

Table of contents

Abbreviations and acronyms	11
Executive summary	15
Chapter 1. Assessment of existing data sources relevant for BEPS analysis	17
1.1 Introduction.....	18
1.2 Potential criteria for evaluating available data for BEPS research	18
1.3 Currently available data for BEPS analysis	24
1.4 Initial assessment of currently available data for analysing BEPS	26
Chapter 2. Indicators of base erosion and profit shifting	41
2.1 Introduction.....	42
2.2 Indicator concept.....	42
2.3 Indicators as a component of Action 11.....	43
2.4 Guidelines for indicators.....	44
2.5 A significant caution.....	45
2.6 Six indicators of BEPS	46
2.7 General structure of the indicators	47
2.8 Disconnect between financial and real economic activities.....	48
2.9 Profit rate differentials within top global MNEs	52
2.10 MNE vs. “comparable” non-MNE effective tax rate differentials.....	57
2.11 Profit shifting through intangibles	60
2.12 Profit shifting through interest	63
2.13 Possible future BEPS indicators with new data	65
2.14 Indicators considered but not included	67
2.15 Summary.....	68
<i>Annex 2.A1. Formulas for calculating indicators</i>	71
Chapter 3. Towards measuring the scale and economic impact of BEPS and countermeasures	79
3.1 Overview.....	81
3.2 Key issues in measuring and analysing BEPS	82
3.2.1 Defining BEPS	82
3.2.2 The “counterfactual” for BEPS analysis	83
3.2.3 Separating BEPS from real economic activity	84
3.2.4 Separating BEPS from non-BEPS preferences	86
3.2.5 Measuring the appropriate tax rate for BEPS analysis.....	86
3.3 What we know about BEPS and the effect of countermeasures	88
3.3.1 General profit shifting analysis	88
3.3.2 Incentives for BEPS	96
3.3.3 BEPS and developing countries	98
3.3.4 Estimating the scale (fiscal effects) of BEPS	99

3.3.5	Global estimate of the revenue loss from BEPS	101
3.3.6	Some other fiscal estimate studies.....	103
3.3.7	The extent of BEPS behaviours and possible dynamic effects if not curtailed.....	106
3.3.8	Effects of BEPS countermeasures.....	106
3.3.9	Impact of existing unilateral BEPS-related countermeasures	110
3.3.10	Economic impacts of BEPS and BEPS countermeasures	110
3.3.11	Important considerations in the economic analysis of BEPS and BEPS countermeasures.....	110
3.3.12	Expected incidence of CIT changes in response to BEPS countermeasures.....	112
3.3.13	Economic efficiency and growth.....	117
3.3.14	Increasing government competition on tax bases and attracting economic activity	122
3.4	Future areas for economic research to better measure the scale and economic impact of BEPS with better data	122
<i>Annex 3.A1.</i>	Economic implications of multinational tax planning	135
<i>Annex 3.A2.</i>	A toolkit for estimating the country-specific fiscal effects of BEPS countermeasures.....	193
Chapter 4 . Towards better data and tools for monitoring BEPS in the future		249
4.1	Introduction.....	250
4.2	Background.....	251
4.3	Classification of analytical tools to turn data into insights	256
4.4	A classification of the types of data.....	258
4.5	Data collected in response to the Action Plan in the future	260
4.6	Recommendations.....	262
4.7	Conclusion	265
Tables		
Table 1.1.	Overview of the current data sources.....	24
Table 1.2.	Regional distribution of MNE subsidiaries in ORBIS by location of subsidiary and group headquarters, compared with regional distribution of top 500 MNE groups and GDP, 2011.....	30
Table 2.1.	Indicator 1: Concentration of foreign direct investment relative to GDP.....	51
Table 2.2.	Indicator 3: High profit rates of MNE affiliates in lower-tax locations	57
Table 2.3.	Indicator 4: Effective tax rates of MNE affiliates compared to non-MNE entities with similar characteristics	59
Table 2.4.	Estimated annual indicator values.....	62
Table 3.1.	Data sources, estimation strategies and results from recent profit shifting studies.....	94
Table 3.2.	Standard deviation of OECD tax rates, 2003 and 2013.....	98
Table 3.3.	Estimates of global and developing country fiscal effects from BEPS.....	101
Table 3.4.	Ranking of key location factors of MNE operations.....	119
Table 3.5.	Summary R&D tax wedge with MNE tax planning.....	120

Table 3.A1.1.	Tax treatment of intellectual property in selected OECD and G20 countries, 2014	152
Table 3.A1.2.	Profit shifting and mismatches reduce the effective tax rate of MNEs	157
Table 3.A1.3.	Economic implications of international tax planning: summary of main findings.....	181
Table 3.A2.1.	Government fiscal estimates of BEPS-related measures.....	194
Table 3.A2.2.	Elasticity estimates of the responsiveness of intra-firm exports and imports to corporate income tax rate differentials	207
Table 3.A2.3.	NIE by the non-financial corporate sector	219
Table 3.A2.4.	Potential data sources for CFC income	228

Figures

Figure 1.1.	Example of non-arm's length transfer pricing affecting National Accounts and firm-level reports	28
Figure 2.1.	Future path of BEPS measurement	44
Figure 2.2.	Indicator 1: Concentration of foreign direct investment relative to GDP	51
Figure 2.3.	Indicator 2: High profit rates of low-taxed affiliates of top global MNEs	56
Figure 2.4.	Indicator 4: Effective tax rates of MNE affiliates relative to non-MNE entities with similar characteristics	60
Figure 2.5.	Indicator 5: Concentration of royalty receipts relative to R&D spending.....	62
Figure 2.6.	Indicator 6: Interest to income ratios of MNE affiliates in locations with above average statutory tax rates	64
Figure 3.1.	Incentive to engage in BEPS: Corporate income tax rate variation within OECD countries	96
Figure 3.2.	Incentive to engage in BEPS: Corporate income tax rate on patent income variation within OECD countries	97
Figure 3.A1.1.	Issues covered by the analysis.....	137
Figure 3.A1.2.	Corporate tax rates and tax revenues.....	138
Figure 3.A1.3.	Empirical approach on profit shifting: Illustrative example.....	147
Figure 3.A1.4.	Trends in international tax planning, 2000-2010	150
Figure 3.A1.5.	Distribution of patents across countries	151
Figure 3.A1.6.	The effect of preferential tax treatment on the number of patent applications.....	153
Figure 3.A1.7.	Illustrative classification of anti-avoidance rules.....	159
Figure 3.A1.8.	Production of the accounting, bookkeeping, auditing and tax consultancy industry.....	160
Figure 3.A1.9.	Illustrative tax revenue effects of international tax planning in hypothetical cases.....	164
Figure 3.A1.10.	Illustrative tax revenue effects depending on the strictness of anti-avoidance rules.....	165
Figure 3.A1.11.	Revenue effects of tax planning: accounting for uncertainties.....	167
Figure 3.A1.12.	Mark-up rate and international tax planning	170
Figure 3.A1.13.	MNE group external leverage and international tax planning.....	174
Figure 3.A1.14.	Share of inward FDI stock explained by tax rate differences between countries	176

Figure 3.A1.15	Tax planning reduces the effect of corporate taxes on tax planning MNEs' investment.....	178
Figure 3.A2.1.	Potential approach to undertaking a fiscal estimate	196
Figure 3.A2.2.	Intra-firm transactions as a percent of selected trade statistics	204
Figure 3.A2.3.	Potential steps to follow once data availability has been determined.....	213
Figure 4.1.	Future path of BEPS measurement	252
Figure 4.2.	Data important for analysis of BEPS and countermeasures.....	258

Boxes

Box 1.1.	Criteria for assessing data	19
Box 1.2.	Public enquiries reveal data missing from many academic studies.....	31
Box 1.3.	Some current best practices in using available data for BEPS analysis.....	33
Box 2.1.	Indicator 1: Concentration of foreign direct investment relative to GDP.....	50
Box 2.2.	How should economic activity be defined?	52
Box 2.3.	Indicator 2: High profit rates of low-taxed affiliates of top global MNEs	55
Box 2.4.	Indicator 3: High profit rates of MNE affiliates in lower-tax locations	57
Box 2.5.	Indicator 4: Effective tax rates of MNE affiliates compared to non-MNE entities with similar characteristics.....	58
Box 2.6.	Indicator 5: Concentration of royalty receipts relative to R&D spending.....	61
Box 2.7.	Indicator 6: Interest-to-income ratios of MNE affiliates in locations with above average statutory tax rates.....	64
Box 2.8.	Future Indicator A: Profit rates relative to ETRs, MNE domestic vs. global operations	66
Box 2.9.	Future Indicator B: Differential rates of return on FDI related to SPEs	67
Box 3.1.	Alternative points of comparisons - Alternative "counterfactuals".....	84
Box 3.2.	Different tax variables used in BEPS and tax policy analyses.....	86
Box 3.3.	Different approaches used to estimate profit shifting.....	91
Box 3.4.	Other empirical analyses of BEPS fiscal effects.....	104
Box 3.A1.1.	Summary of main findings.....	135
Box 3.A1.2.	Disclaimer on the data used in the empirical analysis.....	141
Box 3.A1.3.	Empirical approach: Assessing tax planning based on firm-level data	147
Box 3.A1.4.	Empirical approach: Location of patents.....	154
Box 3.A1.5.	Empirical approach: Manipulation of the location of external debt.....	155
Box 3.A1.6.	Anti-avoidance rules	158
Box 3.A1.7.	The impact of book/tax differences and tax credits on tax revenue estimates	162
Box 3.A1.8.	Main uncertainties surrounding the tax revenue estimates.....	166
Box 3.A1.9.	Empirical approach: Tax planning and competition	171

Box 3.A1.10.	Empirical approach: Tax planning and group external leverage	173
Box 3.A1.11.	Cross-country differences in taxes and location of investment.....	177
Box 3.A1.12.	Empirical approach: Investment and tax planning	179
Box 4.1.	Some best practices in data availability for tax analysis of corporate tax and MNEs.....	253
Box 4.2.	Case studies of tax administrations' collaborations with qualified researchers.....	256