

Wealth Tax as Alternative Minimum Tax ?

– The Impact of Minimum Taxation on Business Structure and Strategy –

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Preliminary Version, April 24, 2006

*International Conference on Policy Modeling (Ecomod 2006)
Hong Kong, June 28-30, 2006*

Abstract

An alternative minimum tax (AMT) is often considered desirable because it is intended to ensure that taxpayers with substantial economic income cannot avoid taxation. Further, wealth tax is a typical second-best instrument in a world with tax evasion. Facing budget deficits and for distributive reasons, levying an additional tax burden on wealthy individuals or corporations seems to be a promising instrument. We analyze a wealth tax that is designed as AMT and model enterprises of different structure, industry, size and legal status showing that companies in the service sector are more frequently subjected to wealth AMT than capital intensive industries. This result runs counter to well-known effects of a common wealth tax. Wealth AMT may influence corporate dividend policy evoking a push-out effect, usually favors financial rather than real investment and encourages outbound investment. We find AMT very distortive and resume that whenever income is taxed correctly, AMT is dispensable

Keywords: alternative minimum tax, business strategy, investment decisions, wealth tax
JEL classification: H25, H21

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1 Introduction

Taxation of wealth or property has been a topic in tax reform discussions for years. Although a classic tax on wealth as an additional tax on net wealth has been abolished in several countries, non-profit oriented taxation is still a subject of recent political debates, recent tax reforms and public economic research activities.

OECD statistics on wealth taxation (2005) clarify that the degree of wealth-based taxation varies significantly between the member countries (figure 1).

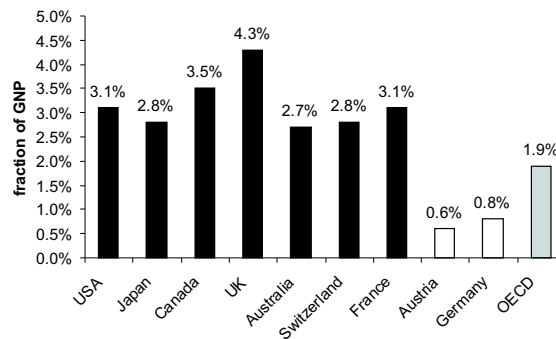


Figure 1: Revenues from asset taxation in % of GNP in selected OECD member countries

E.g. Austria and Germany's GNP fraction of non-profit oriented tax revenue is relatively low. These figures frequently serve as an important argument in favor of introducing a wealth tax in these countries although its negative influence e.g. on businesses with temporary losses or severe liquidity restrictions is well-known. In fact, only few OECD member countries have implemented a classic individual wealth tax. In Europe these are Finland, France, Iceland, Luxembourg, Norway, Spain, Sweden and Switzerland. Among these only Iceland, Luxembourg and Switzerland levy an additional wealth tax at corporate level.

Despite of this evidence wealth tax discussion is still an ongoing process in many countries. Wealth tax is a typical second-best instrument in a world with tax evasion. Furthermore,

due to budget deficits and for distributive reasons, levying an additional tax burden on wealthy individuals or corporations corresponds to the widespread desire for a 'soak the rich' policy with a redistributive character.

Additionally, an alternative minimum tax (AMT) is considered desirable because it is intended to ensure that taxpayers with substantial economic income cannot avoid taxation at all but at least pay a 'minimum tax'. Against this background AMT concepts have been implemented in many countries.

E.g., in the U.S. AMT was first enacted in 1969 and structured as a tax that is added on to a corporation's regular tax liability. The 1986 Tax Reform Act replaced this add-on minimum tax with the present law on AMT. This AMT is intended to ensure that no corporation with substantial economic income can avoid significant tax payments by using exclusions, deductions and credits.⁰ This provision ensures that special deductions do not lead to non-taxation of corporate gains. As the tax law gives preferential treatment to some kinds of income and allows special deductions and credits for some kinds of expenses, taxpayers who benefit from these statutory provisions may have to pay an additional tax called the AMT. It is a separate tax computation that, in effect, eliminates many deductions and credits and creates a tax liability for an individual or corporation who would otherwise pay little or no tax. The corporate AMT income is taxed at flat rate of 20%.¹

As the taxpayer may not be able to pay this tax from his current income but instead has to fall back on his wealth, AMT burdens assets similar to a wealth tax. This is highlighted by the analysis of Lyon (1997) who found out that, e.g., in 1993 more than 50% of the assets in the manufacturing, transportation and public utility industries were subject to AMT (cf. Lyon (1997, p. 115)).

⁰ Cf. Joint Committee on Taxation (2002, p. 7).

¹ Cf. Internal Revenue Service (2004).

Further, the Netherlands introduced a different type of minimum taxation. Income tax was merged with what was formerly the wealth tax and a new income tax system established that distinguishes between three categories of income. One of these categories is taxable income from savings and investments (so-called box 3 income). Here, the tax levied on income from savings and investments (such as dividends, capital gains, losses) is based on the assumption that a taxable yield of 4% is made on the assets, irrespective of the actual yield. This calculated income is taxed at a flat rate of 30%.²

In Germany the introduction of loss offset limitations into profit taxation put AMT characteristics into legislation. It causes asymmetric taxation of gains and losses, enforces the payment of taxes without positive economic income and thereby reduces an investor's wealth under specific conditions.

Summarizing at this point, minimum taxation in the Netherlands guarantees the precise taxation of an expected 4% yield. Conversely, the U.S. AMT and Germany's loss offset limitations ensure rather imprecise minimum taxation.

Without describing the above mentioned examples from the Netherlands, the USA and Germany in more detail we can see from this already that minimum taxation on the basis of corporate or personal income (calculated or realized) is often similar to wealth taxation since it is non-profit oriented. Moreover, wealth taxation can be interpreted as a tax on fictive or calculated profits. We can conclude that taxation of wealth can be interpreted as taxation of specific income calculated on basis of an assumed yield of the underlying assets and vice versa.

Merging arguments in favor of minimum and wealth taxation and simultaneously facing slump in corporate tax revenues and a high budget deficit, recent German wealth tax

² Cf. Ministry of Finance of The Netherlands (2004).

debates have led to the proposal of a concept of minimum wealth taxation.³ This wealth tax is imputable to profit taxes and is hence intended to prevent multiple (multistage) taxation. In consequence, this wealth tax has to be interpreted as a tax on calculated profits, i.e. as a tax on income rather than on wealth, similar to well-known minimum tax concepts, e.g., represented by the Dutch taxation of so-called box 3 income.

Against this background, the effects of a minimum wealth tax are the subject of the following investigation.

A vast literature with theoretical and empirical studies examines the economic impact of wealth or property taxes. E.g., Mieszkowski (1972), Netzer (1973) and McLure (1977) analyze the incidence of a property tax. Wildasin (1982) examines different land tax systems with respect to neutrality if tax rates change over time. On this basis Arnott (1998) and Arnott and Petrova (2002) investigate different property tax systems that are either neutral or non-neutral with respect to timing and density of development of land from a partial equilibrium perspective. Vlassenko (2001) evaluates three property tax systems with respect to efficiency and fairness. Wijnbergen and Estache (1999) assume a minimum asset tax and investigate its sensitivity towards carryover rules and uncertainty. Dye, McGuire and Merriman (2001) analyze empirically the impact of property taxes on business activities and further on growth rates in metropolitan areas.

Analyses on the impact of loss offset limitation and asymmetric taxation on corporate investment decisions are provided by, e.g., Auerbach (1986), Auerbach and Poterba (1987) and Majd and Myers (1986). Auerbach (1986) investigates the influence of loss offset limitations on investment in a dynamic setting. Majd and Myers (1986) study the influence of tax asymmetries under corporate income tax on effective tax rates and investment tax credits and tax depreciation in an option pricing framework. They back up their findings

³ This minimum wealth tax has been proposed by Germany's Green Party.

by numerical experiments. In the empirical analysis by Auerbach and Poterba (1987) effective tax rates on investment in plant and equipment are deduced and discussed taking loss-carryforward firms into account. Feenberg and Poterba (2003) examine how several AMT proposals affects weighted average marginal tax rates and find on average AMT evoking only modest impact on tax rates although some taxpayers face severe changes.

Further, Eeckhoudt and Hansen (1982) and Eeckhoudt, Gollier, and Schlesinger (1997) investigate the influence of partial and no-loss offset provision on risk-taking. An estimation of corporate marginal tax rates under asymmetric taxation is provided by Shevlin (1990). Niemann (2004) analyzes the impact of particular loss offset limitations on intrastate and cross-border investment decisions and finds on average, a domestic minimum tax and a time limit on loss carryforwards depressing real investment. Furthermore, he highlights some counter-examples as well.

Bernheim (1989) studies the impact of a corporate AMT on capital budgeting and investment decisions within and across firms. He finds AMT reducing the range of effective tax rates and thereby compatible with minimizing tax distortions. Relying on his results he concludes that AMT will not have significant influence on organizational structure of economic activities. Among others, Lyon (1990, 1997) criticizes the U.S. AMT as the cost of capital vary widely under this tax. Lyon and Silverstein (1995) study the effects of the U.S. AMT on multi-national corporations. Wijnbergen and Estache (1999) employ data from Brazil to analyze the impact of minimum taxation on corporations in a real option framework. Discussions of economic issues and implications of implications of AMT are provided by Burman et al. (2002) and Burman, Gale, and Rohaly (2003).

We take above mentioned minimum wealth tax as an example of minimum taxation and analyze it at corporate and personal level, according to the proposal. Referring to data from annual reports and the German Central Bank we model enterprises of different

structure, industry, size and legal status. Furthermore, we investigate the influence of this wealth tax on marginal investment decisions and on cross-border investment. We show that companies in the service sector which generally maintain rather high gearing rates are more frequently subjected to the wealth tax than capital intensive industries. This result runs counter to well-known effects of a common wealth tax. Capital intensive firms, e.g. in the metal industry, are levied with definitive wealth tax only if they have large loss carry-forwards or extremely volatile profits. Furthermore, partnerships often enjoy wealth tax privileges due to uniform taxation at individual level whereas corporations may suffer from the wealth tax at corporate and personal level caused by imputation backlogs. Obviously, the underlying AMT influences corporate dividend policy evoking a push-out effect. We prove that this kind of wealth taxation usually favors financial rather than real investment and encourages outbound investment.

The remainder of this paper begins with a description of the proposed AMT wealth tax that is imputable to corporate and income taxes in Section 2. In order to find out how managers may react on wealth AMT we investigate its influence on business structures in Section 3. We present our model framework in section 3.1. Applying methods from capital budgeting and simulations of tax assessments we determine the different tax burdens on companies in various industries and with various structures in Sections 3.2 and 3.3. In Section 4 we examine the influence of minimum wealth tax on marginal investment decisions and we analyze international investment decisions under this tax in Section 5. On this basis we summarize and draw final conclusions on the distortive potential of this AMT in Section 6.

2 AMT as Imputable Wealth Tax

Introducing an imputable wealth tax hence aims to eliminate imbalances in business and capital income taxation. In consequence, the concept of AMT wealth tax merely aims to supplement or improve existing profit and income taxation.

The proposed wealth tax is levied on private and operating wealth of individuals and corporate wealth of corporations. Wealth is determined by the market value of the assets or suitable proxies.⁴ The wealth tax rate usually is 1%. As corporate wealth is taxed at corporate level and again as corporate shares at personal level avoiding double or multistage taxation a halved wealth tax rate of 0.5% is applied at each level. Corporate wealth tax is imputable to corporate tax while personal wealth tax is imputable to personal income tax. If the calculated wealth tax is lower than corresponding profit tax then wealth tax is completely imputable. If a definitive wealth tax remains, a five year wealth tax carry-forward allows future imputation on principle. Further, in order to protect small wealth from being taxed,⁵ an annual tax allowance of € 200,000 for every adult taxpayer and of € 2,000,000 for business assets and shares irrespective of the legal status of the company has been proposed and thus is assumed in the following.

A wealth tax that can be imputed to corporate and income tax only influences decisions if it becomes definitive, i.e., if a non-imputable amount remains. This occurs whenever profits are extremely volatile or the company yield is rather low. If an individual faces a marginal income tax rate of 42 %⁶ a 1% wealth tax rate invokes a definitive tax burden as soon as the pre-tax rate of return of an investment is less than 2.38 %. In the case of an investment within a partnership the required minimum rate of return increases to at least 3.6% due

⁴ As mentioned above, we neglect in our analysis problems of determining the correct value of non-listed firms, assets with a long useful life etc.

⁵ For distributive reasons.

⁶ Which is Germany's maximum marginal income tax rate in 2005.

to German trade tax. Assuming additionally a wealth tax at corporate and personal level of 0.5%, corporations need a pre-tax rate of return of 2.39% to avoid definitive wealth tax. Further, the definitiveness of this minimum tax depends on dividend policy. If profits are retained in full, there is no income tax at personal level to be employed for imputation of personal wealth tax on corporate stock. Furthermore, imputation backlogs may occur even for investments that exceed the required minimum rate of return for a specific time horizon, if periodical profits fluctuate heavily, or temporary losses occur.

Although all kinds of wealth taxes face severe problems e.g. in determining the value of non-listed firms and assets with a long useful life,⁷ in the following we abstract from these aspects and focus on the economic implication of this tax beyond these difficulties.

3 Influence of Wealth Tax as AMT on Business Structures

3.1 Model Design

We were asked to analyze the influence of the underlying wealth tax on given types of company. Referring to our analysis by order of Germany's Green Party, we concentrate in the following on:

1. small craft and trade partnerships, 5-10 employees
2. small craft and trade (non-listed) corporations, 5-10 employees
3. medium-sized companies from metal working industry, 30 employees, turnover less than € 2.5 million
4. capital intensive medium-sized corporations, in the metalworking industry, with managing shareholder, turnover between € 2.5 and 50 million, approx. 150 employees

⁷ Asset valuation is indispensable not only for wealth tax purposes but for minimum taxation as implemented in the Netherlands as well. Cf. Ministry of Finance of The Netherlands (2004, p. 21).

5. large listed corporations (DAX 30 corporations), manufacturing industry
6. large listed corporations (DAX 30 corporations), financial services

By exemplifying representative types of business we can draw conclusions as to how the underlying wealth tax burdens companies of different size and structure.⁸

Information from balance sheets and profit and loss accounts for 2002 for company types 1 and 2 provided by the North-Rhine Westphalian Chamber of Crafts (cf. table 1). provides data for the craft and trade companies. These data comprise comparisons of the average profits, liquidity and wealth of the underlying businesses collected by annual voluntary questionnaires. Data on the asset structure of medium-sized businesses (types 3 and 4) were taken from special publications of the German Federal Bank. (1999, 2003). These statistics include aggregated data from balance sheets and profit and loss statements of German companies from 1971 to 1996 and 1998 to 2000.⁹ Examples of large listed corporations were selected from the major companies that are listed in the German stock exchange index DAX 30. Information from annual reports allowed us to model two representative corporations (cf. table 2). Additional details from the notes in these reports, e.g. referring to exceptional items¹⁰ were taken into account in order to deduce typical industry related tax bases. Although the provided information does not allow for perfect adjustment for tax purposes, this approach enables us to draw general conclusions on how different relations of income and wealth that are typical for an industry will influence the tax burden.

For typical type 1, 2 and 3 businesses we assume the following structure:¹¹

⁸ We leave aside the controversial discussion about analyses of representative firms and regard this approach as a first (simple) step for investigating this type of AMT. E.g., cf. Shevlin (1990), Stiglitz

Small businesses
structure of the balance sheet and operating profit in €

| | type 1 | | type 3 |
|-------------------------------------|---------------------------|----------------------------------|--------------|
| | craft and trade bakery | craft and trade car mechanics | medium-sized |
| net wealth | - 24,000 | 12,500 | 105,000 |
| liabilities | 125,000 | 210,000 | 635,000 |
| total property, plant and equipment | 80,000 | 106,000 | 220,000 |
| operating profit | 28,000 | 40,500 | 43,000 |

Table 1: Structure of small craft and trade partnerships and medium-sized companies

Considering a tax allowance of € 2,000,000 no wealth tax is levied on these businesses. In all cases net wealth is lower than € 2,000,000, always generating a tax base of zero. Additionally, taking future profits into account and determining a combined tax base consisting of a weighted average of the present value of future profits and net asset value,¹² the limit of € 2,000,000 is again not exceeded. The legal status of the business (type 1 or type 2) does not influence this general result for the craft and trade companies. Consequently, in the following analyses we leave aside these types of business that are unaffected by wealth taxation.

Only for capital intensive medium-sized companies of type 4 or large corporations (types 5 and 6) asset and equity structures occur, inducing a positive wealth tax base and thereby possibly a wealth tax burden.

(1987).

- ⁹ 80% of this data is based on balance sheets and profit and loss statements that were prepared for the tax authorities.
- ¹⁰ E.g., we adjusted for exceptional capital gains or exceptional accelerated depreciations.
- ¹¹ Note that the underlying data on net wealth only provides information on net equity according to the balance sheet. Information on the market values of the firm is not available. Therefore, the indicated net wealth only approximates real net wealth, i.e. the market value. Further, operating profit in the craft and trade sector includes calculatory employer's salaries.
- ¹² This valuation method is implemented in Germany's Inheritance Tax Code Directives and called the 'Stuttgarter approach'.

Large businesses
structure of the balance sheet and profit in €m

| | type 4 capital intensive corporation metalworking industry turnover € 47 million | type 5 DAX 30 corporation manufacturing industry | type 6 financial services |
|--------------------------------------|---|---|---------------------------------|
| net wealth | 6.41 | 23,715 | 36,959 |
| capitalized market value | - | 46,000 | 39,000 |
| liabilities | 17.47 | 53,890 | 883,011 |
| total property, plant and equipment | 3.26 | 34,116 | 356,877 |
| total assets | 24.00 | 77,605 | 935,951 |
| profit according to balance sheet | 1.09 | 2,445 | 1,616 |

Table 2: Structure of medium-sized capital intensive companies and DAX 30 corporations

Table 2 provides an overview of the analyzed representative asset and profit structure of type 4, 5 and 6 corporations.¹³ Further, this table clarifies that in contrast to small businesses, typical large companies usually are subject to wealth tax. Since DAX 30 corporations vary widely in structure depending on the industry we analyze two categories: a representative corporation from the manufacturing industry and a representative corporation from the financial services industry. These (synthetic) companies were constructed on the basis of different DAX 30 corporations in the industries in question.

Employing methods of capital budgeting and simulations of tax assessments we determine the tax burden of the underlying companies. We assume a time horizon of 10 years. Per assumption, during these periods profits are retained in full, thereby increases business wealth. On the basis of a starting point for the profit¹⁴ periodical profits grow at the expected GNP growth rate every year. The assumption of continuous growth is relaxed in sensitivity analyses, e.g. by modelling volatile profits during the time horizon.

¹³ Note that capitalized market value is the average of the last quotation of every quarter of a year multiplied with the number of released shares. Cf. German Federal Bank (1999, 2003) and various DAX 30 corporations 1993-2003 annual reports.

¹⁴ See parameters for the different types in tables 1 and 2.

We abstract from the sale of shares during the time horizon for simplicity and to keep the observable effects transparent. Applying the specific assumed company parameters we deduce the tax bases for corporate, income and trade tax plus supplementary taxes and finally the wealth tax in each period.

We simulate the wealth tax according to the proposal as described above and assume profit taxation in line with German tax law applicable in 2005. We integrate the 2005 corporate tax rate of 25 % and an effective trade tax rate of 18.4 % in our model. In Germany, the trade tax is a local additional tax on business profits after some adjustments. As an example for these adjustments, the tax base has to be increased by 50 % of long-term interest payments of the company for trade tax purposes. Applying the local tax rate the trade tax burden can be determined. The resulting trade tax is deductible from the corporate tax base in case of corporations or the income tax base of business income in case of partnerships. In contrast to trade tax on corporate profit, trade tax from partnerships is imputable to the partners' income tax on business profits. Further, supplementary taxes of 5.5 % are levied on corporate tax or personal income tax. Interdependencies between the different taxes are completely taken into account.

In case of DAX 30 corporations we focus on corporate level taxation, i.e. corporate tax, supplementary tax, trade tax and corporate wealth tax. Although integrating personal taxes into calculus is possible in principle, we neglect this level as taxational effects at personal level depend on various subjective factors. We need information on whether the shareholder's income is subject to personal wealth tax, on the shareholder's relevant income tax bracket, etc. Since this information is not available arbitrary assumptions would be necessary indicating that general conclusion can not be drawn from such a model. In contrast to medium-sized corporations, additionally, DAX 30 shareholders often have earnings from other sources which may heavily influence their tax bracket and thereby

their tax burden. Thus, representative conclusions at personal level for large corporations cannot be expected. Consequently, in this case we concentrate on corporate level taxes.

Conversely, for medium-sized companies that are usually formed by a small number of shareholders or partners, it is necessary to consider the matter at both company and personal level. In these cases partners' income is often covered mainly by company payouts.¹⁵

After adjusting the input data for tax purposes on the basis of information about tax payments and tax-free income from associated undertakings, e.g. from annual reports, and tax specific modifications,¹⁶ the tax bases can be determined. The wealth tax base is represented by the average value of capitalized market value of quoted corporations or, for non-listed companies, calculated by the above mentioned weighted average valuation method.¹⁷ Finally, by subtracting the tax allowance of € 2,000,000 we receive a corporate wealth tax base that is subject to a (halved) tax rate of 0.5%. As corporate wealth is taxed at corporate level and again as corporate shares at personal level, to avoid double or multistage taxation half of the usual wealth tax rate (1%) is levied on corporate level and half on personal level. If the calculated corporate wealth tax is lower than the corporate tax, then the wealth tax is completely imputable. If a definitive corporate wealth tax remains, a five year wealth tax carry-forward allows future imputation on principle.

Starting in 2005 we simulate gains and taxes until 2014 and determine the present value of payable taxes. On this basis we derive a ratio describing tax burden in present value terms and in relation to the present value of pre-tax profits. We assume a pre-tax discount factor of 4.25%.¹⁸ Comparing this tax ratio with the one we receive by neglecting wealth

¹⁵ Payouts can be either dividend payments, management fees or related salaries.

¹⁶ E.g. for trade tax purposes according to §§ 8 and 9 of German Trade Tax Act.

¹⁷ This method is implemented in Germany's Inheritance Tax Code Directives and has been modified for § 46 Heritage Tax Valuation Act Provision of the Federal State Schleswig-Holstein.

¹⁸ On this basis we deduce the post-tax yield for corporations investing alternatively into riskfree bonds with a 10 year maturity. E.g. 4.25% federal bond, security code 113525, issued July 7, 2004, maturity July 4, 2014. The pre-tax discount rate is reduced by relevant taxes applying the resulting post-tax discount factor for determining present value.

tax, we can conclude how wealth tax influences a company or investor's tax exposure.

Enriching the analysis with personal level effects for medium-sized companies we assume businesses with two shareholders, each holding 50% of the company, an appropriate employer's salary that mainly covers personal maintenance, 10% of after-tax profits are paid out as dividends whereas 90% of after-tax profit increase business wealth and thereby the basis for future growth. Distributed profits are subject to income tax shareholder relief, i.e. only 50% of this income is subject to personal income tax, the deduced market value of the company's net assets is reduced by the wealth tax allowance of € 2,000,000 and further personal tax allowance. Personal wealth from corporate stock is subject to personal wealth tax at the (halved) rate of 0.5%.

We receive the total tax load in every period and in turn, finally, the change in present value terms due to wealth taxation.

3.2 Impact on Major Listed Corporations

In the following we analyze companies that are representative of large DAX 30 corporations. We assume two model corporations characterized by the structure given in table 2 and subject to the tax burden described in table 3. Here, 'profits' denotes approximated taxable income, i.e. profits as shown in the balance sheet increased by taxes and further adjusted for tax-free amounts included in this value, e.g. tax-free corporate dividend income.

| | DAX 30 corporations | |
|--|--------------------------------------|--|
| | manufacturing industry in €m or % | financial services in million €m or % |
| profits | 1,900 | 1,900 |
| capitalized market value | 46,000 | 39,000 |
| gearing rate in percent | 69.44 | 94.34 |
| pre-tax rate of return in percent | 4.13 | 4.87 |
| wealth tax | 229.99 | 194.99 |
| thereof definitive wealth tax | 0 | 9.009 |
| trade tax | 496.26 | 1,156.08 |
| corporate tax after imputation | 120.95 | 0 |
| supplementary corporate tax | 19.30 | 10.23 |
| tax ratio of profits before wealth tax | 47.19 | 75.69 |
| tax ratio of profits after wealth tax | 47.19 | 77.79 |
| increment in tax ratio due to wealth tax | 0 | 2.10 |

Table 3: Estimated tax load of DAX 30 corporations

Figure 2 illustrates this structure graphically.

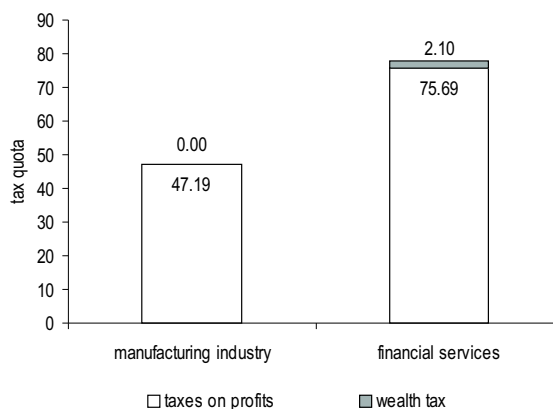


Figure 2: Tax load of listed corporations as fraction of net present value of profits

The relatively high gearing rate of financial services corporations causes an extremely high tax load. This is due to § 8 para. 1 of the German Trade Tax Act that requires the addition of 50% of deduced long term interest payments to the trade tax base.¹⁹

¹⁹ Although there are specific exceptions for financial services, e.g., cf. § 19 German Trade Tax Executive Order, we consider 20% of the liabilities to be representative of an appropriate trade tax adjustment.

This relatively high trade tax load reduces the corporate tax base of financial services corporations. Thereby, the imputation potential for wealth tax decreases simultaneously. Finally, imputation backlogs emerge, i.e. wealth tax becomes at least partially definitive leading to a higher tax burden of profits than in the case of comparable manufacturing corporations.

A general postulate for tax systems is the claim for financial neutrality. It requires that investments or companies are taxed independently of the character of the capital employed. Varying the gearing rate *ceteris paribus* for type 5 and 6 DAX 30 corporations allows us to draw conclusions about the sensitivity of the tax ratio towards the degree of utilized borrowed capital. In most cases we find a neutral influence of wealth tax on the means of finance. The result is highlighted for different gearing rates in table 4.

| DAX 30 corporations | | | | | | |
|---------------------|---------------------------|----------------------------|--------------------|---------------------------|----------------------------|--------------------|
| gearing rate | manufacturing industry | | | financial services | | |
| | total tax ratio on profit | profit + interest payments | thereof wealth tax | total tax ratio on profit | profit + interest payments | thereof wealth tax |
| 40% | 43.30 | 29.91 | 0.00 | 42.07 | 25.65 | 0.00 |
| 50% | 44.29 | 27.13 | 0.00 | 42.63 | 21.78 | 0.00 |
| 60% | 45.57 | 24.34 | 0.00 | 43.47 | 17.88 | 0.00 |
| 70% | 47.31 | 21.23 | 0.00 | 44.86 | 13.97 | 0.00 |
| 80% | 49.78 | 18.71 | 0.00 | 47.59 | 10.03 | 0.00 |
| 90% | 53.60 | 15.87 | 0.00 | 55.39 | 6.07 | 0.00 |
| 95% | 56.42 | 14.45 | 0.00 | 70.02 | 4.11 | 0.57 |
| 96% | 57.09 | 14.16 | 0.00 | 77.96 | 3.78 | 2.14 |

Table 4: Estimated tax load of DAX 30 corporations depending on gearing rate in %

Focussing on the profit tax load we identify two effects of borrowed capital on the wealth tax load:

Thus, we add 10% of paid long term interest payment to the trade tax base. In contrast, in the case of corporations from the manufacturing industry we assume a fraction of 60% long term liabilities among all liabilities as this industry does not enjoy the trade tax privileges that are granted to financial services firms.

1. A high gearing rate implies high tax deductible interest payments and in turn a relatively lower corporate tax base.
2. In addition to a direct reduction in the corporate tax base caused by debit interest payments simultaneously trade tax increases from in fact only 50% deductibility of long-term interest payment for trade tax purposes.²⁰ As trade tax is corporate tax deductible, the corporate tax base declines even more.

Consequently, wealth tax is often only partially imputable inducing imputation backlogs. In summary, wealth tax is not neutral with respect to ways of finance since the trade tax adjustment of debit interest payments and interest deduction for corporate tax purposes may cause a vigorous erosion of the corporate tax base.

Furthermore, we refer to the 'tax burden of profits plus interest payments', i.e. of the total value added of employed capital, to interpret the impact of a wealth tax depending on the capital structure. Again, we observe the well-known discrimination of corporations in debt mainly due to trade tax effects. Definitive wealth tax diminishes the relative tax advantages of borrowed capital. Highly levered corporations' main tax burden results from trade tax which unfortunately, does not serve as imputation potential. Thereby, a definitive wealth tax is more likely to occur for industries with a typically high gearing rate. This results holds varying the pre-tax rate of return.

It is possible that the identified distortion compensates existing distortions, e.g., in the financial sector, from other specific preferential rules or mechanisms that are not included in our model. Our partial analytic approach does not allow to draw conclusions about the overall efficiency implications of highly geared firms.

If we assume no uniform development or growth of profits but instead volatile rates of return, sensitivity analyses allow us to draw general conclusions. The wealth tax load depends strongly on whether and to what extent imputation backlogs arise in future periods. In best case scenarios there is only a time lag in imputation implying a rate of interest

²⁰ 50% of debit interests have to be added to the tax base again.

effect. In worst case scenarios, the wealth tax remains nonimputable and becomes definitive at the end of the time horizon. Furthermore, the imputation potential and in turn the tax ratio depends on whether the stock price (market value) anticipates changes in profits immediately or rather time lagged. This is important in the case of listed corporations since the stock market value of the companies determines their wealth tax base. Thus the wealth tax load is a function of anticipated future profits.

3.3 Impact on Medium-Sized Companies

In the following we investigate the influence of minimum wealth tax on medium-sized companies of different legal status. Hence, we have to extend the model framework with respect to personal level taxation of distributed gains and salaries to managing shareholders. We model two typical businesses: one corporation and one partnership as shown in table 5. A comparison enables us to conclude about neutrality property of AMT wealth tax referring to different legal forms.

'Profits' in table 5 comprises employer's salaries for managing shareholders because they are treated differently for tax purposes in corporations and partnerships. While they are corporate tax-deductible they are not deductible from the income tax base of partners. On the basis of data of the German Federal Bank for companies of the modelled size we assume managerial salaries of € 312,020 per annum with GNP growth over time. Net wealth is not assumed to be identical with balance sheet equity due to the weighted average valuation method that combines net asset value (equity) and discounted future profits.

| | Capital intensive medium-sized companies | |
|--|--|--------------------------------|
| | corporation in € or percent | partnership in € or percent |
| company level | | |
| profits | 1,914,000 | 1,914,000 |
| market capitalization | 12,913,000 | 12,913,000 |
| gearing rate in percent | 73.20 | 73.20 |
| pre-tax rate of return in percent | 12.41 | 12.41 |
| corporate wealth tax | 54,565 | |
| thereof definitive wealth tax | 0 | |
| trade tax | 313,200 | 361,598 |
| corporate tax after imputation | 267,606 | |
| supplementary corporate tax | 17,719 | |
| personal level | | |
| personal wealth tax | 52,565 | 105,130 |
| thereof definitive wealth tax | 36,457 | 0 |
| income tax after imputation | 112,070 | 381,373 |
| supplementary income tax | 7,050 | 29,756 |
| overall | | |
| tax ratio of profits before wealth tax | 41.49 | 46.12 |
| tax ratio of profits after wealth tax | 49.20 | 46.12 |
| increment in tax ratio due to wealth tax | 7.71 | 0 |

Table 5: Estimated tax load of capital intensive medium-sized companies

We apply this valuation approach and finally receive the tax loads as illustrated in figure 3.

As mentioned above for the corporation we assume a retaining rate of 90% in our simulation of assessment. Instead, minimizing definitive personal wealth tax rather requires relatively high personal income tax for imputation purposes, hence an appropriate low retaining rate is more likely. Distributing only 10% of profits implies low income tax payments for the dividend and further, low imputation potential for personal wealth tax on the underlying shares. Since imputable income tax is limited to tax on dividend income²¹ personal income tax on managerial salaries is not available for imputation purposes. Thus, we receive a definitive wealth tax of € 36,457 for a capital intensive medium-sized corporation. The values in this table have to be put into the right perspective. It is quite

²¹ In this example income tax on dividend payments to the corporate shareholder is only € 16,108.

probable that the shareholders wish to generate a higher imputation potential at personal level and therefore decide to distribute a higher fraction of corporate profits. But they have to take into account a trade off. Distributing profits earlier implies a rate of interest drawback due to earlier income payments and in turn earlier income tax payments. This drawback has to be compared with the advantage of a higher imputation volume.

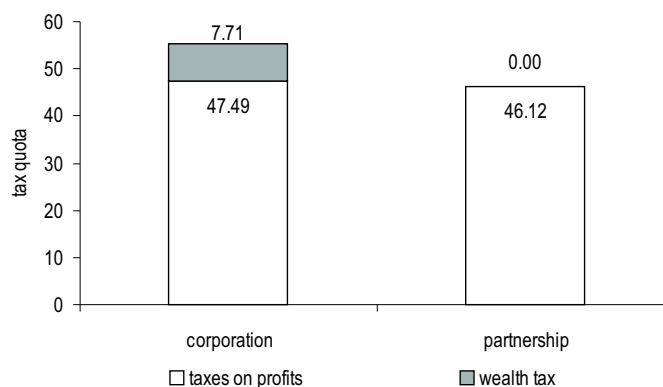


Figure 3: Tax load of capital intensive medium-sized companies as fraction of net present value of profits depending on legal status

In fact, the relation between the shareholder’s income tax bracket, profits and wealth determines tax planning activities and in turn the dividend policy. Depending on individual shareholder’s influence on the dividend payout it may be possible to minimize the tax load by expanding the fraction of distributed profits in this context.

This example illustrates the considerable impact of the AMT wealth tax on entrepreneurial behavior, e.g. dividend policy. In contrast to the well-known lock-in effect of shareholder relief in income taxation of dividends, taxing wealth evokes a push-out effect, i.e. increased pay out of profits. Assuming a retention rate of 90% as in table 3 we find an increase in total tax load of 7.71 percentage points. Retaining less, e.g. less than 65.5% can neutralize the wealth tax load. Higher personal income from higher dividends and in turn higher income

tax as imputation potential, eliminates the wealth tax load completely.

In a partnership with identical profit and wealth structures, definitive wealth tax usually does not occur at all. Total income from the partnership, i.e. profits and salaries for partners, evokes income tax that can be used for imputation purposes.²² Whenever the company's rate of return is sufficiently high, no imputation backlogs will occur.

4 Influence of Wealth Tax as AMT on Investment Decisions

Usually it is desirable from a tax policy perspective that funds are invested in high yield projects in order to evoke maximum economic growth effects. If the government does not explicitly subsidize or discriminate specific economic activities, tax should not distort investment decisions and thereby is intended to be neutral. Referring to neutral tax systems it should only be noted that the cash flow tax and the Johansson-Samuelson tax are special cases of such neutral tax systems (cf. Brown (1948), Johansson (1969) and Samuelson (1964)). As control or guidance of capital allocation is not the intention of a minimum wealth tax - on the contrary, it is supposed to prevent tax evasion - AMT wealth tax should be as non-distortive as possible.

In order to analyze the impact of the underlying wealth tax on entrepreneurial investment decisions, we model an investor willing to engage in an investment project or company (real investment), for a period of 4, 8, 12, 16 or 25 years. Alternatively funds may be invested in bonds on the capital market. Per assumption, both alternatives earn identical pre-tax rates of return. This implies that the real investment is a marginal investment with

²² Conversely, in corporations only income tax on dividend income serves as imputation potential potential, whereas income tax on managerial salaries does not.

a pre-tax net present value that equals the initial outlay. Thus, both investments have identical yields before taxes. We assume a pre-tax rate of return of 3.5% and investigate different time structures of cash flows from real investment, i.e. we analyze real investment projects with either diminishing or increasing cash flows over time.

The integration of taxes on profits and a wealth tax into the model enables our partial analysis to provide insights into the influence of minimum wealth tax on individual investment decisions.²³ However, conclusions about aggregate macroeconomic developments cannot be deduced from this approach.

Depending on the economic life of an investment object with diminishing cash flows and legally allowed depreciation rules we find wealth taxation discriminating real against financial investment. The financial investment suffers from neither absolute nor relative cuts in return caused by wealth tax. A pre-tax rate of return of 3.5% eliminates the definitive wealth tax load of the financial investment. While for a real investment depreciation allowances lead to temporary wealth tax imputation backlogs.

In figure 4 a zero relative reduction of the rate of return implies investment neutral taxation, i.e. equal taxational treatment of real and financial investments. We can hence see the distorting influence of profit and wealth taxation. Both types of tax reduce the relative rate of return of the real investment, i.e. discriminate against real investments.

We find that the observed considerable distortions of wealth tax in figure 4 are caused in only a few periods of the economic life. Assuming an economic life of 4 and 8 years imputation backlogs occur only in the last two periods. For an economic life of 12, 16 or 25 years only the last 3, 6 or 15 periods cause the definitive wealth tax load to lead to severe relative yield cuts and the distortions.

²³ For an elaborated investigation of the influence of taxes on investment decisions under uncertainty and a deduction of neutral tax systems cf. Niemann (1999), Niemann and Sureth (2004, 2005), Sureth (2002).

This repressive influence of wealth tax is caused by the conjunction of diminishing cash flows and typically declining depreciation allowances. Here, the present value of a neutral depreciation schedule, i.e. economic depreciation is higher than the present value of linear or declining depreciation of the initial outlay that is usually employed for tax purposes. This is a well-known feature of a system that taxes true economic profit, i.e. the so-called Samuelson-Johansson tax (cf. Johansson (1969), Samuelson (1964)). Consequently, in this case the legal depreciation pattern invokes a higher profit tax base in early periods than under a neutral economic depreciation. Further, in future periods taxable profit is lower than in the case of neutral taxation. These low tax bases are not sufficient for imputing wealth tax of this period completely. Overall, we can deduce that real investment suffers from wealth tax discrimination if cash flows decrease over time.

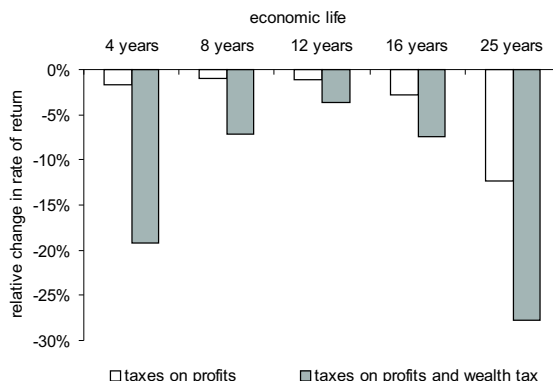


Figure 4: Relative change in rate of return due to wealth tax in case of diminishing cash flows in comparison to financial investment, in % of market rate of return

In contrast, increasing cash flows induce opposite effects. Real investment is subsidized by taxation in relation to financial investment (figure 5). Focussing on the minimum wealth tax, we realize again a relative drawback for real investment.

Now, the present value of economic depreciation is lower than the taxational depreciation in present value terms. The latter invokes higher early depreciation allowances and lower

later amounts than neutral depreciation. This induces an interest rate advantage for real investments, an effect that increases as cash flow growth accelerates over time.

As high depreciation in early periods leads to low taxable profits, wealth imputation backlogs occur. The wealth tax therefore becomes partially definitive. Here, minimum taxation succeeds in invoking a positive tax load where regular taxation of profits understates the correct economic tax base due to accelerated taxational depreciation.

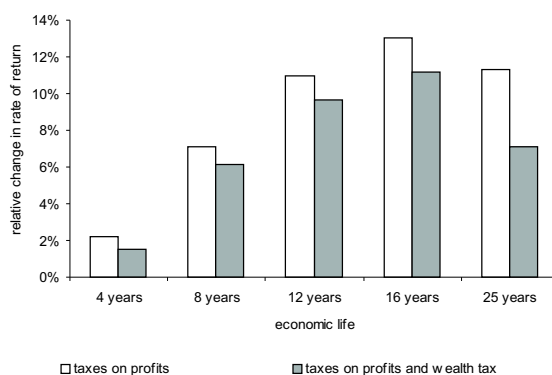


Figure 5: Relative change in rate of return due to wealth tax in case of increasing cash flows in comparison to financial investment, in % of market rate of return

In summary, we observe a reduction of depreciation-induced advantages in profit taxation by minimum wealth tax. In comparison to taxes levied on earnings from financial investments, real investments still enjoy tax privileges overall.

Furthermore, we can imagine scenarios, e.g. with a rather low market rate of return, where wealth taxation even amplifies subsidies from profit taxation. Then, a financial investment does not ensure full imputation of wealth tax but evokes a definitive wealth tax burden to a higher extent than in the case of an alternative real investment.

From these examples we see that the overall tax impact is particularly sensitive towards the time structure of cash flows and depreciation rules. Often, cash flow from real investments

will not be uniform but volatile. Thus, phases with increasing and diminishing cash flows may alternate. Then the likelihood of imputation backlogs increases.

Unique conclusions about the influence of the assumed wealth tax on profitability of real investments are not possible.

Until now we have neglected the effects of loss offset rules that are typical in corporate and income tax law. This aspect becomes important as AMT wealth tax becomes definitive in loss periods. Additionally, losses reduce taxpayers' wealth and thereby influence the wealth tax base of future periods. Thus interdependencies between profit-oriented minimum taxation caused by loss offset restrictions and wealth-oriented minimum taxation (wealth AMT) have to be taken into account when determining the total tax burden of an investment.

In Germany, in 2004 the compensation of losses using future gains was limited. If loss carry-forwards exceed an amount of € 1,000,000 only 60% of taxable gains can be compensated through it. This minimum taxation amplifies the asymmetric taxation of gains and losses and may discriminate against investments and companies with profitable investments including temporary losses.²⁴ Consequently, when comparing two investment objects with identical pre-tax return but where one has a non-uniform time structure of cash flows especially with alternating gains and losses, and the other has uniform positive cash flows over time, we realize that the object with temporary losses is subject to minimum wealth taxation.²⁵

In order to integrate the influence of loss offset limitation into our analysis we model a marginal investment project starting with negative cash flows in the first periods. Then cash flows grow per assumption and late cash flows are correspondingly high. This is a

²⁴ Cf. Niemann (2004).

²⁵ In addition to profit AMT.

possible scenario for a new pioneer entrepreneur whose investment, after initial losses, generates the same overall pre-tax yield as the alternative capital market investment. In such a model it is again possible to isolate taxational effects.

As described, we focus on an investment with increasing cash flows, similar to the one modelled above. Such an investment object, as has been shown above, is subsidized by taxational depreciation rules. Consequently, abstracting from the effects of loss offset limitations, i.e. in case of complete loss offset, a post-tax rate of return that is higher than the one for alternative financial investment is generated.

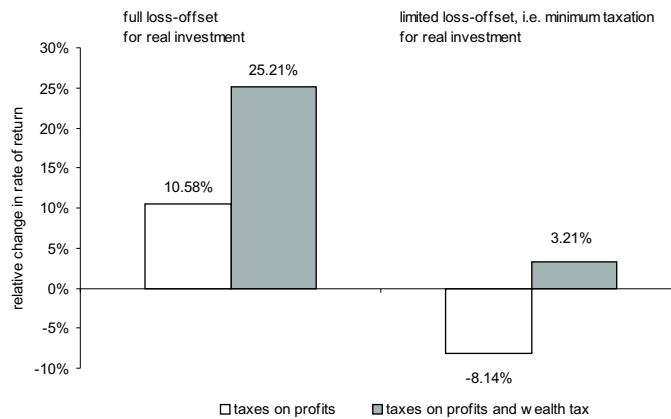


Figure 6: Relative change in rate of return due to wealth tax with temporary losses in comparison to capital market investment, in % of capital market rate of return

Assuming that losses are not immediately tax-deductible but only have time-lagged full loss offset by the end of the time horizon causes an interest rate drawback. Loss offset limitation, as introduced into German tax law, delays loss compensation and in turn increases the interest rate drawback, hence invokes inherently a minimum taxation.

Taxation of wealth (partially) compensates this disadvantage if the alternative investment is subject to definitive wealth tax (figure 6).²⁶

²⁶ Financial investment causes definitive wealth taxation if the rate of return is very low. In the under-

In the basic case modelled in figure 5 the alternative financial investment is wealth tax-free because of a sufficiently high pre-tax yield. Now, per assumption, financial investments are subject to definitive wealth tax. Hence, levying a wealth tax on real investments with increasing profits, rather low pre-tax rate of return and assuming full loss offset, favors real in comparison to financial investment. The wealth tax amplifies the so-called profit tax paradox, i.e. in wealth tax context the depreciation-induced relative profit tax advantage occurs as well. Asset values decline due to deprecation and in turn the wealth tax base decreases. Consequently, under full loss offset, wealth taxation causes a relative increase in the post-tax rate of return of such real investments.

As can be seen in figure 6, the effect from this wealth tax paradox may exceed the interest rate drawback that occurs if loss offset limitations are integrated into this scenario. In this case temporary losses from real investments

1. reduce the wealth tax base while
2. loss offset limitation invokes relatively higher (positive) profit taxes and in turn a larger imputation volume.

Instead, if an alternative capital market investment is not subject to definitive wealth tax – which is the case if the financial investment’s yield is sufficiently high – the investor will refrain from the real investment because of its discriminating minimum (profit and wealth) taxation.

Besides impacting on profitability wealth tax induces negative effects on liquidity. Independently of the time structure of cash flows, whenever a definitive wealth tax emerges liquidity is reduced. As in reality the assumptions of perfect capital markets like unlimited opportunities to borrow funds are not met, liquidity constraints may cause bankruptcy. This problem gains significance if periods with temporary losses have already affected

lying example we chose a pre-tax rate of return of 2%.

liquidity considerably. Furthermore, the underlying wealth tax that often discriminates against (risky) real investments will decrease the investor's willingness to take risks rather encouraging him to invest in riskfree bonds (referring to the influence of taxes on risk-taking cf. the seminal paper by Stiglitz (1969)).

5 Influence of Wealth Tax as AMT on Cross-Border Investments

Until now, we have abstracted from the cross-border economic implications of introducing an AMT wealth tax. As it is a wealth tax that weakens the economic attractiveness of a country for local and international direct investment and instead encourages capital export, which invokes undesirable cuts in public revenues, it is important to include this in our analysis. Although these effects are difficult to quantify we can deduce some general qualitative conclusions for international tax planning. In this context two aspects are crucial: Wealth tax may influence

- direct investment activities of foreign investors in the AMT country (inbound investment) and
- national investors' disposition to invest their funds abroad (outbound investment).

As is known from income and corporate tax law, wealth tax law distinguishes between unlimited and limited liability to pay taxes. Hence, national taxpayers have to assess total (global) wealth while foreign taxpayers have to assess their local wealth. Whether the defined liability to pay taxes in the end leads to a wealth tax burden or not depends, besides specific regulations in wealth tax law, on double taxation agreements.

For residents, double taxation agreements usually exempt wealth from foreign permanent establishments and substantial cross-shareholdings in foreign subsidiaries. Consequently,

irrespective of the legal status of the foreign business unit no wealth tax is levied on wealth from cross-border investments in permanent establishments in the home country. In the case of resident corporations holding shares in foreign subsidiaries, the international cross-holding privilege assures tax exemption for substantial shares.

The wealth of non-residents is subject to local wealth tax only in case of local real estate or local permanent establishments.²⁷ Beyond this, the local wealth of non-residents is not subject to local wealth tax according to common double taxation agreements. Thus, shares of local corporations held by non-residents individuals or companies are not wealth taxable. Consequently, wealth as corporate shares of foreigners is not subject to local wealth tax, regardless of the size of the holding. Hence, in inbound cases wealth tax becomes relevant only at local corporate level.

We can see that common double taxation agreements ensure the wealth taxation of local business assets of non-residents. Instead, resident individuals have to declare their global wealth to local tax authorities.

Introducing AMT wealth tax in one country implies an additional tax burden for investments of non-residents (inbound investment) if this wealth tax becomes definitive. Inbound investments into permanent establishments are wholly subject to wealth tax. Inbound investments in local corporate subsidiaries will be taxed at the rate of 0.5% at corporate level. Non-resident shareholders from countries without corresponding double taxation agreements are liable to wealth tax according to national regulations on limited tax liability. In contrast, non-resident shareholders from double taxation agreement countries are not wealth tax liable with regard to their local corporate shares.

From this we cannot conclude that the (re-)introduction of wealth tax exercises a negative influence on the relative attractiveness of this country for foreign direct investments. The

²⁷ Cf. Art. 22 OECD-Model Convention.

influence of a local wealth tax on international capital allocation depends in particular on whether or not the investor's home country raises a corresponding national wealth tax too. If the home state levies a wealth tax it is possible that the introduction of a wealth tax in the country of investment will not invoke any repressive effects on the direct investment behavior of non-residents. This may be a result of full imputation of local wealth tax on the home country wealth tax, assuming that the home state wealth tax burden is relatively higher. Then, home state (wealth) taxation is structured according to the principle of capital export neutrality implying location neutrality.

If an investor's home country does not raise a wealth tax or if cross-border investment is exempted from home state wealth tax, the implementation of a wealth tax in the country of investment will increase this investment's tax load. As most OECD member countries do not raise a (corporate) wealth tax, the introduction of a wealth tax in one OECD country will alleviate this country's attractiveness for direct investment, especially for projects with an initial loss.²⁸

Furthermore, implementing a wealth tax may be interpreted as a negative signal implying that other increases in taxes are likely to occur. This could interfere with investor confidence in the quality of this location.

As for inbound investment, the influence of a national wealth tax on outbound real investment depends on tax rules concerning wealth taxation in other countries and the wealth tax treatment of alternative investments. As far as national taxpayers have to pay wealth tax on national and cross-border investment, national wealth tax may be neutral with respect to international decisions concerning location.

Double taxation agreements on wealth tax usually exempt outbound investments from national wealth tax. As a taxpayer can avoid national wealth tax by investing abroad, this

²⁸ Then, minimum wealth tax often will become definitive because of a lack of profit taxes which may serve as imputation potential.

capital import neutral regulation encourages outbound investment. We find corresponding results for corporate wealth tax. Consequently, the introduction of a national wealth tax provides an incentive for national taxpayers to invest abroad.

Applying this to international tax planning, it may be possible to reduce or avoid the wealth tax burden. E.g., founding a group finance holding abroad decreases equity and thereby the wealth of a resident group of companies. Several other arrangements depending on single case factors may enable the avoidance of wealth taxation at home. In principle, the tax planner has to verify whether these structures conflict with other regulations, e.g. thin capitalization rules.

6 Conclusions

In this paper we analyze the proposal of a wealth tax at corporate and personal level designed as an AMT in the course of German tax reform discussion. This wealth tax is imputable to profit taxes and thereby is intended to prevent from multiple (multistage) taxation.

Referring to data from annual reports and the German Central Bank and modelling enterprises of different structure, industry, size and legal status, we show that companies in the service industry with usually rather high gearing rates are more likely to be subject to definitive wealth tax than capital intensive industries due to interdependencies between German trade tax and wealth AMT. This result runs counter to to well-known effects of a common wealth tax. Capital intensive firms, e.g. in the metal industry, are burdened with definitive wealth tax only in case they have high loss carry-forwards or extremely volatile profits.

We find that the proposed tax allowance protects small business from being subject to minimum wealth tax as well as medium-sized companies with relatively low capital employed. In the case of medium-sized capital intensive companies, partnerships often enjoy wealth tax privileges due to uniform taxation at individual level. Conversely, corporations may be burdened by the wealth tax at corporate and personal level caused by imputation backlogs. Furthermore, the underlying AMT influences corporate dividend policy, which in contrast to profit taxation evokes a push-out effect.

We demonstrate that this kind of wealth taxation usually favors financial rather than real investments and encourages outbound investments.

An alternative minimum tax as imputable wealth tax – similar to other minimum tax concepts – burdens real investment with volatile gains relatively more than an equivalent financial investment. Investments in financial assets usually enjoy full imputation of the wealth tax. In contrast, industries with volatile gains and temporary losses, such as newly founded businesses, suffer from wealth tax drawbacks. Hence, the analyzed wealth tax reduces the investor's disposition to invest into risky real projects while simultaneously encouraging outbound investment and in turn capital export. Consequently, wealth tax revenues from the entrepreneurial sector may not meet expectations but instead, medium-term or long-term overall tax revenues may even decrease. Capital export will cause not only lost wealth tax revenue but also a decline in revenue from profit taxation (corporate tax, trade tax, income tax, etc.). Hence, the net revenue resulting from the introduction of the minimum wealth tax may be negative.

As long as there are rules in income and corporate tax law that allow the assessment of a tax base that is smaller than economic income, this distortion must be eliminated by amending the tax code, not by introducing (yet) another tax.

We find that the introduction of an AMT discriminates against many firms and investment

projects, especially if economic income is lower than taxable income. This emphasizes that whenever income is taxed correctly, AMT is dispensable.

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