



Tax Administration  
Research Centre

# Audits and Compliance: Evidence from Ugandan Administrative Data

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# Audits and compliance

- This research is part of long term cooperation between UN-WIDER and URA



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**Disclaimer:**

The interpretations and conclusions expressed in this research  
does not necessarily represent  
the views of UN-WIDER the URA and its Management

# Motivation

- Understanding how (and whether) operational tax audits can improve tax compliance is important for revenues
- Tax audits have contemporaneous impact
  - Correction in assessment
- But, importantly, there is inter-temporal (dynamic) effect
  - Do tax audits make taxpayers more compliant in the future?
- Objective of this research:
  - Evaluate tax audits (CIT and VAT) and investigate what they mean for compliance

# What do we know?

## Literature and Contribution

- Extensive evidence on audits evaluation in developed world
  - Kleven et al., 2011; Gemmel et al., 2012 DeBaker et al., 2015, 2018a, 2018b, Advani et al., 2021; Genakos, Kotsogiannis and Salvadori (2023), among others
- ... But limited evidence on developing countries
  - Best et al., 2022 (VAT in Pakistan, finding no impact)
  - Kotsogiannis et al., 2022 (Differential impact of types of audits in Rwanda (RW))
  - Kotsogiannis et al., 2023 (E-invoicing indirect effect via audits in RW)
  - Lediga et al., 2021 (Network effects in South Africa)
  - Nouwoue, 2023 (Some evidence from Cameroon)
- This paper contributes to this evidence

# Snapshot of (Tentative) Results (CIT)

- Positive future compliance for CIT liability (but the empirical set-up not (yet) perfect, some so-called pre-trend issue)
- Evidence seems to suggest that nil-filers are driving the compliance results (in the level of response)
- Excluding issue audits (mostly VAT oriented) do not lead to major changes in the results
- Results do not seem to depend on audit outcome (compliant/non-compliant)

# Snapshot of Tentative Results (VAT)

- On the aggregate, no clear dynamic response:
  - Insignificant impact during 1<sup>st</sup> and 2<sup>nd</sup> years
  - Positive impact starting from 3<sup>rd</sup> year
- Focusing on the impact of audits on the probability of reporting positive VAT liabilities
  - Significant *negative* impact suggesting that impact of audits depends on the sign of the VAT liability reported
- Focusing on issue (VAT oriented) audits does not lead to major changes in the results
- Results do not seem to depend on audit outcome

# Institutional Details

- Ugandan tax-to-GDP ratio has risen, but still low (approx. 13%)
- Consumption taxes (VAT and excises) contribute close to 60% of all revenues, whereas the CIT revenues (7% of all revenues in 2019) one of the lowest in Sub-Saharan Africa
- VAT (18%) and CIT (30%) rates comparable to those in other countries in the region



# Audit Process

- Audits are risk based
  - Two scores used: risk and financial importance scores
- Selection not deterministic, and discretion exists for actual selection for audits among taxpayers with similar scores
- Two main types of audits
  - Comprehensive
  - Issue oriented
- Issue audits may be desk or field audits; comprehensive always field
- In case of noncompliance, penal tax (2%) and interest (24%) levied, the latter seen as a more significant deterrent

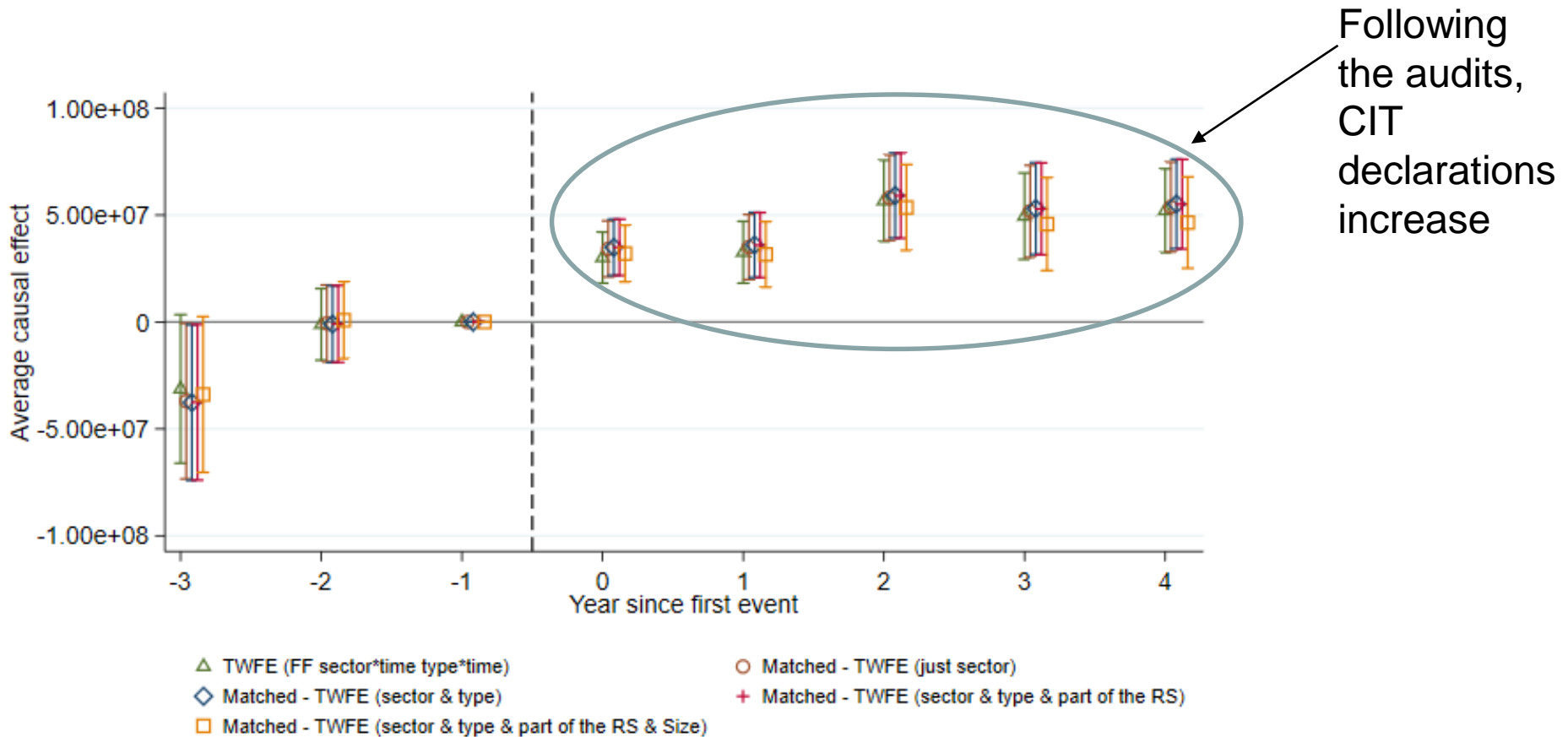
# Data

- Our analysis is based on several datasets:
  - The universe of CIT, VAT tax declaration for the 2014-2021 period (and PAYE in progress)
  - The universe of audit records
  - Information about the risk selection process

# Methodology

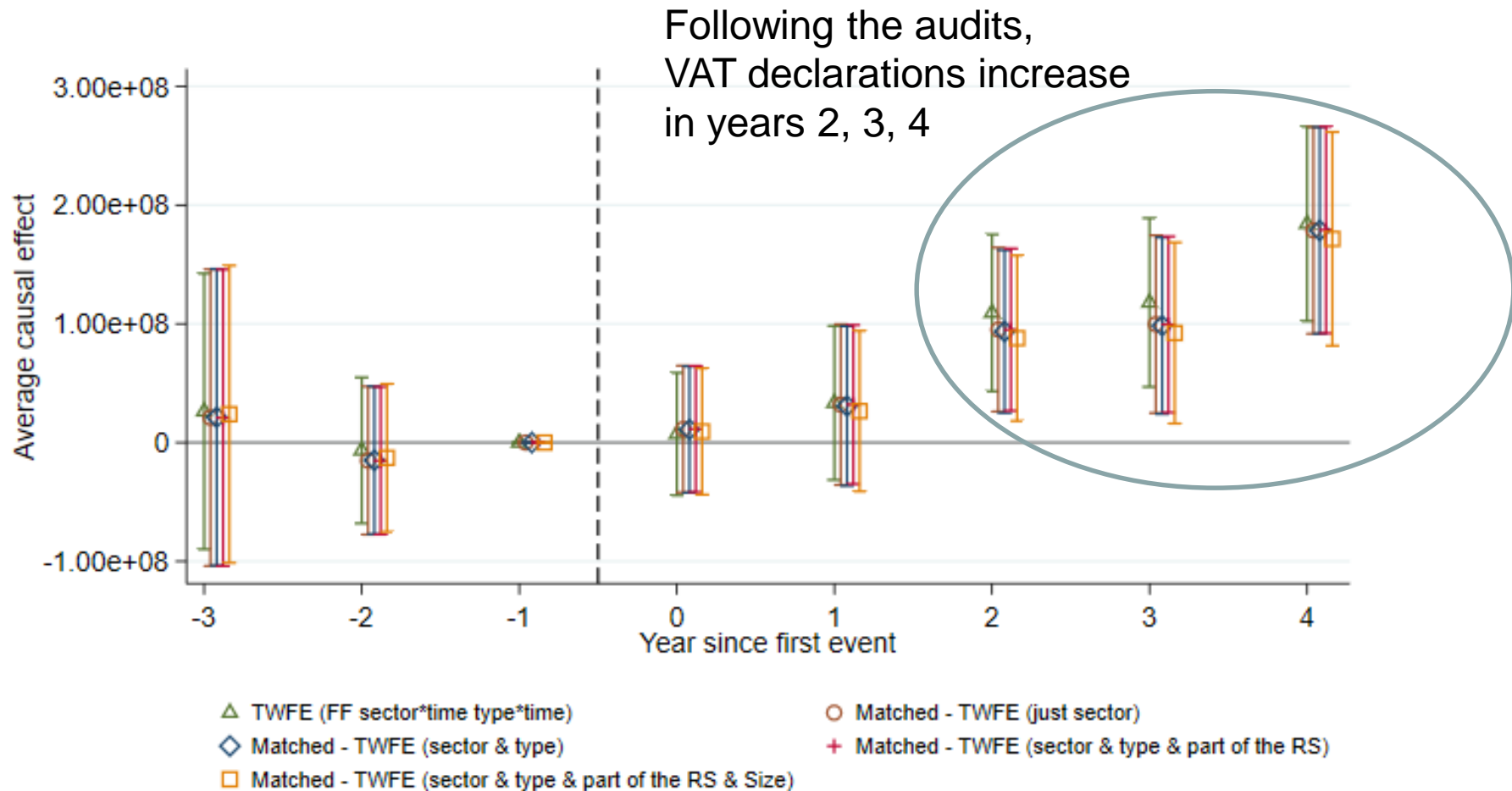
- We have access to audit waves
- We use Coarsened Exact Matching (CEM) to construct the control group and (dynamic) Diff-in-Diff to estimate the impact of the audits
- Various matching variables are used:
  - ISIC industry
  - ISIC industry & type
  - ISIC industry & type & part of the Risk Score (RS)
  - ISIC industry & type & part of the Risk Score (RS) & Size (q. sales)

# Results - CIT in levels



Note: 95% CI based on robust SE clustered at firm level, outcome winsorized at 0.1-99.9.

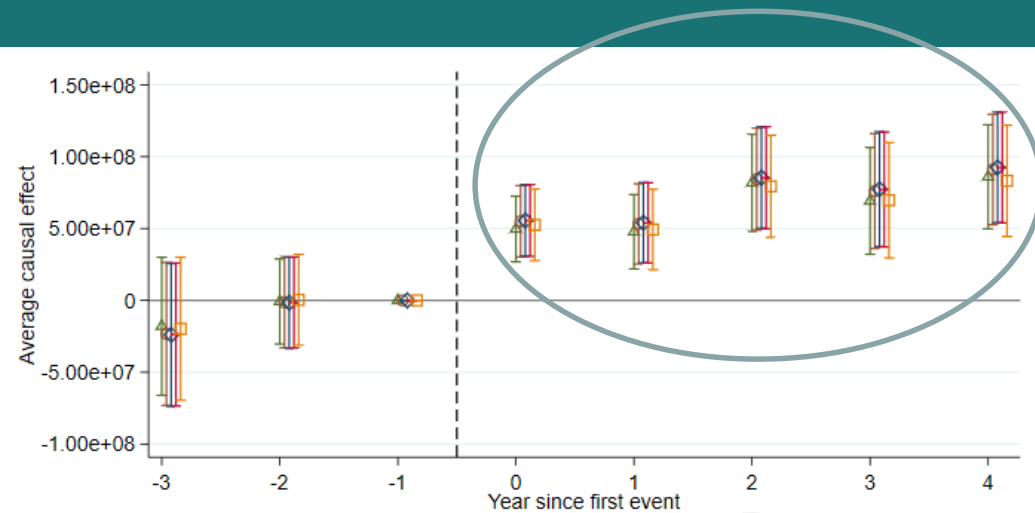
# Results - VAT in levels



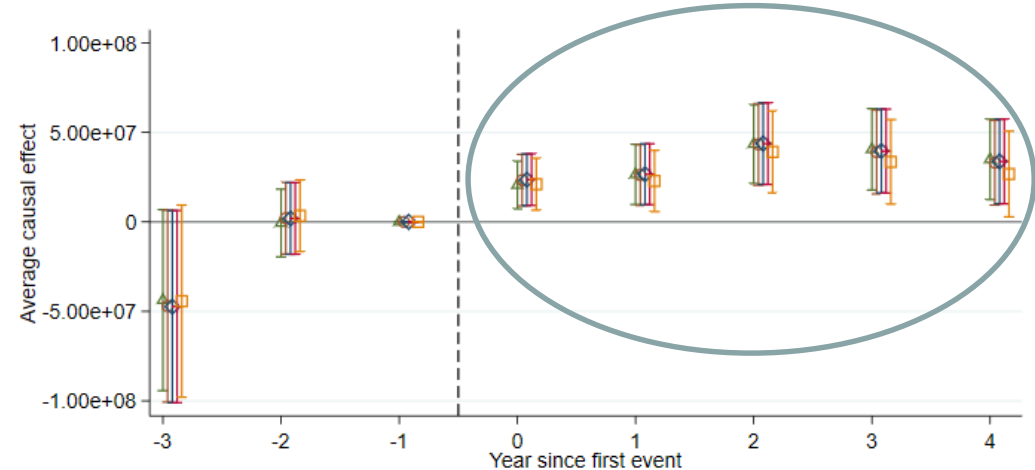
Note: 95% CI based on robust SE clustered at firm level, outcome winsorized at 0.1-99.9.

# Results by audit outcome: CIT in levels

a) Determined compliant



a) Determined noncompliant



Note: 95% CI based on robust SE clustered at firm level, outcome winsorized at 0.1-99.9.

- △ TWFE (FF sector\*time type\*time)
- ◇ Matched - TWFE (sector & type)
- Matched - TWFE (sector & type & part of the RS & Size)
- Matched - TWFE (just sector)
- + Matched - TWFE (sector & type & part of the RS)

# Results by audit outcome: VAT in levels

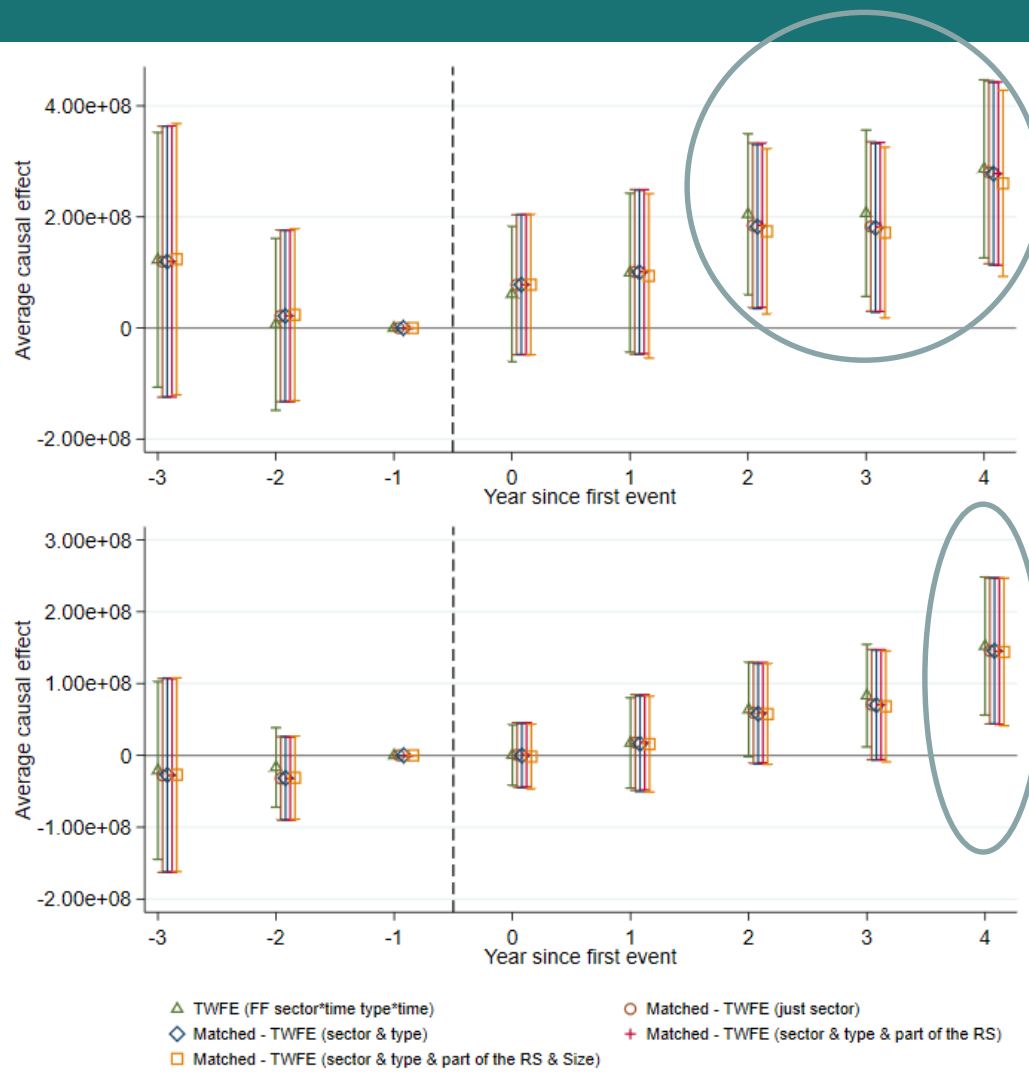
## a) Determined compliant

Following the audits, VAT declarations increase in years 2, 3, 4 for compliant

## a) Determined noncompliant

Following the audits, VAT declarations increase in year 4 for noncompliance

Note: 95% CI based on robust SE clustered at firm level, outcome winsorized at 0.1-99.9.



# Concluding remarks

- Evaluating tax audits is important
  - For revenues mobilization but also efficient allocation of scarce resources within a tax administration



# Concluding remarks

- Research shows that
  - Impact of audits in Uganda on tax compliance is positive and substantial for CIT (but nil-filers are driving the response)
  - VAT audits do not have a compliance effect in the short run, but only from the third year on

# Caveat

- Research does not
  - Evaluate 'quality' of audits (incl. process, allocation to auditors etc.)
  - This is an issue that deserves further attention

- Thank you for listening!