

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

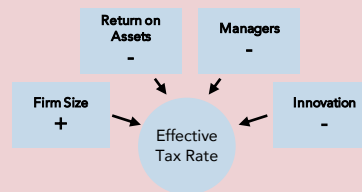
Global Industry Classification Standard (GICS): classification system for companies based on produced products and services

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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



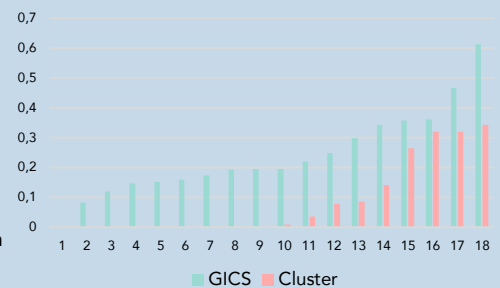
- **Data:** German listed companies in DAX, MDAX, SDAX
- Cluster analysis in R to build comparable groups based on **total assets, sales, return on assets and return on equity**
- Descriptive statistics to analyse ETR (mean, standard deviation, etc.) inside groups
- Comparison of own groups with GICS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



References:

- Armstrong, C., Glaeser, S. & Kepler, J. D. (2016). Strategic Reactions in Corporate Tax Avoidance. *SSRN Electronic Journal*, 1–63. <https://doi.org/10.2139/ssrn.2889145>
- Bhojraj, S. and Lee, C.M.C. (2002) 'Who Is My Peer? A Valuation-Based Approach to the Selection of Comparable Firms', *Journal of Accounting Research*, 40(2), pp. 407–439.
- Chyz, J.A. (2013) 'Personally tax aggressive executives and corporate tax sheltering', *Journal of Accounting and Economics*, 56(2-3), pp. 311–328.
- Dyreng, S., Hanlon, M. and Maydew, E.L. (2010) 'The Effects of Executives on Corporate Tax Avoidance', *The Accounting Review*, 85(4), pp. 1163–1189.
- Franco, G. de, Hope, O.-K. and Larocque, S. (2015) 'Analysts' choice of peer companies', *Review of Accounting Studies*, 20(1), pp. 82–109.
- Higgins, D., Omer, T.C. and Phillips, J.D. (2015) 'The Influence of a Firm's Business Strategy on its Tax Aggressiveness', *Contemporary Accounting Research*, 32(2), pp. 674–702.
- Kraft, A. (2014) 'What Really Affects German Firms' Effective Tax Rate?' *International Journal of Financial Research*, 5(3).
- Rego, S.O. (2003) 'Tax-Avoidance Activities of U.S. Multinational Corporations', *Contemporary Accounting Research*, 20(4), pp. 805–833.
- Young, S. and Zeng, Y. (2015) 'Accounting Comparability and the Accuracy of Peer-Based Valuation Models', *The Accounting Review*, 90(6), pp. 2571–2601.