

Unlocking the Potential of Administrative Data in Africa:

Tax Compliance and **Progressivity** in **Rwanda**

September 2016





A joint paper by the African Tax Administration Forum (ATAF) and the International Centre for Tax and Development (ICTD)

About ATAF

The African Tax Administration Forum (ATAF) is an international membership organisation of African revenue authorities and acts as a platform promoting cooperation, knowledge sharing and capacity building among African revenue authorities. It seeks to ensure greater synergy and cooperation in capacity development amongst all relevant stakeholders to reduce duplication of work and give greater support to African Tax Administrations. From its beginning in 2009, when it was formally launched in Kampala, Uganda, ATAF is growing in stature and in influence. Today ATAF is an important voice in taxation in Africa and the world. It has achieved the status of an international organisation and its membership has grown to 38 African tax administrations.



For further information, please contact:

African Tax Administration Forum, Postnet Suite 430, Private Bag X15, Menlo Park, 0102 South Africa T: +27 (0)12 451 8800

E: info@ataftax.org W: www.ataftax.org

About ICTD

The International Centre for Tax and Development is a global policy research network dealing with the political economy of taxation policies and practices in relation to the poorer parts of the world.

Our operational objectives are to generate and disseminate relevant knowledge to policymakers and to mobilise knowledge in ways that will widen and deepen public debate about taxation issues within poorer countries. Our ultimate objective is to contribute to development in the poorer parts of the world and help make taxation policies more conducive to pro-poor economic growth and good governance.

The ICTD's research strategy and organisational structures are designed to bring about productive interaction between established experts and new stakeholders.

The ICTD is funded by the UK Government's Department for International Development (DFID) and the Norwegian Agency for Development Cooperation (Norad), a directorate under the Norwegian Ministry of Foreign Affairs (MFA).



For further information, please contact:

International Centre for Tax & Development at the Institute of Development Studies, Brighton BN1 9RE, United Kingdom

T: +44 (0)1273 606261 E: info@ictd.ac W: www.ictd.ac

Unlocking the potential of administrative data in Africa: tax compliance and progressivity in Rwanda

Summary

This paper is the first in a series of three studies looking at tax compliance using administrative data from Rwanda. It discusses the use of administrative data for tax research – specifically anonymised taxpayers records, which have become increasingly available on the African continent. The paper starts by critically summarising the key advantages and disadvantages of using this data for tax research in Africa. It proceeds to illustrate these opportunities and challenges in practice, using the case of Rwanda for application of the data to analyse tax compliance and progressivity. By doing this it shows some stylised facts – for example that tax systems designed to be progressive can still be regressive in practice, that a great share of tax revenue is generated by a few very large taxpayers, and that some taxpayers face a negligible probability of being audited. Although these results are specific to Rwanda, they are in line with the situation in other low-income countries in Africa.

Keywords: administrative data; anonymised taxpayer records; tax compliance; progressivity; Rwanda.

Giulia Mascagni is Research Fellow at the Institute of Development Studies (IDS) and Research Director at the International Centre for Tax and Development (ICTD).

Nara Monkam is Director of Research at the African Tax Administration Forum (ATAF)

Christopher Nell was Research Officer at the Institute of Development Studies and the International Centre for Tax and Development, and now works as an independent consultant.



Contents

		owledgements	1 3
	Acro		3
	Intro	duction	4
1	Data and methods		7
	1.1	Administrative data from anonymised tax returns	7
	1.2	Pros and cons of using administrative data for research	9
	1.3	Methods to measure tax compliance using administrative data	12
	1.4	Methods for analysing progressivity with administrative data	14
2	Settir	ng the context: the tax system in Rwanda	17
3	Results		21
	3.1	Descriptive analysis of tax revenue	21
	3.2	Compliance	25
		3.2.1 Audit probability	25
		3.2.2 Compliance gaps	27
		3.2.3 Nil-filers and firms reporting losses	29
	3.3	Effective tax rates	30
4	Concluding remarks		35
	Appe	ndix	36
Table	s		
Table	1	Domestic taxes in Rwanda	18
Table	2	Tax contribution by decile as % of total regime revenue (2012-2014)	23
Table	3	Revisions by authority and level of under-reporting (2013)	25
Table	4	Compliance gap (%, 2012 and 2013)	28
Table	5	Firms with non-positive income (2012 and 2013)	29
Table	6	Effective tax rates based on overall income (%, 2012 to 2014)	30
Table	7	Effective tax rates based on taxable income (%, 2012 to 2014)	32
Table		Sample by year and tax type	36
Table	9	Effective tax rates based on overall CIT income (%, 2012 to 2014)	37
Figur	es		
Figure	e 1	Percentage of tax revenue by tax type in 2013/14	19
Figure	2	Tax take by size (2012 to 2014)	21
Figure	3	Tax take by PIT regime (2012 to 2014)	22
Figure	e 4	Tax take by CIT regime (2012 to 2014)	23
Figure	5	Number of taxpayers by tax centre (2012 to 2014)	24
Figure	6 6	Tax take by tax centre (2012 to 2014)	24
Refer	ences		38