

Empirical research on taxation in Uganda

A summary of results, next steps, and policy implications of research by the IGC and the URA

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The importance of research in informing tax policy and administration

Taxation plays a critical dual function in fostering economic growth. Not only are tax revenues critical to fund growth-enhancing public infrastructure and services; tax policy and administration also plays a key role in directing productive and sustainable economic activity. As Uganda strives to recover from the impact of the COVID-19 pandemic and global recession, these roles have become more important than ever.

However, achieving these goals is not automatic – rigorous research is critical in informing effective tax policy and administration. Recognising the critical importance of economic research, the Uganda Revenue Authority (URA)'s Research, Planning and Development Department (RPD) is working closely with the International Growth Centre (IGC) on a number of research projects to inform tax policy and administration in Uganda.

This note summarises discussions and presentations from an afternoon seminar held by the two institutions on the 15th April 2021. The aim of the event was to share and discuss findings from ongoing research projects conducted jointly by personnel from the URA and the IGC.

The seminar included the presentation and discussion of four research projects:

- Professor Nada Eissa presented findings from the 2021 paper on "[What is the fiscal cost of tax incentives in Uganda?](#)" (Nada Omer Eissa, Priya Manwaring, Nicole Ntungire and Jakob Rauschendorfer)
- Professor Isabelle Cohen and Nicholas Musoke presented work on "Messaging Matters: The Effects of Different Messages on Individual Tax Payment"
- Sandra Sequeira presented findings from work on "Using statistical methods to combat tax evasion: The case of Uganda's customs" (Michael Carlos Best, Nada Omer Eissa, Parijat Lal, Joseph Okello Ayo, Jakob Rauschendorfer and Sandra Sequeira)
- Felix Forster and Dorothy Nakyambadde presented their 2021 paper on "[Managing Trade in Clunkers: Evidence from Uganda](#)"

As part of the engagement with other departments under the URA, the following individuals provided expert responses to the presented studies:

- **Commissioner Domestic Tax:** Represented by Mr. Louis Muhangura
- **Commissioner Customs & Excise:** Mr. Abel Kagumire

In the remainder of this note we first review key insights as well as policy implications emerging from the studies and lay out next steps for the analysis identified during the seminar. In the last section of this report, we briefly discuss other research areas of interest to the URA as well as next steps in the collaboration between the IGC and the URA.

URA & IGC research on taxation: Insights, policy and next steps

I. Eissa et al (2021): “What is the fiscal cost of tax incentives in Uganda?”

Tax incentives - provisions in country's tax system that reduce a company's tax payments - are a vital tool to promote and attract investment in Uganda. These incentives are used to encourage specific kinds of economic activity and investment the government deems desirable, often with a promise to create new jobs and raise economic growth rates.

However, these incentives come at a cost to taxpayers, not only as direct costs in terms of tax revenue foregone, but also indirectly through distortions to economic activity. Assessing if tax incentives are justified, therefore, requires calculating their cost.

This paper presents static estimates of the direct fiscal costs of Uganda's Corporate Income Tax as well as customs tax incentives using administrative data provided by the Uganda Revenue Authority. The paper considers the following types of incentives:

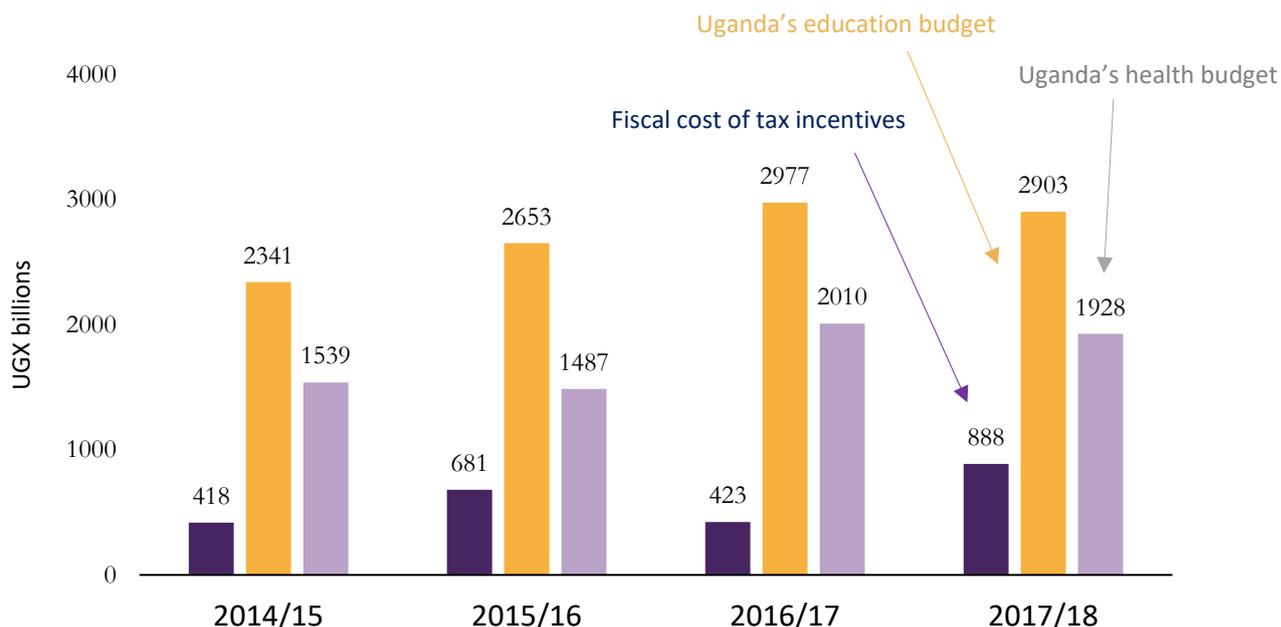
1. Corporate income tax (CIT) holidays, exemptions or income deductions
2. Deductions from taxable income based on capital expenditure
3. Lower CIT tax rates, applicable on certain kinds of activity
4. Import tax incentives: deviations from statutory VAT and tariff rates (e.g. Duty Remission Scheme)

To calculate the cost of both CIT and customs incentives, the authors use a revenue forgone method: they calculate the static revenue loss incurred by the introduction of a tax incentive, assuming that firm behaviour would remain unchanged in absence of an incentive.

Cumulatively, the paper estimates that revenue foregone due to tax incentives amounted to about 2,411 billion Uganda Shilling (approximately 652 million USD) over the fiscal years 2014/15 to 2017/18, with approximately one third of this figure stemming from Corporate Income Tax incentives and two thirds incurred from tax incentives in place in Uganda's customs system.¹ To put these estimated losses into perspective, the estimated fiscal cost of Uganda's tax incentives in 2017/18 was 888 billion UGX, corresponding to around 3% of total budget for 2017/18 or almost 1 percent of GDP in 2017.

¹ Capital expenditures are by far the primary beneficiaries of CIT incentives, and it is important to note that tax incentives provided for capital expenditures expanded significantly in 2017/18 following the reintroduction of initial allowances on plant and machinery and on industrial buildings. Milly Nalukwago (URA, RPD) noted that income tax deductions based on capital expenditure are being revised lower in FY 2021/22 and that hopefully this will reduce revenue foregone from this source.

Figure 1: Fiscal cost of tax incentives is considerable compared to selected budget positions.



Notes: All figures are in 2019 values.

Due to various data related issues – most notably the fact that the analysis is limited to those firms who actually file corporate income tax returns – these figures likely represent a lower bound estimate for the fiscal cost of tax incentives in Uganda.

Policy implications

Given the considerable size of these incentives, three policy implications emerge from the analysis:

- 1) Limit discretion in the selection of firms receiving tax incentives and instead apply specific rules/criteria for any firm to automatically become eligible. Evidence from the U.S., Europe, China, and cross-country evidence from developing countries has shown that uncertainty regarding profits and policy has a significant negative impact on investment. At the same time, clear and transparent criteria for incentives reduce the potential for these benefits being provided to uncompetitive and/or unproductive firms.
- 2) Establish mechanisms to link the provision of tax incentives to pre-agreed future targets, as well as monitoring systems that ensure that “promises made” in return for preferential treatment are “promises kept”.
- 3) Improve data collection on which firms receive which exemptions - this includes the need that all registered firms file returns, regardless of whether or not they receive tax incentives. Many firms do not file returns when they are subject to an exemption, despite this being a formal obligation.

Next steps for analysis

A critical next step for the analysis of tax incentives will be to examine the social benefits of tax incentives provided to firms in delivering outcomes including employment, exports and supplier linkages. To do this, the research team requires:

- CIT data from 2012 – 2020 with firms with exemptions each year ‘flagged’
- VAT data for 2012 – 2020

Discussions at the seminar also highlighted the need to examine the length of incentives and whether providing 10- or 5-year tax holidays or unlimited deductions are necessary to attract and promote investment.

II. Cohen and Musoke (2021) “Messaging Matters: The effects of different messages on individual tax payment”

Existing cross-country evidence suggests that sending simple SMS messages to taxpayers can be a low-cost way of encouraging tax payments, with messages containing threats of audit having been found to be the most effective. However, to date, most of the research on this subject has been in OECD countries, where governments have significant capacity to pursue non-compliant taxpayers.

Does sending messages enhance compliance in Uganda, where audit and enforcement capacity is comparatively lower? This study seeks to answer this question by examining the effect of sending SMS messages to taxpayers in Uganda with different content. This builds on existing initiatives by the URA to send messages to taxpayers to appreciate their tax payments and encourage them to make payments to avoid penalties.

In particular, the study examines the effect of sending SMS messages to individual taxpayers. These taxpayers are largely small business owners, often with a tax burden of \$100 USD or less. Nevertheless, these taxpayers pay inconsistently (for example, skipping years) and there is considerable evidence that they underreport their annual turnover in order to pay less in taxes. As can be seen in Figure 2a, by 2017, almost 300,000 taxpayers had been registered for individual tax and presumptive tax, but of these, only 40,000 had made a payment. Of those who made a payment, even less had actually filed a return.²

² Discussions at the webinar suggested that this may be because paying taxes is easier than filing returns, and/or that taxpayers may also think they are less likely to be penalised for failing to file a return than failing to make a payment.

Figure 2a: Individual tax payment and filing

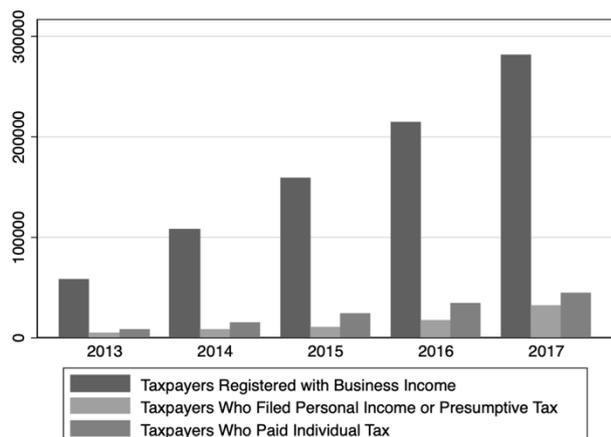
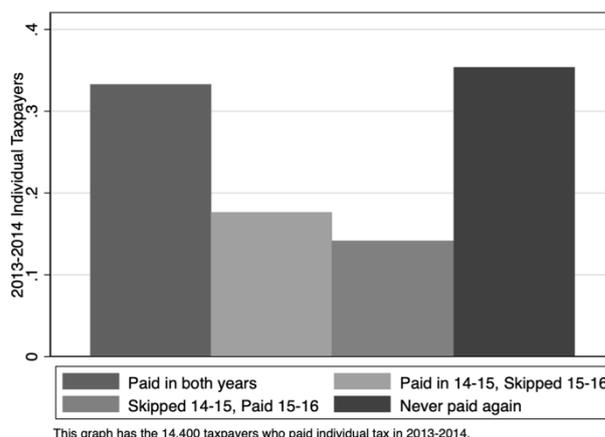


Figure 2b: Payment over time



In July 2019³, the research team worked with URA’s Domestic Tax Department to send out four different messages to all taxpayers who had made any payments on presumptive and personal income taxes since 2014/15. Taxpayers were divided into groups at random:

Group	Size	Message
Control	24,535 texts	No message sent
Inform	24,534 texts	“Dear esteemed client, please file your income tax return and pay the tax due by 30 th June 2019. URA”
Encourage	24,534 texts	“Dear esteemed client, by paying your taxes you make it possible to educate our children, fund our healthcare, and keep us safe. URA.”
Enforce	24,534 texts	“Dear esteemed client, file your income tax return and pay the tax to avoid unnecessary payment of interest, penalties, and possible enforcement actions like the closure of business.”

Examining data between June – September 2019, the study finds that such messages are very effective in the Ugandan context. Compared to the control group, taxpayers who were sent the ‘inform’ and ‘enforce’ messages were significantly more likely to pay personal individual tax and presumptive tax. Interestingly, the ‘encourage’ messages had no effect on tax behaviour when compared to the control group.

The study finds that these messages affect different taxpayers differently:

- Texts worked better for those with smaller businesses and more recent registrations
- Texts worked better for those in areas with fewer social services, but especially with recent investments in infrastructure. As such, Katales and other tax encouragement activities may work better in areas where social services are improving.

³ Messages were deliberately sent out in the last week of June, as this is the peak period for taxpayer payments and filing. This is an important factor to keep in mind when thinking of the analysis and how to implement any findings.

Policy implications

Sending messages appears to be a cost-effective way of raising tax compliance: while it costs URA approximately 100 UGX to send a message, the research study finds that receiving any message increases tax collection by approximately 570 UGX on average, with enforcement messages increasing payments by 1,340 UGX on average.

Next steps for analysis

Further areas for study that were discussed during the seminar include:

- Examining the long-term impact of such messages on taxpayer behaviour
- Examining the impact of sending messages in languages other than English
- Examining taxpayer decisions to file taxes vs make tax payments

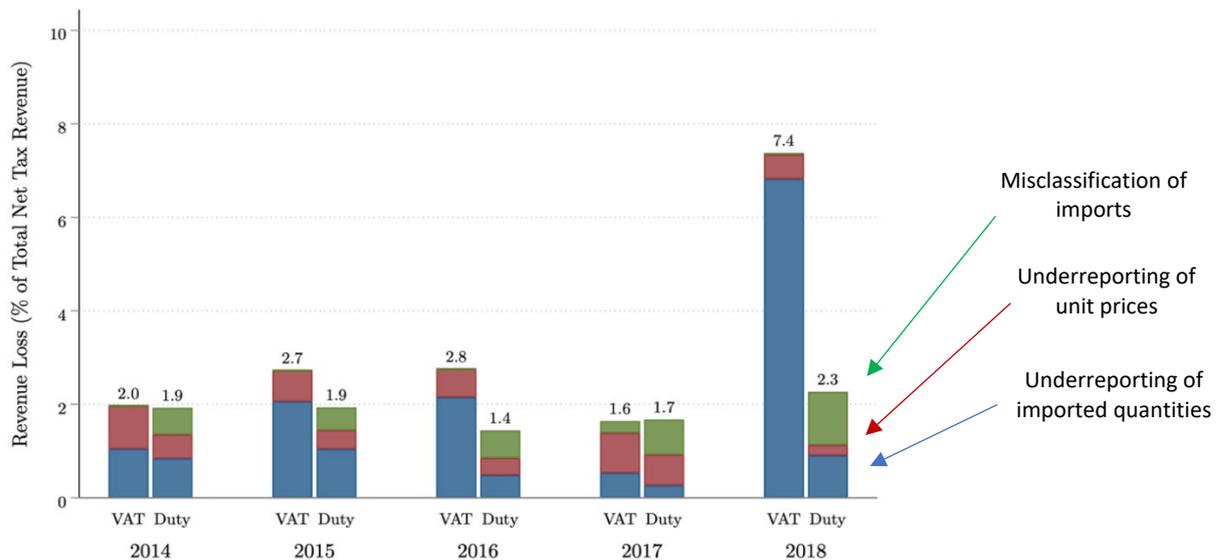
III. Sequeira et al (2021) “Using statistical methods to combat tax evasion – The case of Uganda’s customs”

Pressure to increase tax revenues was already high prior to the COVID-19 crisis. However, the recession additionally impacted Uganda’s tax base and led to a significant revenue shortfall: In the 2019/20 fiscal year, the Uganda Revenue Authority (URA) only managed to achieve about 82 percent of its revenue target (URA 2020). One promising area to improve the collection of taxes through enhanced enforcement and administration is by combating the evasion of import taxes, a central source of tax revenues for Uganda and other countries at similar stages of development. To illustrate, import taxes – such as tariffs, the Value Added Tax (VAT) on imports, the petroleum duty, excise taxes and other fees and charges levied on the importation of goods from foreign countries – continue to contribute a significant share to Uganda’s total tax collection. For example, in 2019/20 the URA collected a total of 16,752 billion Ugandan Shilling (UGX) in net revenues. Import taxes contributed almost 38 percent to this figure, with revenues from import duties (i.e., tariffs) and the VAT on imports alone contributing almost 22 percent to Uganda’s total national tax collection. While taxing imports continues to be a key source of revenue for Uganda there is ample anecdotal evidence for tax evasion in customs.

Employing publicly available trade statistics as well as data made available by the Uganda Revenue Authority, this study estimates the total fiscal cost from the evasion of import taxes through three different mechanisms: Underreporting of imported quantities, underreporting of unit prices and miss-classification of imported goods into lower taxed varieties.

Referring to the estimates for 2018, the findings suggest Uganda loses about 9.7% of net tax revenue collection or 1,750 billion Uganda Shilling per year due to the evasion of tariffs and VAT on imports alone (cf. Figure 3). This number is almost as high as the budget for the Ugandan health sector (1,879 billion Uganda Shilling in 2017/18).

Figure 3: Import tax evasion in Uganda is as high as 9.7% of net tax revenues.



Notes: Underreporting and misclassification of imports is constructed from UNComtrade data. Underreporting of unit prices is calculated using URA ASYCUDA data.

Beyond quantifying the fiscal costs of import tax evasion, the study showcases that there may be powerful levers in Uganda’s customs system that could be employed to combat evasion. For example, the study finds that in 2016 only 343 individual customs agents were in charge of more than 63,000 import shipments conducted by more than 8,000 individual importers. Some agents are found to engage in fraudulent practices to a higher degree than others so that stronger supervision could provide a more cost-efficient way of reducing smuggling than investigating individual importers.

Policy implications

With this study being the first one to study import tax evasion in the context of Uganda and demonstrating sizeable revenue losses from fraudulent behaviour in customs, the key policy implication from this project is that combating customs tax evasion provides an ample opportunity for Uganda to raise revenues. The next steps for the analysis are meant to help the URA identify the best levers for this exercise.

As an immediate next step, the research team will provide the URA-RPD with a list of high-risk items X countries of origin that can be used to identify where resources are best exerted and with which trading partners *Information Sharing Agreements* are most important.

Next steps for analysis

From the discussion at the seminar as well as the presentation of the project, the following areas for further research emerged as priorities:

- Exert efforts on examining the role of individual agents involved in the customs clearing process: Customs Clearing Agents (CCAs) as well as Authorized Economic Operators

(AEOs) by conducting a survey of clearing agents and importers to identify bottlenecks and pinpoint risk factors in customs.

- Combine customs records with other tax admin data (VAT, CIT, PAYE) to (a.) provide firm-level indicators of import tax evasion, (b.) study the evasion of other taxes by comparing the submissions of taxpayers at different points in the clearing process.
- Support the customs department with data and algorithms to inform customs procedures and support the development of information sharing agreements.

IV. Forster and Nakyambadde (2021) “Managing trade in clunkers”

Low-income countries import hundreds of thousands of used vehicles from international markets every year, and Uganda is no exception. The country imports 20,000-40,000 passenger vehicles annually, 98% of which are used vehicles. While of course these vehicles fill a transportation need, they are significantly more polluting than newer vehicles.

To address this environmental concern, many low-income countries around the world, including Uganda, rely on age-based import restrictions to reduce the inflow of old, highly polluting used vehicles. These policies are particularly important as they are typically one of only few policies to curb local vehicle emissions. But how effective are these policies in restricting the inflow of targeted vehicles?

This study aims to answer this question by examining the impact of the environmental levy increase in July 2015, which raised tariffs on 6–9-year-old passenger vehicles from 0-20% to 35%, and on 10+ year old passenger vehicles from 20% to 50%.

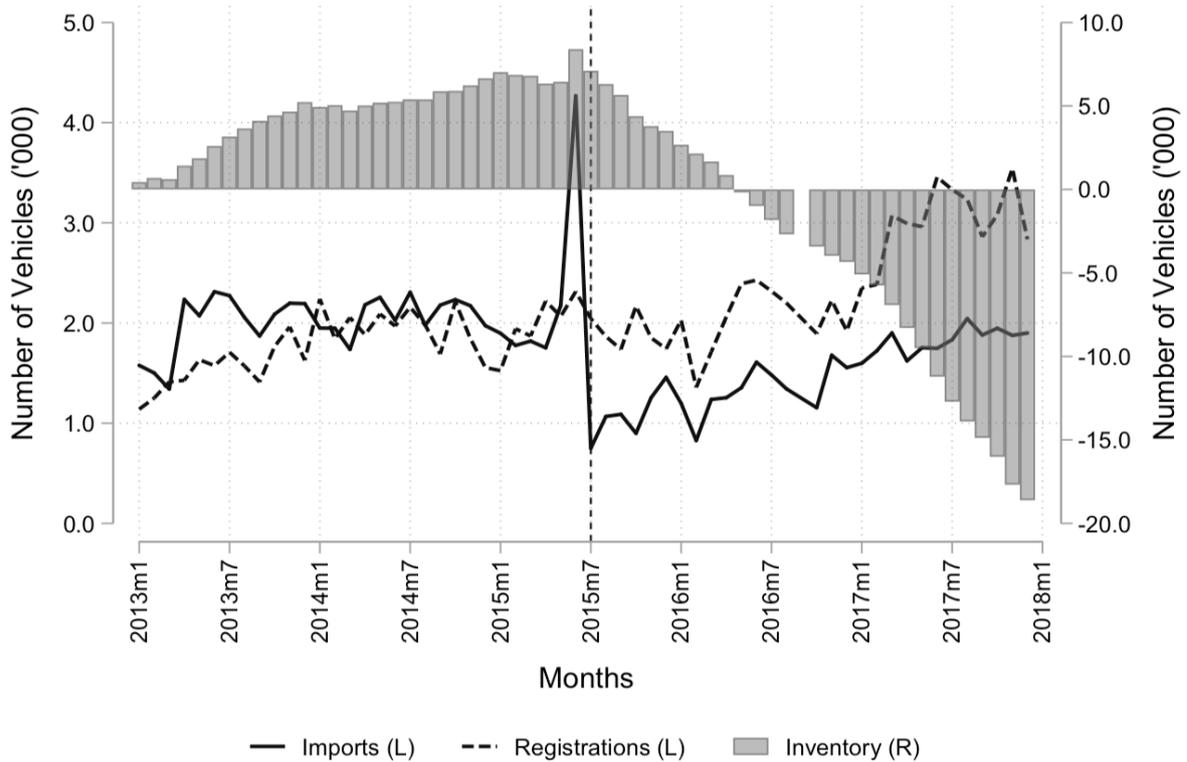
Using data on imports and first-time registrations of vehicles between 2013 and 2018, as well as data on domestic prices from the Ugandan Bureau of Statistics and online platforms, the authors find that the environmental levy is effective in reducing imports of targeted vehicles in the intermediate age groups. Passenger vehicle imports decline significantly, with imports of 6–9-year-old and 10–15-year-old vehicles falling by over 40%. This also leads to a decline in registration of these vehicles, especially among end users importing them directly.

However, the levy’s effectiveness in reducing the inflow of older vehicle is undermined by two key factors:

- 1) First, there is evidence of end-user substitution towards *even older* vehicles following the levy increase. For example: 16+ year old vehicles experienced a higher price due to the higher levy, reducing demand. But at the same time, 6–9-year-old vehicles and 10–15-year-old vehicles also experienced levy and price rises. As a result, some users who would have purchased 6-9- or 10–16-year-old vehicles purchase the relatively cheaper 16+ year old vehicles. This is despite the fact that higher levies are applied to older vehicles. In the case of 16+ year-old vehicles, the researchers find that this ‘substitution’ effect completely cancels out any reductions in demand from the higher tariffs.
- 2) Second, the existing vehicle inventory among intermediary traders acts as a buffer against the levy increase, so that first-time registrations of targeted vehicles purchased

from traders are much less affected by the policy change than imports. Given that inventories are limited, however, this concern is more relevant in the short run.

Figure 4: Trader Inventory of Passenger Vehicles: Trader inventory built up prior to the levy change allows first-time registrations to exceed imports after July 2015.



Policy implications

These findings suggest the following from the vantage point of policy:

- Highly progressive levies or outright bans of the oldest vehicles (as implemented in Uganda in 2018) are effective policies to limit older vehicle imports.
- In addition, tariffs are ideally complemented by domestic regulation to reduce the adverse effect of substitution towards vehicles already in country.

Next steps for analysis

Discussions at the seminar highlighted the following areas for further research:

- Impact evaluation of the import ban on older vehicles implemented in 2018.
- Evaluation of the broader implications of the environmental levy and vehicle import bans on the Ugandan economy, including government revenue, productivity, and consumer welfare. This will allow for better consideration of the trade-offs involved in tariff increases and bans on importing used vehicles.

Additional areas of policy interest for research

In addition to the study-specific next steps outlined above, the discussions at the seminar also highlighted a number of other areas of policy interest for further research.

Mr. Louis Muhangura (on behalf of the Commissioner, Domestic Tax Department) highlighted the following topics as being of key interest to the URA research agenda:

- Research on the impact of tax education on compliance and tax morale
- Research on ways of improving tax compliance in the informal sector
- Research to evaluate tax policy changes in Uganda
- Examining the relationship between politics and taxation in Uganda

Mr. Abel Kagumire (Commissioner, Customs Department) suggested the following topics as being of key interest to the URA research agenda:

- Research on e-commerce and taxation of the digital economy
- Further analysis of transfer pricing
- The effect of specific tax policy changes in final consumer prices and other tax heads