ledger that records when a transaction occurred, the details of that transaction, including transfers of assets and ownership, and provides assurance that the required business rules have been met without the need for third party verification. Updates to the blockchain are subject to consensus from all participants in the network, making it virtually impossible for any one individual, or group of individuals, to falsely change or create records. Each transaction is protected by a cryptographic key, which includes the key of the prior transaction, creating an immutable historic "chain" of transactions.

As such, blockchain may offer new ways for tax authorities to combat fraud, trace and match data and automate reporting. The Estonian government has already started using this in tax and business registration systems. The Danish tax administration has started a proof of concept to better track and secures vehicle registrations using a blockchain solution, to confirm that all related tax payments are paid as ownership or other changes occur. In the United Kingdom, the government is considering its applications to better track tax revenue, while the Australian government is conducting a comprehensive review to examine its potential for a range of government services.

As with other aspects of emerging digital developments, this may be an area where sharing of information and experience between tax administrations will be of high value.

Measuring the impact of digital delivery

Overall, developments in digital delivery look set to allow tax authorities to reshape not just the taxpayer experience, but the broader compliance landscape. Previously dim features on that landscape can be brought to light and those already visible come into sharper focus. As compliance improves and participation in the system grows, revenue will not only be protected, but potentially be increased.

That raises the question, though, of how tax authorities can best measure digital delivery success to inform both strategy and resource decisions. The most common metric is currently digital uptake. However, considering the direct relationship between digital delivery and compliance, further work on compliance-related metrics would be helpful. For example, a decrease in outstanding lodgements, a decline in post-event audits as more information arrives digitally, or an increase in accuracy of case-selections may be attributed to effective digital service delivery. Metrics could also be explored for the timely transfer of third party data, the effectiveness of automated matching and the quality of data collection.

And finally

As tax administrations around the world embrace digital technology to deliver better services to taxpayers, overall tax compliance may also be enhanced. The theory is simple: by meeting taxpayer expectations and simplifying the service experience, then taxpayers should find it easier to comply. Therefore, digital service delivery may drive an increase in voluntary compliance, which would then increase revenue and participation, and improve overall trust and confidence in the system.

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Chapter 12

Large business and international

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Large business taxpayers are of critical importance to the economies in which they operate. They produce the majority of export income, provide a large share of the tax revenue and, in many economies provide the majority of jobs. They also have complex business structures with multiple operating entities that engage in international transactions presenting distinct and significant tax compliance issues that can have major consequences on tax revenues if not adequately addressed by tax administrations.

In the wake of the work on the OECD/G20 project on Base Erosion and Profit Shifting (BEPS), which will provide tax administrators with new information and tools to address compliance issues related to this important taxpayer segment, it is incumbent upon tax administrations to ensure that their own actions do not create unnecessary tax uncertainty which could have negative consequences on economic growth and result in unpredictable government revenues. In this context, the issues surrounding tax certainty for both businesses and tax administrations will be of increasing importance.

In this chapter, we will explore the current trends in managing large taxpayer compliance that focus on compliance risk management, international collaboration, co-operative compliance, and tax certainty.

Compliance risk management

The majority of tax administrations have adopted a risk-based approach to compliance. As such, they have formal processes in place for identifying, assessing and prioritising their compliance risk areas as part of responsible tax administration. Advanced analytical tools that leverage more comprehensive data offer new opportunities for the use of business intelligence in the identification of non-compliance. As noted in the OECD's *Advanced Analytics for Better Tax Administration* report, "advanced analytics is proving an extremely valuable tool in improving tax administration effectiveness" (OECD, 2016). Through the use of these tools, tax administrations can more effectively assess and prioritise risks, and determine the appropriate level of intervention to achieve compliance.

As an example, in the context of its Approach to Large Business Compliance, the Canada Revenue Agency (CRA) has developed an automated Integrated Risk Assessment System that risk ranks its entire large taxpayer population based on a significant number of risk algorithms developed by subject matter experts in the domestic, international and tax avoidance areas. Experienced case managers, auditors, and industry specialists, taking into consideration inherent and behavioural risk factors, determine an overall risk profile for each taxpayer. The highest risk cases of non-compliance form the basis of regional and national work plans. This approach allows the CRA to focus its audit resources on the highest-risk cases of non-compliance and to reduce the compliance burden for businesses that are low risk. The business intelligence gathered at each stage of the risk assessment process and during the audit is used to improve risk algorithms and the overall risk assessment process.

In addition to having better tools to analyse data, tax administrations continue to access a range of different data sources. In the past, the majority of available data came from the various forms and tax returns filed by taxpayers. Administrations are increasingly looking to large businesses to provide them with more detailed information on their organisational structure, cross-border transactions and uncertain tax positions. Once implemented, the outcomes of BEPS Action Item 13, Transfer Pricing Documentation and country-by-country (CbC) Reporting (OECD, 2015a) will provide administrations with new information for transfer pricing risk assessment. This additional information, along with enhanced business intelligence tools, will allow tax administrations to be more effective in the compliance risk management of the large business population segment.

International collaboration

The large business environment has changed significantly in recent years. Along with the rise in globalisation and electronic commerce, there are more multinational business structures. The survival of these businesses depends heavily on their ability to succeed in a fiercely competitive global economy. This has led many businesses to actively consider various and complex tax treatment options, such as: hard-to-value intangibles; cross-border lease arrangements; thin capitalisation; related party and hybrid financing; restructuring and liquidations; and, determinations of permanent establishment. As such, effectively managing tax compliance risks in this environment is critical.

This competitive environment is also amplified by corporate tax rate variances between tax jurisdictions in order to attract international investment and the consequential economic benefits. Such initiatives typically lead to non-harmonised tax regulations between tax jurisdictions and the shifting of reported profits to countries with the lowest tax rates, thereby threatening the tax bases in various countries.

The BEPS package, approved in late 2015, is intended to address aggressive international tax avoidance strategies used by some multinational enterprises (MNE) to inappropriately minimise their tax obligations.[1]

Over the past several years, we have seen a significant increase in collaboration among tax administrations to address international tax evasion and aggressive tax avoidance issues, for example, through joint audits and risk assessments. The implementation of BEPS recommendations will provide additional tools to address these cross-border compliance issues.

Action 13 on Transfer Pricing Documentation, in particular, will provide new opportunities for tax administrations to work together on risk assessment using common data sets resulting from CbC implementation. Further enhancements to each tax administration's risk assessment processes can be achieved through combined efforts to identify risk indicators and industry-specific issues, and ensure that data is being interpreted in a consistent manner. Forums such as the OECD's Joint International Taskforce on Shared Intelligence and Collaboration (JITSIC) Network,[2] will continue to facilitate the sharing of business intelligence and strengthen the capacity of tax administration to tackle common risks.

In order for tax administrations to fully realise the value of this collaboration, they will need to continue to improve their capacity to risk assess and profile their large business population. For example:

- ***Improve automation*** – Aging systems need to be updated. New systems such as learning software that can improve our understanding of key relationships between corporations and other taxpayer groups are needed. The information gathered can be greatly beneficial in developing or enhancing risk algorithms and profiles across a broad spectrum of taxpayer segments.
- ***New skill sets*** – For the most part, staff in large taxpayer units have audit-related skills. However, expertise in the areas of risk assessment, profiling, and communications are new and important competencies that should be developed or acquired.
- ***Access to and use of external sources of data*** – The use of domestic and international data sources offer significant opportunities to not only improve monitoring, but to move toward real or near real-time compliance activities. Tax administrations will have the opportunity to use various data sources to consider the level of engagement or intervention needed to influence compliance behaviour.

Co-operative compliance

The concept of co-operative compliance is based on the premise that taxpayers provide timely and detailed information about their tax transactions and issues and, in turn, the tax administration will review that information in real-time and provide early tax certainty to the taxpayer regarding their tax position prior to them filing their tax return. With major potential tax issues largely settled before filing, taxpayers are generally subject to a timelier and more narrowly focused post-filing examination. It also allows the tax administration to raise issues with the taxpayer before taking a tax position.

In recent years, a number of OECD tax administrations have adopted a co-operative compliance approach. The form of the approach can vary: some are based on enhanced relationships with no formalised procedures some use formal agreements, and others rely on specific regulations or a legal framework. Whichever approach is utilised, the goal is to

have an open and transparent relationship between the taxpayer and the tax administration; one that is built on trust.

As concluded in the OECD report *Co-operative Compliance: A Framework: From Enhanced Relationship to Co-operative Compliance* (OECD, 2013), a tax control framework (TCF) is considered to be centrally important to effective co-operative compliance programmes. A TCF ensures that the large business or MNE has the proper internal controls and governance in place with respect to its tax processes and tax function. A TCF can prevent tax errors, allow companies to manage compliance-related risks more effectively, and promote transparency and co-operation with tax administrations.

An evaluation of the effectiveness of the TCF allows the tax administration to complement its existing risk assessment and adjust its audit plan accordingly. A TCF requires transparency by both parties; the business must allow the tax administration to review its TCF, and the tax administration should be prepared to discuss the impact of the framework on its assessment of risk and planned audit activities. It is only with such transparency that trust can be established, which in turn leads to the desired outcome of tax certainty and compliance.

Tax certainty

Although most tax administrations provide taxpayers with guidance and education about their tax obligations, improving tax certainty through effective public information, clear forms and instructions, face-to-face meetings between taxpayers and tax authorities, collaborative compliance approaches, efficient programmes for advance tax position rulings, and Advance Pricing Arrangements can assist in maximising voluntary compliance. Clear, consistent and timely responses to enquiries, reasonable interpretation of the law, and transparency of processes can help taxpayers make sound and timely business decisions and reduce their compliance costs.

By actively involving and engaging taxpayers, their representatives and other stakeholders such as industry associations to achieve a better understanding of the taxpayer's tax compliance obligations, improved outcomes and reduced costs for both the taxpayer and the tax administration can be achieved. The knowledge gained by engaging stakeholders can in turn be applied to tailor products and interventions, to design processes and solutions that are more meaningful, and to improve the overall effectiveness of the tax system.

Following the major changes flowing from the BEPS package, concerns that resulting tax uncertainty could negatively impact business decisions, have a negative effect on growth and result in unpredictability of government revenues, will prompt tax administrations to further examine and engage on the issue of tax certainty.

The challenge for revenue bodies will be to implement policies and practices in ways that support tax certainty, and minimise compliance intervention and burden for low-risk taxpayers.

Many of the BEPS Action items and existing compliance approaches can in fact assist in providing tax certainty for both tax administrations and businesses. As an example, CbC reports will provide new information for transfer pricing risk assessment and enable tax administrations to work collaboratively from the same data set to assess transfer pricing risks and tailor responses that can be utilised across multiple jurisdictions. Furthermore, BEPS Action Item 14 will require tax administrations to implement more effective and efficient Mutual Agreement Procedures processes (OECD, 2015b). Also, existing international Forums

such as JITSIC can be leveraged to address significant risk issues at an earlier stage, thereby enhancing tax certainty for compliant taxpayers.

While collaboration amongst tax administration is an important condition to achieve tax certainty in this global context, effective communication and transparency between tax administrations and taxpayers can lead to improved outcomes and reduced costs for both the taxpayer and the tax administration. The knowledge gained can in turn be applied to tailor products and interventions and to design processes and solutions that improve the overall effectiveness of the tax system.

Future direction

The global context in which tax administrations operate continues to change at an unprecedented pace. New technologies, increasing global collaboration and the tightening of tax rules provide tax administrations with new opportunities and tools to improve compliance outcomes for the large business taxpayer segment. These developments together with advances in the sophistication of risk-assessment will continue to build the individual and collective capacity of tax administrations to effectively deal with existing and emerging tax risks in a timely manner.

As countries move to implement BEPS, those businesses that continue to engage in aggressive tax avoidance arrangements will experience a more concerted effort both on a domestic and international level to combat these arrangements, and to make non-compliance more difficult.

At the same time, effective implementation of BEPS measures by tax administrations demands reconsideration of relationships with largely compliant taxpayers and in particular those enterprises operating in multiple jurisdictions. While tax administrations acquire increased confidence about risk assessment, taxpayers are looking for assurance that their compliance efforts are being recognised with reduced burden and greater certainty. Transparent engagement can go a long way toward encouraging compliant behaviour, identifying opportunities to reduce taxpayer risk and limit the potential for tax controversy. The higher this level of engagement can be, both on the part of the taxpayer and on the part of the tax administration, the greater its potential impact will be on compliance behaviour and the promotion of trust.

The implementation of collaborative approaches, which can take many forms, will therefore be an important priority in an environment where taxpayers and tax administrations alike seek to have cost-effective confidence and certainty. It will be beneficial if all stakeholders can move to a place where avoiding tax disputes and thereby creating certainty, will be recognised and valued over resolving problems after they occur.

Notes

1. For further information on the BEPS package please see www.oecd.org/tax/beps/.
2. For further information on JITSIC please see www.oecd.org/tax/forum-on-tax-administration/jitsic/.

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Chapter 13

Improving mutual agreement procedures

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Nearly all tax treaties between countries provide for a mechanism, known as the mutual agreement procedure (MAP), for resolving disputes as to the application and interpretation of the treaty provisions. Over time, however, the number of unresolved disputes within the MAP procedure has increased, creating uncertainty for both taxpayers and tax administrations.

This chapter provides an overview of initiatives that have been taken to improve the MAP process, including the recent minimum standard agreed under Action 14 of the OECD/G20 Base Erosion and Profit Shifting (BEPS) project. This will provide context for a discussion of opportunities and approaches that countries might wish to consider in order to prevent disputes reaching MAP and, where they do, to improve the effectiveness of the MAP process.

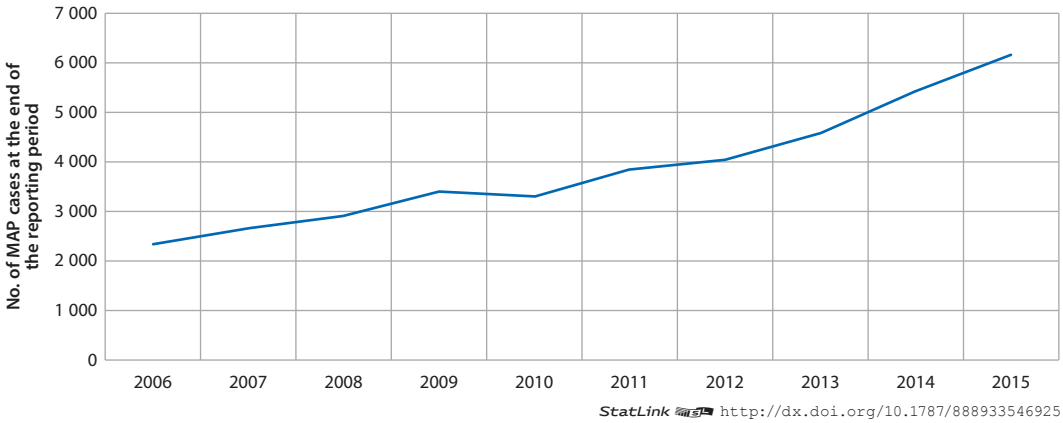
The primary purpose of most tax treaties, also known as double taxation agreements, is to eliminate double taxation of the same transaction or income and to prevent fiscal evasion. Where these occur, they can have significant economic costs, including for trade and investment. Tax treaties therefore set out agreed rules as to the allocation of tax on cross-border transactions and income of taxpayers resident in the signatory countries.

As with any agreement, however, the parties may sometimes take different views on the application or interpretation of those rules in a particular context. Where such a dispute arises, then the vast majority of tax treaties provide for a formal process for dispute resolution through a mutual agreement procedure (MAP). Such a procedure is set out in Article 25 of the OECD Model Tax Convention (Convention). The Convention is used by most countries as the framework for negotiations on tax treaties. MAP is of fundamental importance in minimising incidents of double taxation and taxation otherwise not in accordance with applicable tax conventions.

In the last decade, MAP has increasingly shown signs of strain, raising concerns among taxpayers and governments given its central role in the international tax system. According to recent statistics, MAP caseloads have increased in pure numbers as well as in the average time it takes for jurisdictions to reach agreement. It is important to note in this context that MAP is not an independent or binding arbitration process but a discussion between countries.

At the end of 2015, the total number of open MAP cases reported by OECD member countries was 6 176, compared to 5 429 in the 2014 reporting period and 2 352 in the 2006 reporting period (see Figure 13.1).

Figure 13.1. **Evolution of the inventory of MAP cases in OECD member countries, 2006-15**



Source: OECD (2017), Mutual Agreement Procedure Statistics for 2015, www.oecd.org/ctp/dispute/map-statistics-2015.htm.

Improving the effectiveness of the MAP process is an important element of the BEPS project, designed to provide certainty and predictability and thereby complement the actions that counter BEPS.[1] Action 14 of the BEPS project, Make Dispute Resolution Mechanisms More Effective, is intended to "develop solutions to address obstacles that prevent countries from solving treaty-related disputes under MAP, including the absence of arbitration provisions in most treaties and the fact that access to MAP and arbitration may be denied in certain cases" (OECD, 2013).

The outcome of Action 14 – discussed in more detail below – is an agreed minimum standard to ensure disputes related to tax treaties are resolved as quickly and efficiently as possible, supported by a peer review and monitoring mechanism (OECD, 2015).

Precursors of the BEPS Action 14 minimum standard

Action 14 is the most recent mechanism to improve the MAP process, building on earlier multilateral and bilateral initiatives. An example of a bilateral initiative is the administrative agreement entered into by the United States and the United Kingdom in 2000 "to assist taxpayers in the conduct of cases under the MAP, to ensure taxpayers know what they can expect from the competent authorities, and to make the MAP as expeditious and effective as possible" (IRS, 2000).

On the multilateral side, in 2007, the OECD Committee on Fiscal Affairs (CFA) released its Manual on Effective Mutual Agreement Procedures (MEMAP), which provided basic information on the operation of MAP. It also set out best practices that competent authorities and taxpayers could follow to support and improve the MAP process and other cases eligible for MAP consideration (OECD, 2007).

The multilateral approach was taken further by the Forum on Tax Administration (FTA) through the creation of the FTA MAP Forum in 2014. This forum provides a means for FTA-member countries to surface concerns and collaborate on improving the effectiveness of MAP programmes. This is done on the basis of a Strategic Plan, which commits participants to "ensure that the principles embodied in [the participant's] global network of tax conventions are properly applied to minimise to the fullest possible extent incidents of double taxation, unintended double non-taxation and taxation otherwise not in accordance with the provisions of applicable tax conventions" (OECD, 2016a).

Specific topics addressed in the Strategic Plan include the need for competent authorities to:

- Maintain an adequate number of experienced MAP case handlers,
- Retain an appropriate degree of independence from internal practices and policies relating to revenue collection,
- Approach the MAP process from a posture of mutual trust and co-operation,
- Commit to a programme of continuous review and implementation of internal improvements in handling the MAP process, and
- Ensure taxpayers have effective legal and practical access to MAP at the conclusion of an audit, if not before.

BEPS Action 14 minimum standard

These bilateral and multilateral initiatives laid the groundwork for Action 14 of the BEPS project. Action 14 goes beyond earlier initiatives through its inclusive scope and mandate to participate in a peer review and monitoring programme. It also sets a clearly defined target for resolving MAP cases within an average timeframe of 24 months.

In September 2016, the FTA MAP Forum together with a Focus Group on Dispute Resolution formed by the CFA completed work on the structure and governance of the peer review programme. The programme's details are set forth in Terms of Reference and an

Assessment Methodology (see OECD, 2016b). Together with supporting documents, these set out the process for conducting a fair and informative review process, including separate questionnaires for the reviewed jurisdiction, peers and taxpayers. Jurisdictions must also submit annual statistical reports, including on the amount of time it takes to close MAP cases.

Together with the OECD FTA MAP Forum Secretariat, the FTA MAP Forum will review each jurisdiction on its progress towards meeting the elements of the Article 14 minimum standard and then document its findings in a report. These elements of the minimum standard are divided into four main areas:

- Prevention of disputes.
- Assurance of appropriate and effective access to MAP.
- Efficient resolution of MAP cases, including seeking to resolve cases within an average of 24 months and ensuring that adequate resources are provided to jurisdictions' MAP functions.
- Timely implementation of MAP case resolutions.

The reports, which are already underway, are prepared on the basis of an agreed assessment methodology.

The Action 14 peer review programme incentivises jurisdictions to find concrete ways to improve their own handling of the MAP process. For example, in order to progress towards the standard of seeking to resolve cases within 24 months, jurisdictions may need to streamline their internal processes for evaluating cases and producing and responding to position papers. The peer review programme also incentivises jurisdictions to work jointly to meet the 24-month timeframe, including through adequate preparation prior to meeting and agreement to conduct their discussions in good faith and in a constructive manner.

The peer review programme also promotes efforts to improve the MAP process beyond reducing case closures to 24 months. Element 1.4 of the Action 14 minimum standard requires that countries become members of the FTA MAP Forum and participate fully and collectively in its work. In addition to timeliness, other elements essential to improving the MAP process are consistency and predictability, effective management of MAP case inventories and efforts to reduce incoming MAP cases altogether by preventing disputes.

Innovative approaches to prevent disputes and for quicker resolution

In order to achieve significant reductions in current MAP case inventories and the average time for completion, competent authorities should continue to explore the range of approaches that might help in preventing and resolving MAP cases.

Although each case presents its own facts and circumstances, the majority of MAP cases are similar in the facts and issues they present. This observation allows for the exploration of innovative case resolution techniques.

- *Safe harbours:* An approach that could lead to quicker resolution is the adoption of bilaterally agreed-upon safe harbours. These provide certainty that cases presenting the same essential facts will be treated in an agreed, consistent way. Although safe harbours are most often used as provisions in domestic law, they could also be explored and adopted between competent authorities, particularly in relation to the

more common disputes, such as intercompany transactions between affiliates or assertions of the existence of, and profits attributable to, a permanent establishment.

- *Agreement of frameworks for handling cases:* Though not a safe harbour *per se*, it is possible to agree a framework for handling more common cases. For example in 2015 the US and Indian competent authorities agreed a framework for handling intercompany cases that represented approximately half of their shared MAP case inventory. This incorporated a systematic approach for deriving individualised arm's length benchmarks on the basis of data points specific to the tested parties.
- *Strict time limits for common cases:* One straightforward approach requiring modest efforts would be for competent authorities to agree upon strict time limits – well below 24 months – for the handling of cases that present common, familiar fact patterns or cases of modest size. Those concerning common services transactions and allocations of intercompany services might often fall into this category. If analysts cannot reach agreement within the expedited time frame, such cases could be rapidly elevated to the executive level.
- *Advanced Pricing Agreements (APA):* APA programmes are an effective tool for managing MAP case inventories. By providing tax certainty for both tax administrations and taxpayers on a prospective basis, MAP cases that might otherwise result from audits can be entirely avoided. The administrative advantages of bilateral and even multilateral APAs are amplified when they include roll-back provisions. As well as providing certainty for future years, roll-back can help resolve earlier years either under audit or already in MAP where there is similarity in the relevant facts and circumstances.
- *Advanced Competent Authority Procedures (ACAP):* ACAP can provide a similar return to APAs on upfront administrative investment. If a MAP case is already in negotiation, then there are obvious efficiencies if the two competent authorities are able to address not only years currently before them, but also address the same issues that arise in subsequent years. This is on the assumption of similarity in relevant facts and circumstances. Resolving "ACAP" years in the MAP discussions is tantamount to negotiating a bilateral APA with a roll-back provision, alleviating the burden of a separate audit and MAP process.

Due to domestic legal regimes, a bilateral APA programme and ACAP agreements may not be available to a particular competent authority to manage its MAP case inventory. However, even those competent authorities that lack such tools can avail themselves of other approaches for improving the efficiency and conduct of MAP. For example a competent authority can improve the MAP process by filtering out weak cases on a unilateral basis. This is in accordance with the obligation contained in the mutual agreement article to withdraw adjustments raised by its own examination function that are not justified and to otherwise resolve the taxpayer's request without presenting the case to its treaty partner.

Such unilateral actions need not be taken only when a taxpayer formally presents its case to the competent authority. Some competent authorities have reported participating in internal panels within their tax administrations that review the propriety of international examination adjustments before they are actually made. Such early intervention is consistent with Action 14's recommendation that countries develop "global awareness" within their tax administration. Such wider awareness can help in reducing the number of MAP cases and allow resources to be directed to reducing the processing times of remaining cases.

Note

1. For further information on the BEPS project please see www.oecd.org/tax/beps/.

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Chapter 14

The measurement of tax gaps

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A key objective of all tax administrations, whether explicit or implicit, is to improve tax compliance and minimise the tax compliance gap. An increasing number of OECD countries are estimating tax gaps and publishing their findings, particularly for value added tax (VAT). Estimation of tax gaps over time, as well as one off, or partial tax gap analysis, can provide valuable insight to inform policy and compliance strategies and help revenue authorities to understand the scale of non-compliance and emerging risks.

While the tax gap has intuitive attraction for both the public and political representatives, it is a difficult concept to define precisely. Estimation is also difficult as much of the tax gap is either deliberately concealed from view and/or data may be difficult to find. The measurement and publishing of tax gaps should therefore be navigated and communicated carefully. Limitations of tax gap estimates mean they are not a good basis for explicit performance targets.

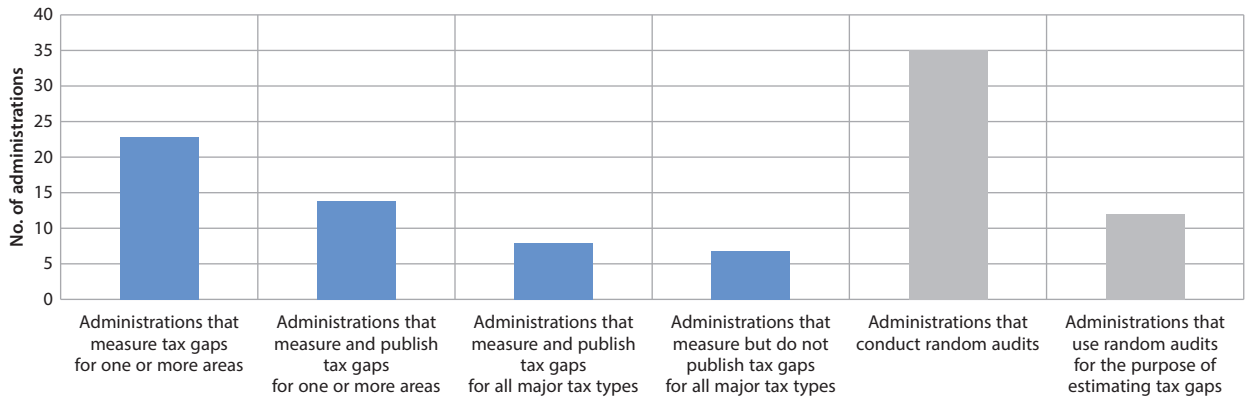
This chapter sets out some issues to consider in tax gap measurement.

What is the tax gap and why measure it?

The tax gap is the difference between tax due and tax collected. This however raises a number of questions of definition. For example what is the tax due, is it tax assessed or the total tax that should be assessed if there was full information? How the impact of policy should be captured (for example as regards potential avoidance)? Should tax collected include tax that is not collectible, for example because the taxpayer is insolvent, or cannot be collected within a particular period?

While different countries take different approaches to defining the tax gap, the main consideration is that any chosen approach contains information that is useful for understanding the relative size and nature of non-compliance over time, including in the components of the tax gap. This can help administrations identify trends and risks to the tax base across different taxes and/or customer groups and inform approaches to tackling non-compliance, whether through policy changes or compliance interventions. In addition, when the tax gap components are brought together into an aggregate figure, it provides a strong starting point for wider strategy development, informing prioritisation and longer-term resourcing. Some of the data sources used for compiling tax gaps, such as data from random audits, can be also bring benefits in improving risk identification as well as sources of non-compliance or under-reporting in particular areas.

Figure 14.1. **Tax gap measurement and random audits**



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Source: Tables A.139 Tax gap and A.140 Random audits.

Measurement and design options

Tax gap design will be influenced by the availability of data and user requirements. The two main approaches used for tax gap measurement are:

- **Top-down:** The tax base is used to calculate a theoretical value of tax that should be collected, and the actual amount of tax collected is subtracted from this to estimate the tax gap.
- **Bottom-up:** Detailed risk information, administrative data sources, or other bottom-up modelling techniques are used to build a picture of the tax gap for discrete areas.

Where there are robust external surveys, it may be relatively easy to construct top-down tax gaps. Bottom-up tax gaps rely on combining good operational knowledge with management information systems and can be more difficult. For example, it may be that

avoidance and/or large business tax risk is not sufficiently understood and distinct that it can be included in the estimates. If random audits of taxpayers are a viable option, they can be used to build a good understanding of tax losses for large populations. If these statistics are to be used to influence strategy, it may be possible to design the audits in a way which can inform and evaluate policy changes.

Where feasible, a better picture can be drawn by using both top-down and bottom-up estimates – the former capturing all non-compliance and the latter providing greater insight into the behaviours contributing to aspects of the tax gap. Additional factors to consider might include:

- ***Resourcing:*** The resource requirement to generate the estimates and to assure methods and findings internally is likely to be significant. The most significant implication is caseworker time to conduct enquiries into randomly-selected taxpayers, particularly where this accounts for a significant proportion of compliance resource. There is an opportunity cost of using trained tax professionals for tax enquiries which are not targeted due to risk information. There can also be a significant analytical requirement (in the United Kingdom this is around 12 full time analysts).
- ***Availability of data:*** Data availability will differ between tax types and approaches. Some methods such as random audits will require investment over a number of years.
- ***Governance arrangements***: Consideration needs to be given to analytical integrity, quality assurance and sense checks of findings. These approaches also need to provide mechanisms to allow internal debate and agreement on subjective assumptions.
- ***Management attention***: The management and any release of tax gap estimations, which can generate significant public and political debate, is likely to require senior management focus and support.
- ***Whether to publish***: This is good practice but has consequences, in particular the risk of misunderstanding and consequent misuse, and should be seen in the wider context of transparency and public accountability.
- ***Frequency of updates*****:** Whilst year on year changes are limited in meaning, there are benefits of maintaining a series over time and as up to date as possible. Retaining a permanent team of tax gap analysts supports consistency of approach and knowledge retention. If resources are constrained, periodic full updates could be interspersed with interim updates using quicker methods, for example risk analysis or tax efficiency metrics.

Box 14.1. **Measuring tax gaps**

In the ***United Kingdom***, Her Majesty's Revenue and Customs (HMRC) define the tax gap as "The difference between the amounts of tax that should, in theory, be collected by HMRC, against what is actually collected."

The United Kingdom publishes an annual estimate of aggregated tax gaps each year, using a top-down and bottom-up approach, and has a time series from 2005-06. Around 30 component estimates are compiled from a wide range of sources and methods, by government analysts working under a code of practice for official statistics to assure independence and quality. The UK Code of Practice for Official Statistics was published as required by the Statistics and Registration Service Act 2007. It sets out common standards that should be followed by all UK

Box 14.1. **Measuring tax gaps** *(continued)*

organisations that produce official statistics (https://www.statisticsauthority.gov.uk/monitoring-and-assessment/code-of-practice/). In contrast the United States, Inland Revenue Service (IRS) uses a periodic task force approach for its federal taxes. This enables them to compute more precise, albeit infrequent, estimates with more detailed breakdowns, which can be used to calibrate their risk models.

Top-down: The tax base in the United Kingdom is used to calculate a theoretical value of tax that should be collected, and the actual amount of tax collected is subtracted from this theoretical value to estimate the tax gap: VAT gaps are estimated this way by comparing economic data on consumption with tax receipts; Excise tax and duty gaps are estimated by using volume estimates of consumption to calculate a theoretical tax base, then comparing this with excise receipts.

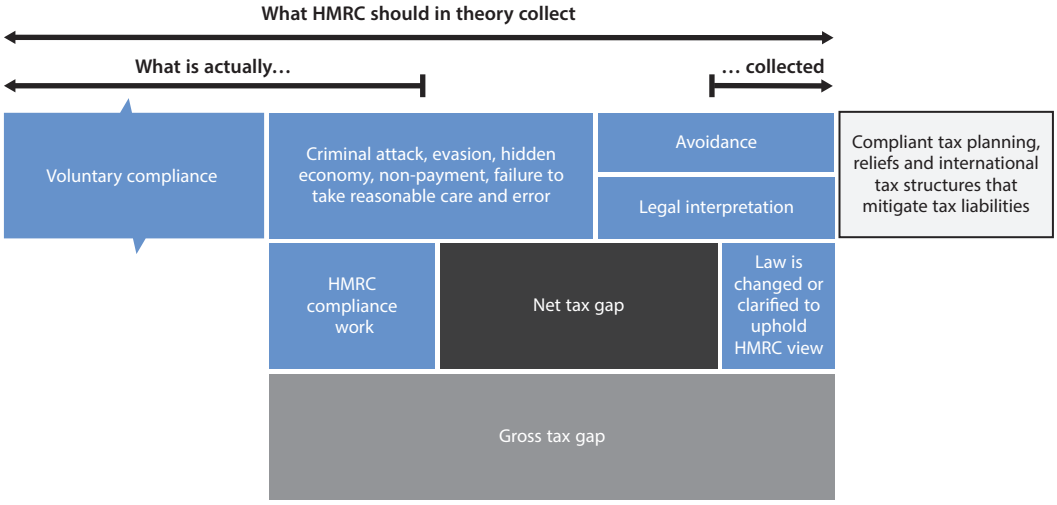
Bottom-up: HMRC uses internal data and operational knowledge to identify areas of potential tax loss. The best information available is used for each area and aggregated to create an overall tax gap: where there are large populations, audits are conducted of a random sample of taxpayers and their results are grossed-up to form an estimate of the tax gap; where HMRC tracks risks intensively, such as for avoidance and large businesses, management and operational information on identified risks and compliance yield is used; and where information is limited, HMRC uses illustrative models – for example in estimating the size and nature of the hidden economy.

For all methods tax gap analysts develop strong communication links with internal HMRC policy customers. This helps analysts to understand the tax systems and processes involved in data capture, and the operational compliance context. It also informs explanations and understanding of emerging tax gap results.

A simplified diagram representing HMRC's interpretation of the tax gap is shown in Figure 14.2.

Source: United Kingdom, HM Revenue and Customs (2017).

Figure 14.2. **HMRC's interpretation of the tax gap**



Note: The components of the figure do not represent the actual scale.

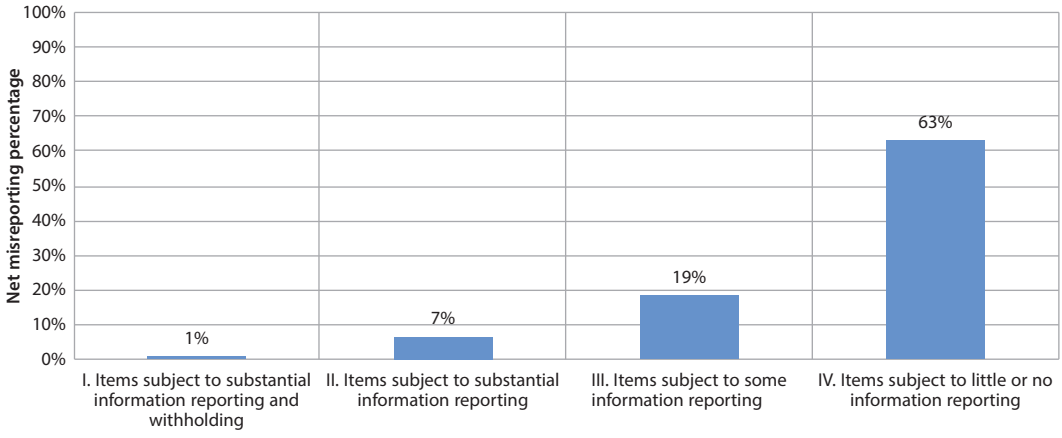
Source: United Kingdom, HM Revenue and Customs (2017).

Alternative approaches to measuring the tax gap

Some countries, even with limited resources, have been able to build a reasonable understanding of their tax gap through a mix of top-down estimation, surveys and risk-based models. This may also include an in-depth understanding of one area, rather than a whole tax gap. International Monetary Fund (IMF) technical assistance to Estonia is an example of this (IMF, 2014). Other administrations have investigated tax gap estimation and reached a conclusion that the costs of measuring tax gaps outweigh the benefits, given data availability, resource investment required and the levels of uncertainty involved. Sweden, for example, has published a tax information map, which gives an indication of the information regime around different taxes and the changing levels of risk (Skatteverket, 2014). It followed an exercise to update their tax gap estimates. However, they concluded they did not have the necessary data to update their tax gap estimates. Some non-OECD countries have made good progress on developing tax information maps.

A tax information map approach builds on the clear finding set out in the United States IRS report on tax gaps, namely improving information assurance on tax regimes reduces the scope for non-compliance (IRS, 2016). Administrations can use this approach systematically to help reduce the tax gap, avoiding the interim measurement challenges.

Figure 14.3. **Effect of information reporting on individual income tax reporting compliance, tax years 2008-10**



StatLink http://dx.doi.org/10.1787/888933546963

Source: IRS (2016), "Federal Tax Compliance Research: Tax Gap Estimates for Tax Years 2008–2010" (report), https://www.irs.gov/pub/irs-soi/p1415.pdf.

Random audit programmes are considered a high quality method to estimate tax gaps in large populations of registered taxpayers. Deployed alongside risk-based audits, they can be an effective deterrent to taxpayers and provide a strong evidence base for a range of compliance analysis. However, they are costly to administer and reduce the compliance resource available for risk-based audits.

Some countries are using and exploring methods for estimating tax gaps using risk based compliance information. This is difficult as risk based audits are more likely to have a higher incidence and amount of yield. This selection bias needs to be identified and controlled for before tax gaps can be estimated for the whole population. The Heckman two-stage estimation procedure is an econometric tool that allows analysts to take into

account the probability of audit and the characteristics that drive incidence and scale of yield. Application depends on the observable data around risk selection. The Italian Revenue Agency has used a Heckman approach to estimate tax gaps this way. Other fiscal authorities are also considering this approach and variations such as choice-based sampling. Italy makes an aggregate estimate of tax evasion each year using "top-down" methodology, and the resulting tax gap reflects overall non-compliance for Italy's personal and corporate taxes, VAT and regional tax on productive activities.

Limitations of tax gap estimates

While tax gap estimates can provide a rich source of data for tax administrations, they do have a number of limitations which means that they are not a good basis for explicit performance targets (which may lead to suboptimal resourcing and prioritisation decisions). The main limitations are:

- ***Error and Uncertainty:*** There are many sources of error including systematic errors in the assumptions used, missing data and standard errors due to sampling. Whilst users can place heavy scrutiny on annual movements in data, the scale of error and uncertainty makes year on year changes limited in meaning and it is better to observe the longer term trends. For this reason, few tax administrations publish data annually.[1]
- ***Lagged data*:** Many tax gap estimates are heavily lagged, for example the United Kingdom published tax gap estimates for 2014-15 in October 2016. Within this some component estimates were projected forward from actual data relating to the 2012-13 tax year. The reason for this lag is that compliance interventions may take a long time to complete – particularly the high yielding cases.
- ***Wider factors:*** Tax gaps can change due to economic factors beyond the control of tax administrations – such as changes to the tax base including from economic cycles. Changes to tax policy, for example movements in tax rates, can shift the tax gap up or down. These can be mitigated to an extent by expressing the tax gap as a percentage of tax liabilities, rather than as a cash value.
- ***Volatility and Revisions:*** Tax gaps can change, and be revised for a number of reasons unrelated to actual taxpayers' behaviour. These include new or revised economic data used in modelling the tax base, new data from compliance activity where cases are settled late and differ from forecast yield, and from improved methodology or changes in data source.

Note

1. The exception is for VAT, where European Commission publishes VAT gap estimates annually for EU-26 and EU 28 member countries (CASE, 2016).

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Chapter 15

Third-party data management – the journey from post-assessment crosschecking to pre-filling and no-return approaches

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The use of third party data plays an important role in supporting modern tax administrations processing of tax returns and ensuring complete and accurate information in assessments. While post-assessment crosschecking of information remains the norm in most Forum on Tax Administration (FTA) countries, many administrations report strategies to extend the range of data sources used to improve both coverage of the regime and the quality of the pre-filled return. The majority of countries report that moving to pre-assessment verification is a high priority in their current compliance strategy, as is extending the use of data provided from third parties.

This chapter describes the pathway from post-assessment crosschecking to pre-filling and, where appropriate, no tax return approaches.

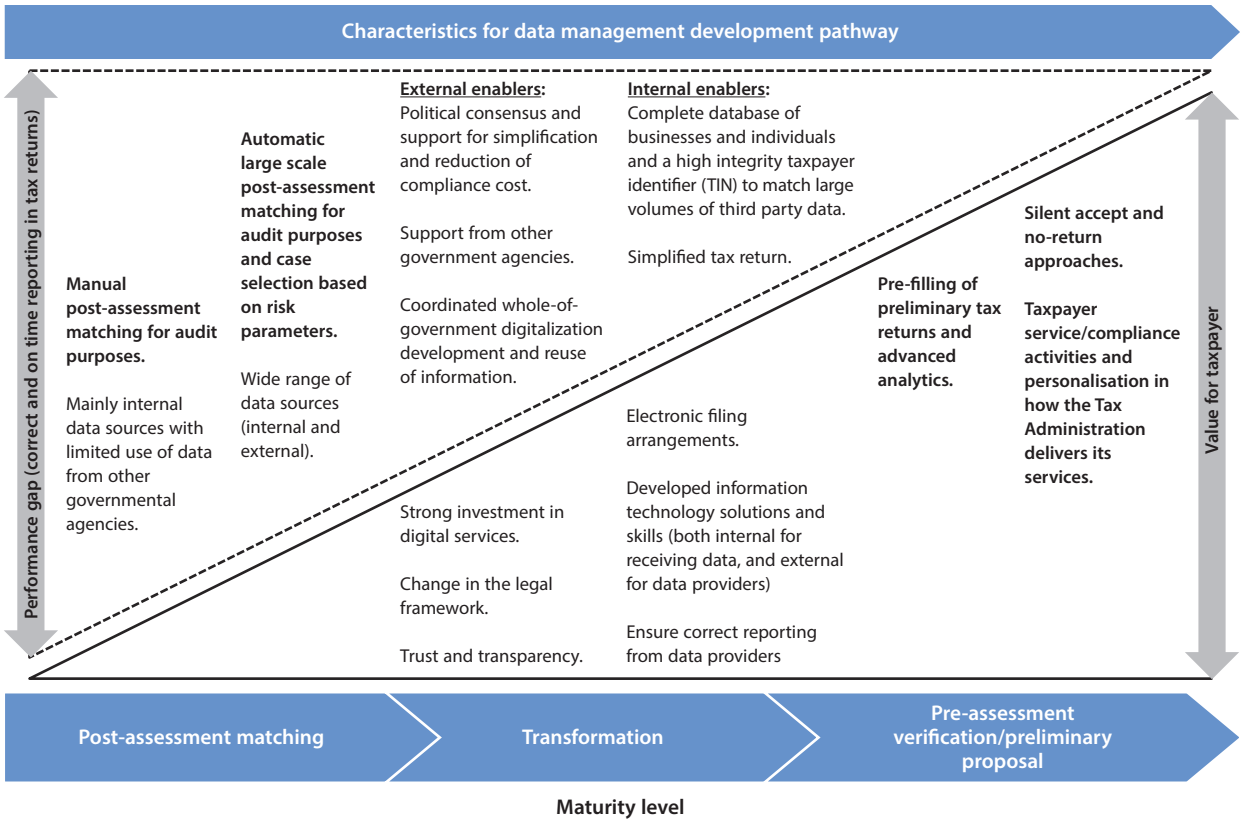
The pre-filled "pathway"

Tax administration is undergoing a fundamental change, facilitated by advances in technology and the availability of data, from a system based on filing and post-assessment cross-checking to one that delivers pre-assessment verification.

Ultimately the combination of technological developments and the integration of data into redesigned tax administration systems, including third-party data used by taxpayers in their day-to-day life, have the potential to make tax administration close to invisible for many taxpayers. Embedding compliance, including upfront verification, in the design of tax administration systems should substantially reduce administrative burdens, freeing up taxpayer and tax administration resource, while improving overall compliance.

These benefits, including a better taxpayer experience and greater taxpayer confidence in the integrity of the tax system, can also be realised to a greater or lesser extent in different taxpayer segments during the transition to full integration of tax-relevant data (including on identity). For example, for many employees with income only from employment, interaction with the tax system is already minimal in a growing number of countries, with tax taken at source and limited or no end of year "square-up process" or formal reporting. Greater use of third party data can also already improve post-assessment actions, enhance risk assessment and, through the use of advanced analytics, inform wider tax administration strategies. Even the simple capability to access third part data, as a number of studies have shown,[1] can also have a strong positive impact on compliance.

Figure 15.1. **A pre-filling maturity "pathway"**



Source: Norway – Norwegian Tax Administration (2017).

Figure 15.1 depicts the possible pathway from post-assessment to pre-assessment verification, with a description of the characteristics of different levels of maturity is below. The rest of this chapter outlines the steps in this pathway.

Post-assessment

Currently most tax administrations systems are based on the filing of individual income tax returns on an annual basis, with one-third of these returns still filed in paper form (see Chapter 6). Returns are generally regarded as "self-assessed" and processed by the administration as filed, with only minimal direct checking. Any verification or auditing of the return is conducted post-assessment or post-filing whereby the tax administration will seek to verify the accuracy of tax returns. This can be done by:

- ***Acceptance*** of the tax return depending on judgements about the risk of non-compliance in a particular taxpayer group.
- ***Cross-checking*** amounts reported, on a full or sample basis, with information from third-party sources, such as returns from employers, information from banks and financial institutions, information provided from other government agencies, information on overseas accounts received under the Common Reporting Standard etc.
- ***Audits of particular taxpayers***, either on a random, sectorial or a risk basis. The increase of information in digital form more easily allows anomalies and other risk factors to be picked out.

When differences are identified between the amount assessed on the basis of tax returns and as a result of information in the post-assessment phase, the tax administration will reopen the assessment and make adjustments. This is resource intensive for the tax administration, potentially involving extensive interaction with the taxpayer, accounting for some of the 30% or overall tax administration resources devoted to audit and verification activity. Different levels of maturity in this phase are characterised by the coverage of data, the number of sources, the technology used to support crosschecking and awareness of taxpayers as to what information is available to the tax administration from third party data providers.

Box 15.1. **Combining information from multiple sources**

In ***New Zealand***, the intent is to move towards increasing levels of pre-population of data supported through enhanced and improved data sharing (both public and private information) to significantly reduce customer effort and provide customers the ability to easily confirm their tax position through smart, easy to use online digital services. This includes a focus on policy intent, significant technological change and simplified and integrated business processes to support customer outcomes.

In ***Russia***, assessment of property taxes is done on the basis of information which is supplied to the tax administration in an xml file format by property registry which provides descriptions of taxable properties and tax base values. The information on established tax rates is received from local governments. Tax information accompanied by descriptions of taxed properties, regardless of their location, can be accessed by taxpayers online through a personal secure account in the tax administration's web portal.

Box 15.1. **Combining information from multiple sources** *(continued)*

In ***Singapore***, the "No-Filing Service" (NFS) provides a seamless experience using income tax data from employers and other government bodies which has eliminated the need to file personal income tax returns for many taxpayers. The NFS was piloted in 2007 with 45 000 taxpayers and has grown to 1.39 million in 2015. Taxpayers can preview their Notice of Assessment on the web portal even though they need not file. The use of reliable third party data to automate the tax filing process reduces the risk of non-compliance and the need for contact between the customer and the revenue authority.

Source: New Zealand – Inland Revenue, Russia – Federal Tax Service, Singapore – Inland Revenue Authority of Singapore (2017).

Transformation phase

The development and transformation, from post-assessment verification to a situation where the volume and the quality of data allow the tax administration to move to pre-assessment and possible pre-filling, can be a lengthy journey. It is a result of a long-term strategy using technology to develop efficient and user-friendly solutions for the tax administration, providers of third-party data and taxpayers. An important part of this is identifying data sources – including from other parts of local or national government – and understanding how such data sources can be integrated into tax administration systems (including the question of whether to adapt legacy systems or make more fundamental changes, including the possibility of using commercial off-the-shelf systems). This can also involve tax administrations working with third-party providers directly or through a wider dialogue on acceptable formats and standards. In parallel, relevant legislation may require adjustment, including possible mandating of third party reporting of tax-related information or withholding. Tax administrations must also develop internal capacity and skills to receive and process data including for use in advanced analytics (OECD, 2016). Many tax administrations are already reporting substantial increases in recruitment of people with such skills.

Box 15.2. **Collection of data for third parties**

Tax administrations are also using their information gathering powers to obtain information on those operating in the rapidly growing, sharing economy. The Australian Tax Office has been working with the platform facilitators to obtain data on drivers and people letting properties. While in Finland legislation that enables the collection of third party information has been used to obtain data to monitor online credit/debit card payments and detect possible unregistered remote sellers and VAT EU distance sellers. Where a significant volume of payments are identified as being made to an unknown person, this can be investigated to determine if the person is an unregistered business. To date, the tax authority has identified 188 unregistered distance sellers, amounting to sales of EUR 50 million. Based on sales, the estimated VAT loss is EUR 12 million yearly.

Source: OECD (2017), "Technology Tools to Tackle Tax Evasion and Tax Fraud", www.oecd.org/tax/crime/technology-tools-to-tackle-tax-evasion-and-tax-fraud.pdf.

This transformation process requires political and public support given that it will involve major change management programmes, changes in how tax administrations interact with taxpayers (and thus a large education element) and will involve public discussion about data privacy and security issues. This may be part of a broader whole-of-government digitalisation process to promote simplification and reuse of information.

A fundamental enabler in processing third-party data is a comprehensive electronic infrastructure for exchange of information between the tax administration, other public sector agencies, individuals and businesses. This will require that systems can talk to each other and that data is of good quality and can be integrated easily. This requires the active engagement of the tax administrations with providers of data, as well as software developers, about formats, compatibility and approach. In particular, consideration needs to be given to the ability to make changes with short lead times and at low cost given the pace of technological change. Solutions must also be designed to handle high volumes during peak filing periods, storage and extraction of data for audit (internal or external) or wider analytical purposes.

In principle, providers of third party data can be exposed to similar obligations of taxpayers given their role in the broader economy. Taxpayer's obligations are usually defined as the obligation to register in the tax system, to file tax returns, pay on time and the obligation to ensure that information is complete and accurate. Similar obligations can be placed by legislation on providers of third party data, as they are already in some circumstances where withholding is required, including the obligation to pay on time. Legislation may also be necessary for data protection purposes, ensuring that data is collected, used and retained for specified purposes and kept confidential.

Even where legislative obligations are brought in, tax administrations must facilitate voluntary compliance for third-party data providers as they do for taxpayers with the necessary information and support to meet their obligations. In addition, tax administrations must use a range of verification actions and risk-based approaches to monitor the accuracy and quality of data received from third-party data providers. This means a shift from using resources to verify information received from taxpayers, to focus on ensuring accuracy in data reported from third parties.

Box 15.3. **Working with third parties to obtain data**

To support high levels of voluntary compliance by taxpayers, the Norwegian Tax Administration (NTA) works closely with third party data providers to ensure they have the information and support they need to meet their obligations at the lowest possible cost.

An important feature of this support has been the development of Altinn, a portal for electronic dialogue and information exchange between public sector agencies, individuals and businesses. Altinn began as collaboration between the tax administration, Statistics Norway and the Brønnøysund Register Centre and has seen its use increase significantly since its launch in 2002. As of February 2016 forty three organisations were registered as service owners. One of the newest services on the portal is an initiative between NTA, the Norwegian Labour Welfare Administration and Statistics Norway, that gives employers access to reported salaries and employment information via single point of contact for all three agencies. A side benefit of this work has seen the harmonising of due dates which has allowed the agencies to reduce third party burden, by reducing the number of electronic forms businesses need to submit from five to one.

Box 15.3. **Working with third parties to obtain data** *(continued)*

With most initiatives, launched by the NTA to increase compliance from third party providers, requiring changes in the law, it is important to have an effective overall legal framework that creates and supports the third party reporting regimes. The NTA also has established a forum for dialogue with intermediaries and regularly hosts training and education events to make businesses, particularly small and medium enterprises, aware of their obligations as third party data providers. Beyond this it is important that administrations have a programme of monitoring and intervention in place to detect and deter insufficient or inaccurate third party reporting. In this regard, the NTA has recently moved resources from its traditional audit operations to support actions aimed at ensuring sufficient and accurate information from third party data providers.

Source: Norway – Norwegian Tax Administration (2017).

Pre-assessment verification

At some point the data flow from third party data providers together with external and internal enablers and changes in the design of tax administration systems, will allow tax administration to verify returns immediately, or to pre-fill tax returns or, eventually, to dispense with them altogether.

In addition to the reduction of burdens and costs, choices here will also depend on a wider public debate about the connection of taxpayers to the tax system, in particular how visible should tax obligations be to taxpayers. This is partly a wider political issue but also has implications for compliance where data is missing, in particular as regards shadow economy activity.

A number of tax administrations have already moved to pre-filling of tax returns for some taxpayers, which the taxpayer then has to either agree (which may be by deemed agreement after a certain period of elapsed time) or provide further information which may lead to an upwards or downwards adjustment. The data needed for pre-filling is simplest in the case of employees with only one source of income and where the employer has provided the relevant income information to the tax authority. As a minimum this will require taxpayer identity, tax history, income, and credit and deduction related information (which may already be embedded in the employer's systems). The most frequent sources used for pre-filling, as reported by jurisdictions participating in this publication, are: data on salary and wages provided from employers; dividends and interests from banks and financial institutions; and pension information from other government agencies (see Table A.93).

Tax administrations may choose to make a shift from post-assessment crosschecking to pre-filling – which will implicitly reveal what information is available from third parties – when the external and internal enablers are able to provide a sufficient data of appropriate quality. Careful consideration needs to be given to the question of what is "sufficient data". While full information is not a pre-requisite where taxpayers remain under an obligation to confirm that all taxable income has been reported, significant gaps can also lead to significant non-compliance. This can either be because the taxpayer does not believe that the tax administration has access to the data or the taxpayer just assumes that the amount assessed is accurate.

New data sources also may not always be immediately used in pre-filling because of quality issues or because of difficulties in integrating such data. This needs to be taken into account when moving to pre-filling. For example, we will see a large increase in the amount of data available on accounts of taxpayers held overseas as exchange begins under the Common Reporting Standard (CRS). Due to the fact that pre-filling of tax returns requires a high degree of certainty, in the early days of exchange under a new standard such as the CRS, tax administrations may exercise caution before using the data in pre-filling tax returns until they are sufficiently confident about the quality of the data and the matching of that data against individual taxpayers.

Box 15.4. **Bringing it together**

In ***Australia***, the Australian Tax Office (ATO) provides the opportunity for clients to choose to pre-fill information directly into individual income tax returns, including salary, interest and private health insurance data sourced directly from employers, banks and insurers. The information provided through this system helps the ATO improve services and makes it easier for those that want to comply to do so and harder for those that choose not to. In the last financial year, the ATO made close to 96 million transactions available for pre-filling, with taxpayers downloading more than 54 million of those transactions. It used over 636 million transactions reported by third parties to match individual income tax returns and other income statements. The ATO is using increasingly sophisticated data analytics and risk modelling to identify and review income tax returns that may omit information or contain incorrect statements.

The ATO conducted around 450 000 reviews and audits resulting in revenue adjustments of over AUD 1.1 billion in income tax. Cases involved omitted income or over-claimed entitlements such as deductions or offsets, including those significantly different to claims made by taxpayers in similar circumstances.

Source: Australia – Australian Tax Office (2017).

Note

1. See for example Kleven et al. (2010). The study finds evasion rate to be very small for income subject to third-party reporting, but substantial for self-reported income. This project analysed a randomised tax enforcement experiment in Denmark with a sample of over 40 000 individual tax filers.

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Part III

Annexes

Annex A

Data tables

Annex A contains the set of tables which hold the data provided by tax administrations in response to the 2016 tax administration survey, and that were used to prepare information contained in this report.

It is available in electronic form only and can be found at: http://dx.doi.org/10.1787/tax_admin-2017-en.

Annex B

Participating tax administrations

Country	Tax administration	Website address	Currency code
Argentina	Federal Administration of Public Revenues	www.afip.gov.ar	ARS
Australia	Australian Taxation Office	www.ato.gov.au	AUD
Austria	Federal Ministry of Finance	https://english.bmf.gv.at/	EUR
Belgium	Federal Public Service Finance	www.minfin.fgov.be	EUR
Brazil	Secretariat of Federal Revenue of Brazil	www.receita.fazenda.gov.br	BRL
Bulgaria	National Revenue Agency (NRA)	www.nap.bg	BGN
Canada	Canada Revenue Agency	www.cra-arc.gc.ca	CAD
Chile	Servicio de Impuestos Internos	www.sii.cl	CLP
China	State Administration of Taxation	www.chinatax.gov.cn	CNY
Colombia	National Tax and Customs Administration	www.dian.gov.co	COP
Costa Rica	Directorate of Taxation, Ministry of Finance	www.hacienda.go.cr	CRC
Croatia	Tax Administration, Ministry of Finance	www.porezna-uprava.hr	HRK
Cyprus [1]	Department of Inland Revenue, VAT Service	www.mof.gov.cy/ird www.mof.gov.cy/vat	EUR
Czech Republic	Financial Administration of the Czech Republic	www.financnisprava.cz	CZK
Denmark	Danish Tax Administration (SKAT)	www.skat.dk	DKK
Estonia	Tax and Customs Board	www.emta.ee	EUR
Finland	Finnish Tax Administration	www.tax.fi	EUR
France	Direction générale des finances publiques (General Directorate of Public Finances)	www.impots.gouv.fr	EUR
Germany	Federal Ministry of Finance – Tax Administration of the “Länder” (Federal States)	www.bundesfinanzministerium.de	EUR
Greece	General Secretariat for Public Revenue, Ministry of Finance	www.publicrevenue.gr/kpi/	EUR
Hong Kong, China	Inland Revenue Department	www.ird.gov.hk/	HKD
Hungary	National Tax and Customs Administration	www.nav.gov.hu	HUF
Iceland	Directorate of Internal Revenue (Ríkisskattstjóri)	www.rsk.is	ISK
India	Central Board of Direct Taxes	www.incometaxindia.gov.in	INR
Indonesia	Directorate General of Taxes	www.pajak.go.id/?lang=en	IDR
Ireland	Office of the Revenue Commissioners	www.revenue.ie	EUR
Israel	Israel Tax Authority	http://ozar.mof.gov.il/taxes	ILS

Country	Tax administration	Website address	Currency code
Italy	Revenue Agency	www.agenziaentrate.it	EUR
Japan	National Tax Agency	www.nta.go.jp	JPY
Korea	National Tax Service	www.nts.go.kr	KRW
Latvia	State Revenue Service	www.vid.gov.lv	EUR
Lithuania	State Tax Inspectorate under the Ministry of Finance	www.vmi.lt	EUR
Luxembourg	Administration des contributions directes (Acd) – Direct Tax Administration Administration de l'enregistrement et des domaines (Aed) – Indirect Tax Administration	www.impotsdirects.public.lu www.aed.public.lu	EUR
Malaysia	Inland Revenue Board	www.hasil.gov.my	MYR
Malta	Inland Revenue Department (Direct Taxes), VAT Department	www.ird.gov.mt www.vat.gov.mt	EUR
Mexico	Tax Administration Service (Servicio de administración tributaria)	www.sat.gob.mx	MXN
Morocco	General Administration of Taxes	www.tax.gov.ma	MAD
Netherlands	Netherlands Tax and Customs Administration	www.belastingdienst.nl	EUR
New Zealand	Inland Revenue Department – Te Taari Taake	www.ird.govt.nz	NZD
Norway	Skatteetaten (Tax Norway)	www.skatteetaten.no	NOK
Peru	Superintendencia Nacional de Administración Tributaria (SUNAT)	www.sunat.gob.pe	PEN
Poland	Ministry Of Finance	www.mf.gov.pl	PLN
Portugal	Autoridade Tributária e Aduaneira (since 1 January 2012)	www.portaldasfinancas.gov.pt	EUR
Romania	National Agency for Fiscal Administration	www.anaf.ro	RON
Russia	Federal Tax Service (FTS of Russia)	www.nalog.ru	RUB
Singapore	Inland Revenue Authority of Singapore	www.iras.gov.sg	SGD
Slovak Republic	Financial Directorate of the Slovak Republic (since 1 January 2012)	www.financnasprava.sk	EUR
Slovenia	Financial Administration of the Republic of Slovenia	www.fu.gov.si	EUR
South Africa	South African Revenue Service (SARS)	www.sars.gov.za	ZAR
Spain	Agencia estatal de administración tributaria – State Tax Administration Agency	www.agenciatributaria.es	EUR
Sweden	Swedish Tax Agency (Skatteverket)	www.skatteverket.se	SEK
Switzerland	Federal Tax Administration	www.estv.admin.ch	CHF
Turkey	Gelir İdaresi Başkanlığı (Turkish Revenue Administration)	www.gib.gov.tr	TRY
United Kingdom	Her Majesty's Revenue and Customs	www.hmrc.gov.uk	GBP
United States	Internal Revenue Service	www.irs.gov	USD

Note: 1. Note by Turkey: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. Turkey recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, Turkey shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of Turkey. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

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