

Who's my peer?

About the comparability of taxation ratios within fields of business

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Introduction

- Taxes as important source of income for the state
- BUT companies try to avoid taxes
- Various influences on behaviour



Aim: find relation between taxation ratios and field of business

?



To what extent exists a relationship between the industry of a listed company and its effective taxation ratio?



Believed industry does not influence taxation ratio but rather firms characteristics.

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Key terms

Effective Taxation Ratio (ETR): displays how many taxes a company really pays; indicator for tax avoidance, measured with $\frac{\text{Income Taxes}}{\text{Pre-Tax Income}}$

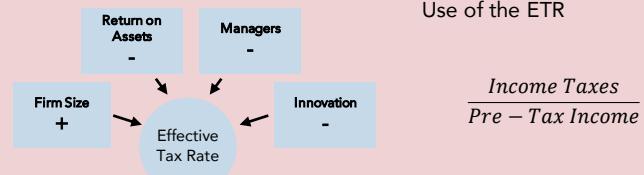
Global Industry Classification Standard (GICS): classification system for companies based on produced products and services

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Literature Review

Taxation Ratio

Influences:



Measure:
Use of the ETR

$$\frac{\text{Income Taxes}}{\text{Pre-Tax Income}}$$

(Kraft, 2014; Rego, 2003; Zimmerman, 1983; Dyreng et al., 2010; Chyz, 2013; Higgins et al., 2015)

Comparability

Importance:

- for valuation processes to predict future developments (De Franco et al., 2011)
- for tax purposes, as companies adjust tax planning when peers change tax planning (Armstrong et al., 2016)

Measure:

- often based on products and services → eg. GICS
- classification based on financial data more successful and accurate

→ factors for classifying: Total Assets, firm size, sales, market capitalisation (Young and Zeng, 2015; Bhojraj and Lee, 2002; Dittmann and Weiner, 2005; Franco et al., 2015)

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Methodology



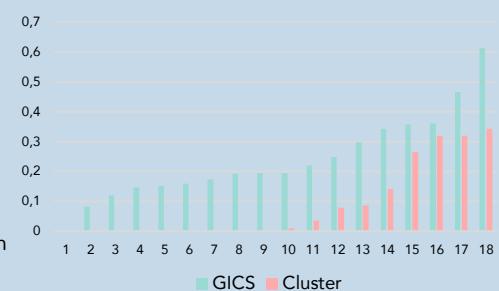
- **Data:** German listed companies in DAX, MDAX, SDAX
- Cluster analysis in R to build comparable groups based on **total assets, sales, return on assets and return on equity**
- Descriptive statistics to analyse ETR (mean, standard deviation, etc.) inside groups
- Comparison of own groups with GICS classification

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Results

- Cluster analysis provides grouping that differs severely from GICS groups
 - many firms form own cluster
- Average ETR: 30.5%
- Lowest ETR: Groups with companies with a lot of public attention (like Deutsche Post AG, EON SE, Volkswagen AG) (15.66% - 21.15%)
- Highest ETR: firms from various industries like automotive, retail and materials (42.12% - 57.04%)
- Variation of ETR in the GICS groups stronger
 - cluster analysis provides more homogenous groups
 - stronger relationship between taxation ratio and cluster groups than GICS industries
 - Difficult to determine peers inside GICS industries

Variation Coefficient



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Recommendations

- Limited on Germany
 - analysis worldwide useful
- Control for international activities
- Control for key drivers in GICS industry



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