

Treasure islands, real jobs?

The impact of reforming a low-tax jurisdiction

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Workshop Avaliação de Políticas Públicas

*The analyses, opinions, and findings expressed in this article are those of the authors and do not necessarily coincide with those of Banco de Portugal or the Eurosystem.

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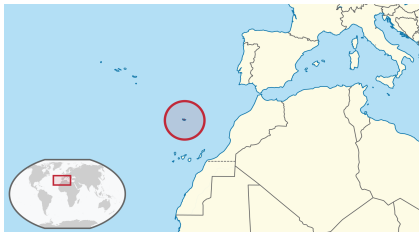
- Impact on high-tax countries well documented
 - Tax revenues, employment, investment, innovation, industry concentration, income inequality...
- Impact on treasure islands: ?
 - General perception: mailboxes, few workers; data opacity
- In response to international initiatives to prevent harmful tax practices, jurisdictions with low or zero taxes have recently introduced economic substance rules
 - Having employees who are physically present

This paper

- **How is the labour market in a low-tax jurisdiction?** \Rightarrow
Descriptive
 - Characterization of firms: turnover, foreign equity
 - Characterization of workers: number, jobs, types of contracts, education, occupations
- **Is there a wage premium for those who work there?** \Rightarrow
Mincer equation
- **What is the impact of introducing employment requirements?**
 - For those who already work there? \Rightarrow *CEM Diff-in-diff*
 - For new workers? \Rightarrow *High-dimensional FE* (Not today)

Data

- List of firms present in Madeira's Free Trade Zone
 - Source: Statistics Portugal; period: 2009-2019



- Quadros de Pessoal
 - Rich administrative linked employer-employee dataset
 - All firms in Portugal with at least one wage earner, including information on employee characteristics and monthly earnings

Madeira's Free Trade Zone (MFTZ)

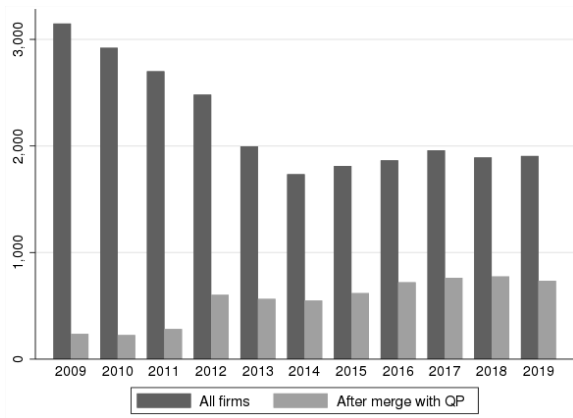
- **Purpose:** compensating the structural handicaps that companies face in an outermost region
- **Attractive incentives for licensed firms:**
 - Low CIT on income from transactions with foreign entities: 0% for most firms until 2012; currently 5%
 - Tax exemptions: withholding taxes on dividend remittances, payments of royalties, interest and services

MFTZ substance requirements' reform

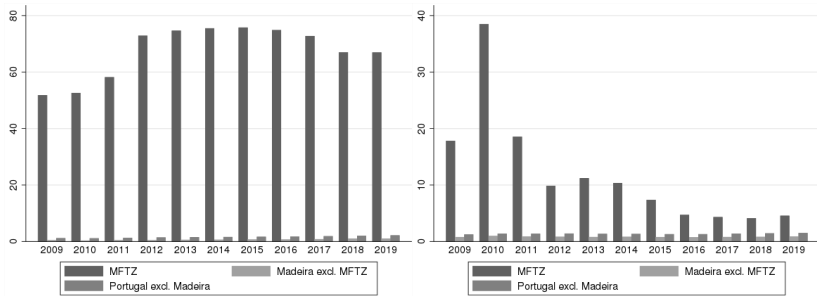
- Announcement: 2011
- Implemented: 2012
- Corporate income tax rate: from 0% to 5% until the end of 2027
- Job creation requirements

Jobs	Taxable Income Limit
1 - 2	2 730 000 €
3 - 5	3 550 000 €
6 - 30	21 870 000 €
31 - 50	35 540 000 €
51 - 100	54 680 000 €
> 100	205 500 000 €

How many firms in MFTZ? And with at least one employee?



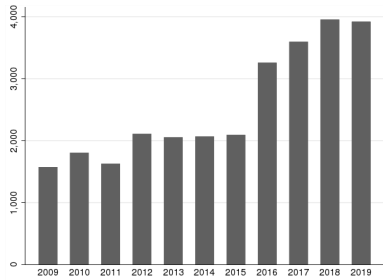
Are these firms different?



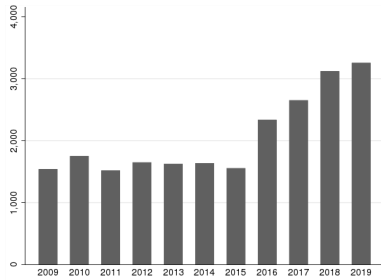
(a) % of foreign equity

(b) Turnover, million euros

How many jobs and workers in MFTZ?

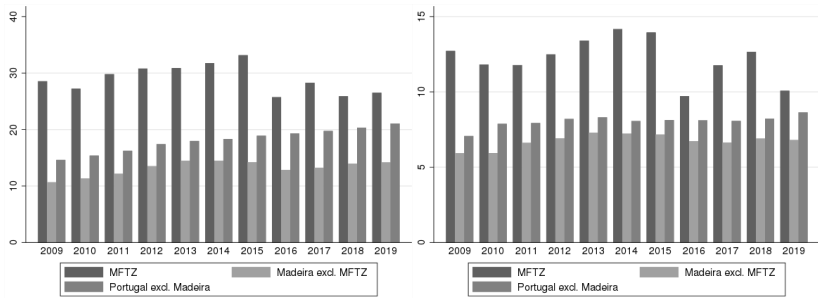


Jobs



Unique workers

Are these workers different?

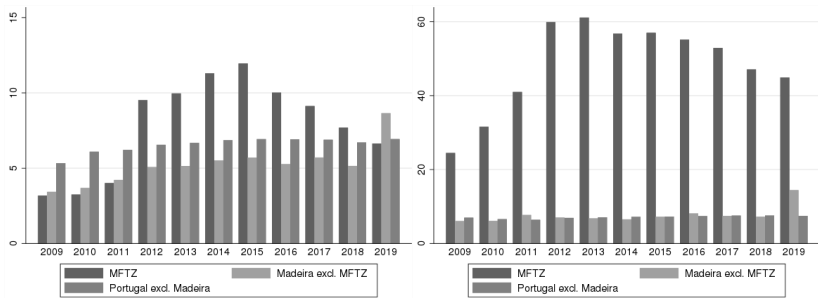


(a) % of workers with tertiary education

(b) % of white-collar workers

no big gender differences (but % of males \uparrow after the reform)

Are employment schemes different?



(a) % of unique part-time workers

(b) % of part-time workers with multiple jobs

share with permanent contract ↓

Are their occupations different?

Madeira's Free Trade Zone

1. **Office clerks, general secretaries, and data processing operators (16%)**
2. **Specialists in finance, accounting, admin. organization, public relations & sales (11%)**
3. **Skilled workers in construction and related trades, excl. electricians (9%)**
4. **Intermediate-level technicians in finance, administration & business (8%)**
5. **Other administrative support staff (6%)**

Portugal excl. Madeira

1. Salespersons (10%)
2. Personal service workers (6%)
3. Operators of fixed installations and machinery (5%)
4. Office clerks, general secretaries & data process. operators (5%)
5. Cleaning workers (5%)

Madeira excl. MFTZ

1. Personal service workers (14%)
2. Salespersons (9%)
3. Cleaning workers (8%)
4. Skilled workers in construction and related trades, excl. electricians (5%)
5. Office clerks, general secretaries & data process. operators (5%)

Is there a wage premium for those who work there?

Mincer equation – Base monthly wage (in log), 2009-2019

	(1)	(2)	(3)	(4)	(5)
MFTZ	0.159***	0.181***	0.152***	0.124***	0.135***
	(0.010)	(0.008)	(0.008)	(0.008)	(0.008)
Year FE	Yes	Yes	Yes	Yes	Yes
Sector FE	Yes	Yes	Yes	Yes	Yes
Worker Controls	No	Yes	Yes	Yes	Yes
Firm Controls	No	No	Yes	Yes	Yes
Region FE	No	No	No	Yes	No
Occupations FE	No	No	No	No	Yes
Observations	28,315,068	28,315,068	28,315,068	28,315,068	28,219,960
Adjusted R2	0.240	0.490	0.496	0.502	0.526

Notes: All regressions include year and sector FE (86 CAE 2-digits sectors). Worker-level controls comprise age and its quadratic term, tenure and its quadratic term, gender, education (3 distinct education levels), dummy variables for foreign nationality, white-collar jobs, part-time jobs, and permanent contract. Firm-level controls comprise the % of foreign capital and the log of employment. Region FE are defined at the NUTS2 level (7 regions). The last column includes the Portuguese classification of occupations (4-digits) instead of the dummy variable for white-collar jobs. For the estimates of column (5), we harmonised the break in the 1994 and 2010 Portuguese classifications of occupations. Stars indicate significance levels of 10% (*), 5% (**), and 1%(***)

What is the impact of introducing employment requirements for those who already work there?

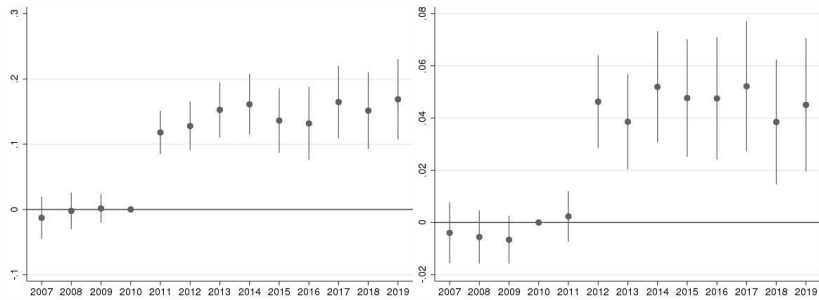
1. Restrict to workers aged between 25 and 55 years old
2. Find a suitable comparison group using workers always outside MFTZ and a CEM algorithm based on pre-treatment characteristics (age, gender, education, foreign, wage,...)
3. Event study diff-in-diff framework

$$y_{ift} = \beta_1 MFTZ_{ft} + \sum_{t=2007, t \neq 2010}^{2019} \eta_t \times MFTZ_{ft} \times Year_t + \gamma_t + \epsilon_{ift}, \quad (1)$$

where

- y_{ift} is the outcome of interest for worker i at firm f in year t
- Omitted period: 2010, pre-announcement
- Standard errors are clustered at the worker-level

Results



(a) In (Wage)

(b) % of part-time workers

Number of firms that each worker works for \uparrow after the reform
Robust to the inclusion of Sector, or sector \times year FE

Concluding remarks and next steps

- We examine the labor market of a treasure island, contributing to shed light on how those jurisdictions operate
 - Relevant for a full picture of international tax avoidance phenomenon and for the discussion on the effect of policies
- Labour market with distinct characteristics: few workers, specialized tasks, high education, high wages
- Reform imposing employment requirements
 - Wages \uparrow for those who already worked there
 - Requirements partly met by incumbents working part-time on more firms
 - Movers: TBD