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# Is a One-book-system Adequate? A Framework for Tax Law Analysis Under Genuine Uncertainty

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## Abstract:

This paper examines whether a one-book-system that takes the commercial law profit definition as tax base (the so-called authoritative principle) is adequate from an evolutionary point of view. We consider firstly the case that European International Financial Reporting Standards (EU-IFRS) are relevant for all statements with the authoritative principle based on EU-IFRS. Secondly, we examine the fact that EU-IFRS focus on the consolidated annual accounts and that the national accounting principles are relevant for individual statements. Tax law analysis under genuine uncertainty requires a framework and we present such a framework. It entails an interpretation of equality of taxation, a hypothesis on the functioning of markets, an interpretation of realizable and desirable market goals, tax effects hypotheses, and action hypotheses for personal and corporate companies under genuine uncertainty. Contrary to the mainstream of accounting literature, from our evolutionary point of view, the authoritative principle is adequate. The reason is that commercial profit is an adequate instrument to achieving the tax goal equality of taxation in the sense of reducing expectable tax avoidance decisions. This is the case because according to evolutionary action hypotheses as well as tax effects hypotheses, commercial profit can be a subjectively rational decision criterion for personal and corporate companies alike. Equality of taxation is for its part in line with the evolutionarily interpreted social values freedom of choice and equality before the law. Since we focus on the question if the existing commercial profit concept can be an adequate tax base, we do not discuss whether we would have more reasons to take a conservative profit concept as tax base rather than EU-IFRS. Just as little, we analyze whether it is better to take EU-IFRS profit as tax base although national accounting principles are relevant for individual statements.

**Keywords:** ability to pay-principle, authoritative principle, equality of taxation, evolutionary tax effects hypotheses, evolutionary analysis of tax law, horizontal equity, vertical equity

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## Research Articles

1. An Asset-Based Framework of Credit Creation (applied to the Global Financial Crisis), Susanne von der Becke / Didier Sornette, DOI: <https://doi.org/10.1515/ael-2015-0002>.

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**Book Review Symposium: "Rethinking Financial Reporting: Standards, Norms and Institutions" by Shyam Sunder (Nowpublishers, 2016)**

3. Rethinking Financial Reporting: Reinstating the Social License of Limited Liability, Colin Haslam, DOI: <https://doi.org/10.1515/ael-2017-0046>.
4. Really Rethinking Financial Reporting: A Discussion of 'Rethinking Financial Reporting: Standards, Norms and Institutions' by Shyam Sunder, Paul F. Williams, DOI: <https://doi.org/10.1515/ael-2017-0062>.

## 1 Introduction

The determination of companies' taxable incomes is relevant for income, corporate and business taxes. Since companies usually have to draw up a commercial balance sheet, the question arises if it is adequate to determine the tax profit and the commercial profit according to the same principles. Recently, many studies have been discussing this question by analyzing the effects of the so-called one-book-system. Part of these studies examine the effects of book-tax conformity on the information quality and earnings management (Blaylock, Gaertner, & Shevlin, 2015; Hanlon & Heitzman, 2010; Hanlon, Laplante, & Shevlin, 2005; Hanlon, Maydew, & Shevlin, 2008; Hanlon & Shevlin, 2005; McClelland & Mills, 2007). Others put forward the argument that a one-book system reduces the taxpayers' willingness to avoid explicit taxes (Atwood, Drake, Myers, & Myers, 2012; Desai 2003; 2005; Tang, 2015; Whitaker, 2005). Since in Germany, a one book-system was introduced in 1874 (Pfaff & Schröer, 1996), we can find a widespread discussion in German literature. Proponents emphasize, for example, that we can interpret the fiscal state as the companies' silent partner (Ballwieser, 1990; Döllerer, 1971; Moxter, 1997, 2000) or as a means to achieving equality of taxation (Schmiel, 2012; Wehrheim & Fross, 2010). In contrast, opponents point out that the commercial profit concept is not adequate to fulfill the tax goal equality of taxation (Schneider, 1997; Weber-Grellet, 1994, 2008, 2015) or to achieve other tax goals (Wagner, 2000; implicitly Schanz & Schanz, 2011; Wagner, 2014).

This controversial discussion leads us to our research question. In the present paper, we examine whether a one-book-system is an adequate tax rule. A one-book-system can either take the commercial law profit definition for taxation or, vice versa, the tax profit concept as a basis for commercial purposes. We focus on the first form for two reasons. Firstly, it is used in several European countries (Cuzdriorean & Matis, 2012; Schanz & Schanz, 2011). In Germany, for example, certain companies have to draw up a tax balance sheet according to the accounting principles of commercial law as long as no other specific tax rules apply.<sup>1</sup> Secondly, the European Union has harmonized the commercial accounting principles for capital market oriented companies of the member states to a system of EU-International Financial Reporting Standards (IFRS) (art. 1 Regulation (EC) 1606/2002). Therefore, it is a relevant question if the EU-IFRS profit concept can also be an adequate tax profit concept and we can find this discussion in the context of the (revisited) Common Consolidated Corporate Tax Base (CCCTB) (Spengel, 2008; Spengel, Ortman-Babel, Zinn, & Matenaer, 2012). Thus, we ask if a one-book system that takes the commercial profit concept as a basis is an adequate tax profit concept. To avoid misunderstandings between the two possible forms of one-book-systems, we call this relationship between financial accounting and taxation authoritative principle (Hommel & Schmitz, 2013). Furthermore, we have to consider that the purposes of the commercial accounting principles may vary. In the European Union, publicly traded companies have to prepare their consolidated annual accounts according to the EU-IFRS profit concept, which aims at the information of investors (art. 4 Regulation (EC) 1606/2002). Since EU member states can permit or require other companies to prepare their consolidated annual accounts or both the consolidated annual accounts and their individual financial statements according to EU-IFRS, commercial profit concepts in the European Union differ. In the following, we consider two different cases. Firstly, we analyze the case that EU-IFRS are relevant for all statements with the authoritative principle based on EU-IFRS (Eberhartinger & Klostermann, 2007). Secondly, we examine the case that EU-IFRS focus on the consolidated annual accounts and the national accounting principles are relevant for individual statements. In that case, the authoritative principle for individual statements is based on the national accounting principles. The legislative purpose of these national principles can be to protect creditors by limiting the distributable profit. Furthermore, there can be a connection between the definition of profit and equity in company law and commercial law, like in Germany (Alexander & Nobes, 2013; Döllerer, 1971; Hommel & Schmitz, 2013; Leuz, 2010; Moxter, 2000).

Our analysis differs from the previous discussion in two points. The first main difference is that we explicitly take a critical rationalist perspective according to Albert (1985), 1999) and Gadenne (2006). From this point of

view, tax rules are means to achieving tax goals. A fundamental tax goal is equality of taxation and the ability-to-pay-principle is the yardstick to measure equality of taxation (Dodge, 2004; Fleming et al., 2001; Lang & Englisch, 2012; Nakazato, Ramseyer, & Nishikori, 2010). In this light, we have to examine if equality of taxation is an adequate tax goal. If so, we have to analyze whether commercial profit as a tax base is an adequate means to achieving equality of taxation. The international discussion of the authoritative principle does not explicitly deal with the question whether commercial profit conforms to the ability-to-pay-principle. However, we will see in chapter 4 that studies implicitly deal with equality of taxation when they put forward the argument that a one-book system reduces the taxpayers' willingness to avoid explicit taxes (Atwood, Drake, Myers, & Myers, 2012; Desai, 2003, 2005; Tang 2015; Whitaker, 2005). The second main difference is that we consider genuine uncertainty. Genuine uncertainty means environmental conditions can occur which actors cannot consider in their decisions because of their incomplete knowledge. The first reason for this incomplete knowledge is that individuals cannot inform themselves about all action alternatives. The second reason is that the number of possible environmental conditions and action alternatives is undetermined (Beckert, 1996; Shackle, 1972; Witt, 2009). An economic analysis of tax profit rules under genuine uncertainty has been missing so far. Previous studies either take a neoclassical view (Hundsdoerfer et al. 2008; Schanz & Schanz, 2010; Wagner, 2000, 2014) that excludes genuine uncertainty or they do not refer explicitly to any economic theory (Weber-Grellet, 1994; Wehrheim & Fross, 2010). The empirical studies also do not refer to a theoretical framework under genuine uncertainty (Atwood et al., 2012; Blaylock et al., 2015; Desai, 2003; Hanlon & Heitzman, 2010; Hanlon et al., 2005, 2008; Hanlon & Shevlin, 2005; McClelland & Mills, 2007; Tang, 2015; Whitaker, 2005). Although *Schneider* considers genuine uncertainty in taxation goals, he does not discuss a tax effects theory under genuine uncertainty (Schneider, 1997).<sup>2</sup>

Obviously, analyzing tax law under genuine uncertainty requires a theoretical framework and we develop this in the present paper. Since genuine uncertainty is a constitutive element of evolutionary approaches, we call this an evolutionary approach although there are many different interpretations of evolutionary theory (Witt, 2008). Our argumentation is as follows: From a critical rationalist perspective, tax rules are means to achieving tax goals. According to this view, tax goals should firstly be compatible with social goals and secondly be realizable. Neoclassical goals like efficiency and decision-neutrality do not fulfill this second requirement. In contrast to the neoclassical approach, we examine if equality of taxation is an adequate tax goal. We interpret equality of taxation as reducing expectable tax avoidance decisions. We find that equality of taxation in this sense is compatible with freedom of choice and equality before the law, which are in themselves social values. Since we come to the result that equality of taxation is an adequate tax goal, we examine whether the authoritative principle is an adequate means to achieving this end. Because of our interpretation of equality of taxation, we need tax effects hypotheses that in turn require hypotheses on the actions of personal companies and corporate actors. Since neoclassical tax effects hypotheses and action hypotheses do not fulfill critical rationalist requirements, we develop such hypotheses under genuine uncertainty. We refer to the prospect theory and the resource dependence approach and come to the result that the existing commercial profit as well EU-IFRS as national accounting principles can be an adequate tax base. However, we do not examine if we have more reasons to take a conservative profit concept as tax base instead of the EU-IFRS profit concept or conversely to take the EU-IFRS profit as tax base concept although national accounting principles are relevant for individual statements. In order to make this case, the paper proceeds as follows: We sketch out our critical rationalist perspective in chapter 2. In chapter 3, we examine if equality of taxation is an adequate tax goal and in chapter 4, whether the authoritative principle is an adequate means to achieving this end. We summarize our results in chapter 5.

## 2 Framework for the evolutionary analysis of tax law

In this chapter, we present our concept of an evolutionary analysis of tax law that we use to answer our research question whether the authoritative principle is an adequate tax rule under genuine uncertainty. We take a critical rationalist methodology based on *Albert* (Albert, 1985, 1999) and *Gadenne* (Gadenne, 2002 and 2006). This implies in general "work[ing] out the philosophical assumptions and principles that lie behind our actions and lives, so that they can be criticised and perhaps improved" (Gadenne, 2006, p.107). In this manner, we outline our methodology and support it by arguments: We aim to investigate the structure of reality. Knowledge should be the "comprehension and representation of reality" (Albert, 1999, p.10); yet we consider perception to be subjective (so-called critical realism) or, in Popper's words, theory-laden (Popper, 1968). Because of the so-called induction problem, we can achieve neither absolute truth of knowledge nor an absolute justification of values and methodology. This consistent fallibilism supports a methodological rationalism that implies discussing hypotheses critically and comparing them with other hypotheses (Albert, 1999). We take a critical rationalist

perspective according to Albert for three reasons. Firstly, Albert applies critical rationalism to social science. Secondly, while others focus on epistemological questions of critical rationalism (Miller, 1994; Psillos, 2006; Sankey, 2006), Albert uses critical rationalism also in politics (Albert, 1985, 1999). Since effective legislation is part of politics, these methodological rules are relevant for an economic analysis of tax law. Thirdly, Albert applies critical rationalism to methodology itself (Albert, 1985, 1999). Because of that, we also include a critical rationalist perspective according to Gadenne who applies critical rationalism especially to the method of critical testing (Gadenne, 2006).

According to critical rationalism, tax rules are means to achieving tax goals and tax goals are means to achieving other goals or more abstract values. As goals or values and means are not ultimate or undisputable, we have no reason to dogmatize them. Rather, we have to interpret goals, values, and means as alternatives to other goals, values, and means and should discuss them critically (Albert, 1985, 1999). This discussion implies supporting or challenging ends and means by arguments and it has an ethical and an empirical dimension (Witt, 2003). The ethical dimension of critical discussion entails analyzing if goals and means contradict other relevant goals or values or if we have arguments that they are compatible with goals or values we see as important (Albert, 1999). Since we take equality of taxation as a tax goal and tax law is part of the social order, we ask if it is compatible with values of the social order.

Regarding the empirical dimension of the critical discussion, we have to formulate the requirements for empirical hypotheses. Critical rationalism postulates that assumptions and hypotheses should be empirically confirmed. Admittedly, due to the induction problem, it is not possible to achieve verified truth (Albert, 1985; Gadenne, 2006). Furthermore, as observation in a scientific context is theory-laden, we cannot finally falsify hypotheses (Popper, 1968). Hence, we follow Gadenne in that we have to test empirical hypotheses and take into account any contradictions that emerge (Gadenne, 2002, 2006). The argumentation is as follows: If we search for truth, it does not make sense to “believe a theory that has been falsified by repeated experiments” but to adopt a hypothesis “that has best stood up to severe criticism” (Gadenne, 2006, p.106). This critical rationalist prerequisite conflicts with the ‘as-if-instrumentalism’ according to Friedman (Friedman, 1974).<sup>3</sup> Friedman’s instrumentalism does not focus on the (preliminary) empirical truth of assumptions. Rather, it is sufficient that the correlations of the theoretical model are empirically confirmed. In other words, hypotheses are adequate if the prediction is valid. This view is a common methodology in economics and it should justify the use of neoclassical theories.

The empirical dimension of critical discussion focuses on the empirical hypotheses of means-end-statements. Means-end-statements should use scientific findings for two reasons (Albert, 1985, 1999). Firstly, the achievement of social goals usually requires institutions to function or individuals to act in a certain way. The empirical discussion has to ask if the (implicit) hypotheses on the functioning of institutions or the actions of individuals are preliminarily empirically confirmed (Albert, 1985, 1999). The reason is as follows: If we want to achieve goals and if knowledge should be the “comprehension and representation of reality” (Albert, 1999, p.10), it does not make sense to pursue goals whose underlying hypotheses contradict reality. This is the idea of Albert’s postulate that ought implies can. Goals are only adequate if they are realizable. In other words, goals are only adequate if it is possible to design environmental conditions according to the assumptions of the empirical hypotheses (Albert 1985; 1999). For that reason, a pareto-efficient market is not an adequate social order value because the assumptions of a perfectly competitive market contradict reality (Shubik, 2007). Secondly, we have to consider that rules can cause secondary effects (Albert, 1999). For example, we have to expect that tax rules influence the actions of individuals and companies. For this reason, analyzing tax law needs empirical hypotheses, in particular action hypotheses and market hypotheses (Schmiel, 2016a).

A critical rationalist perspective denies that it is possible to deduce specific goals from general goals and then rules from specific goals (Albert, 1985). We can find such a top-down-deduction in neoclassical tax analysis. This implies that by accepting the general goal (usually efficiency), neoclassical tax analysis automatically accept specific goals (usually decision-neutrality)<sup>4</sup> and means that follow from them (Schanz & Schanz, 2011). Figure 1 shows the neoclassical tax analysis framework:

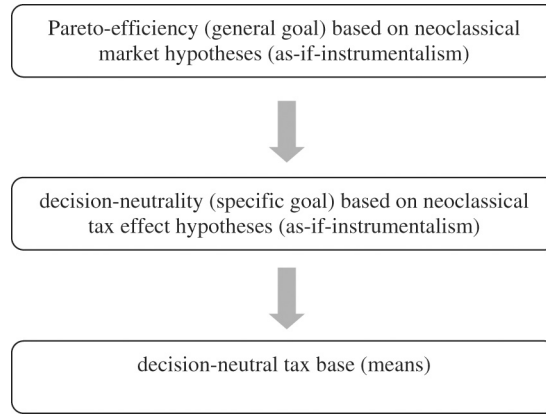


Figure 1: Neoclassical tax analysis framework.

A top-down-deduction requires finding a general goal or value, which in turn implies perfect knowledge regarding the ethical implications of possible goals, rules, and their evaluations. Furthermore, it requires perfect knowledge regarding the feasibility and the secondary effects of possible goals and rules.

However, since a critical rationalist perspective denies the possibility of achieving verified truths about the feasibility and secondary effects or undisputable goals, a top-down deduction does not work. Thus, we cannot deduce equality of taxation from social order values and then the authoritative principle or another tax rule from equality of taxation. This would imply knowing all details about the ethical implications of possible values, equality of taxation, the authoritative principle, and other tax rules including their evaluations. Furthermore, it would require perfect knowledge regarding the feasibility and the secondary effects of possible social values, equality of taxation, and tax rules. Instead, we have to go bottom up (Albert, 1985, 1999). We have to ask if equality of taxation is compatible with social values and if it is realizable (first part of the analysis). Since equality of taxation is not definite, we firstly have to interpret it. If we can support by argument that the thus interpreted equality of taxation complies with social values and is realizable, we have to analyze whether the authoritative principle fits in with this interpretation (second part of the analysis). Let us now apply our methodology to our research question and have a look at our arguments for why a certain interpretation of equality of taxation (chapter 3.1) is an adequate tax goal (chapter 3.2) and why the authoritative principle is an adequate means (chapter 4). For this, we need an interpretation of equality of taxation under genuine uncertainty, a hypothesis of the functioning of markets under genuine uncertainty, an interpretation of realizable and desirable social values under genuine uncertainty, as well as tax effects hypotheses and action hypotheses of personal companies and corporate actors under genuine uncertainty. These interpretations of goals and empirical hypotheses are part of our evolutionary framework for analyzing tax law. Figure 2 summarizes this framework:

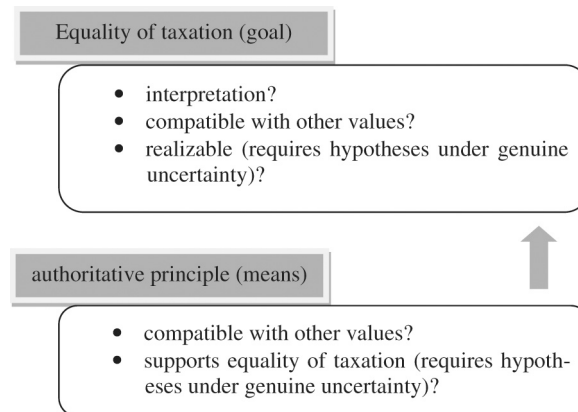


Figure 2: Evolutionary tax law analysis framework.

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### 3 Equality of taxation as an adequate tax goal

#### 3.1 What does equality of taxation mean in general?

In this chapter, we analyze if we can support equality of taxation by arguments. Thus, we deal with the first part of the evolutionary tax analysis. As Figure 2 shows, we have to answer the questions whether equality of taxation is compatible with social order goals and if it is realizable. Yet, before we analyze equality of taxation in this perspective, we have to interpret what equality of taxation can mean in general. For this purpose, we take the German Federal Constitutional Court's interpretation as a starting point. However, equality of taxation is not only a German tax goal but also a tax goal in other countries, for example in most of the European member states (Lang & Englisch, 2012) and in Japan (Nakazato et al., 2010). According to the German Federal Constitutional Court's interpretation, tax law has to be in line with equality before the law, which in turn is laid down in article 3, paragraph 1, of the Basic Constitutional Law for the Federal Republic of Germany. The Federal Constitutional Court substantiates equality before the law as equality of taxation and in particular as horizontal and vertical tax equity (Bundesverfassungsgericht, 2012, 2004). It postulates taxing equal issues equally (horizontal equity) and unequal issues in their relation unequally (vertical equity) (Bundesverfassungsgericht, 2009a, 2009b, 2015). "The general principle of equality requires that all persons are treated equally before the law. The requirement that follows from this [is] that what is substantially equivalent must be treated equally and what is substantially dissimilar must be treated differently" (Bundesverfassungsgericht, 2010, recital 66). Regarding the question if cases are equal or unequal, the financial ability to pay is the relevant determinant (Lang & Englisch, 2012). Thus, we have to examine what ability to pay means. The statement 'tax payers are able to pay' is a statement of fact. However, this statement requires a specification of ability to pay. From a critical rationalist perspective, it is not possible to deduce the meaning of ability to pay from its term in an essential manner (Popper, 1969, 1995). Rather, we need reasons why we can view issues as equal or unequal regarding the taxpayers' ability to pay (Repetti & Ring, 2012). Concerning income, corporate, and trade tax, it is necessary to specify which income or profit definition is adequate to measure taxpayers' ability to pay and we ask in chapter 4 if commercial profit is adequate in this sense.<sup>5</sup> How can we generally find an answer to the question if issues are equal or unequal regarding the taxpayers' ability to pay? We suggest considering the general mechanism of tax avoidance decisions. Tax avoidance decisions mean certain tax effects that reduce the explicit tax payment burden (Hanlon & Heitzman, 2010). Tax avoidance decisions indicate that from the taxpayers' perspective, a case without taxation is equal to another case; yet, if they take taxes into account, the cases are different because of the taxation. To give an example: If groups orient themselves by the group profit, we have to expect that they evaluate debt financing by shareholders and equity financing by shareholders without taxation as equal cases. Yet, if taxation rules treat each company as tax subject (critical Biondi, 2017) and tax debt financing by shareholders in groups lower than equity financing, we have to expect tax avoidance decisions. Another reason for tax avoidance decisions is that from the taxpayers' perspective, a case without taxation differs from another case and if they take taxes into account, it still differs not only absolutely but also relatively because of the taxation. To give an example for this: If taxpayers evaluate full liability and limited liability as unequal cases, we have to expect tax avoidance decisions if tax law does not consider this difference adequately. Conversely, if, from the taxpayers' perspective, the case is equal to another case without taxation as well as if they take taxes into account, there is no reason to avoid taxes. The same holds if, from the taxpayers' perspective, a case without taxation differs from another case and still differs in the same relation if they take taxes into account.

Obviously, to discuss the conditions that incite taxpayers to avoid taxes does by no means imply justifying tax avoidance and certainly not tax avoidance because of unequitable tax rules. In summary, tax avoidance decisions indicate that, from the taxpayers' perspective, either equal issues are taxed unequally or the unequal taxation of unequal issues is not adequate in relation. Therefore, tax avoidance decisions preliminarily indicate one or more unequitable tax rules.

Table 1 summarizes the connection between tax avoidance decisions and tax equality from the taxpayers' perspective:

**Table 1:** Connection between tax avoidance and tax equality.

Taxpayers' perspective		Reasons to avoid taxes	Preliminarily unequitable tax rules
Cases without taxation	Cases with taxation		
Equal	Different because of taxation	Yes	Yes
Unequal	Relatively different because of taxation	Yes	Yes

Equal	Equal	No	No
Unequal	Relatively equal	No	No

Because of this connection, from our point of view, the hypothesis that taxation rules are equitable includes the hypothesis that these rules at least reduce tax avoidance decisions (Schmiel, 2013, 2016a). Thus, tax effects hypotheses can support or challenge the legislative hypothesis of equitable taxation. Such a connection between equality of taxation and tax effects has been highlighted in tax research literature even though these tax effects hypotheses usually have a neoclassical basis (Hundsdoerfer et al., 2008; Wagner, 1992). Since a neoclassical tax effects theory does not consider genuine uncertainty, it does not explain tax effects in a world with genuine uncertainty. For that, we need to know about the mechanism between taxes and the actions of taxpayers under genuine uncertainty. Therefore, we have to analyze how taxpayers act. In consequence, we need a theory that explains the mechanism between taxes and the actions of taxpayers. According to an evolutionary action hypothesis, individuals and companies can act consistently but they can only act in accordance with their subjective knowledge (Beckert, 1996; Schmiel, 2013; Vanberg, 2002). In the case of genuine uncertainty, there are no perfectly rational but only subjectively rational decision criteria. An evolutionary hypothesis would be as follows: "If taxation changes the rank order of the relevant decision-making options according to the actors' subjectively rational decision criteria, they decide differently if they take taxes into account than they would if they did not." (Schmiel, 2016a, pp. 381f).

If we take this hypothesis as a basis, we see that tax rules could prevent tax avoidance decisions if they taxed the decision criteria (the objective) of taxpayers (Schanz & Schanz, 2011). Since taxpayers could only avoid taxes if they avoided achieving their objective, tax avoidance would require harming themselves and we expect that this is not usually their intention. However, as in the case of genuine uncertainty no perfectly rational decision criterion exists but rather many subjectively rational decision criteria, taxation rules that prevent tax avoidance decisions (so-called decision-neutrality)<sup>6</sup> are not realizable (Schneider, 2000). Thus, decision-neutrality does not fulfill the critical rationalist rule that goals should be realizable. Therefore, equality of taxation cannot aim at decision-neutrality but only at a reduction of tax avoidance decisions. The reduction of tax avoidance decisions requires that tax bases correspond to subjectively rational decision criteria. Furthermore, tax law can only reduce tax avoidance decisions that are known. However, we may have to assume that tax consultancies permanently develop new tax avoidance strategies (Witt, 2003). In consequence, our interpretation of equality of taxation generally implies the hypothesis that tax rules reduce expectable tax avoidance decisions. Until now, we only deal with the abstract mechanism of tax avoidance and its reduction. To answer the question if a certain company tax rule is adequate, we have to know more about the subjectively rational decision criteria that companies use. Therefore, answering the question if the authoritative principle is adequate requires finding out more about the actions of companies. Furthermore, we suppose differences between the actions of personal companies and corporate actors. However, before we analyze these details in chapter 4, we ask if we can support our general interpretation of equality of taxation by argument.

### 3.2 Why is equality of taxation an adequate tax goal?

So, why is equality of taxation an adequate tax goal? As the tax system is part of the social order, we assume tax goals should conform to social values. From a critical rationalist perspective, it is not possible to deduce tax goals from social values (Albert, 1985, 1999). On the contrary, we can only support goals by argument and a supporting argument is that tax goals and tax rules are compatible with social values. Furthermore, we have to keep in mind *Albert's* feasibility postulate that objectives have to be realizable (Albert, 1985). Market objectives that suppose a neoclassical general equilibrium framework or a tendency to equilibrium (von Hayek, 1945; von Mises, 1998) do not correspond to the feasibility postulate (Buchanan & Vanberg, 1991; Schubert, 2012; Vanberg, 2001; Witt, 1987, 2009). In the light of genuine uncertainty, markets cannot achieve efficiency or welfare maximization (Vanberg, 2001; Witt, 2003, 2009). Hence, we reject such objectives in this paper. As in the light of genuine uncertainty, perfect markets do not exist, we need another concept of markets and another hypothesis about their functions. We take the interpretation of markets by *Vanberg* as a basis. According to that, markets are instruments to coordinate interests (Vanberg, 2005, 2011a, 2011b).<sup>7</sup> Markets allow actors to pursue their own interests as far as they comply with the market rules (Vanberg, 2007). The essential idea of the coordination mechanism is that self-interested actors take the interests of others into account because only then they can expect that other actors agree to a transaction (Buchanan & Vanberg, 1991; Vanberg, 2007). It is firstly obvious that such a coordination mechanism needs rules. In other words, a market is an institutional arrangement as firms are (Aspers, 2007; Vanberg, 2001, 2005). It is secondly obvious that rules cannot enable a perfect mechanism in the sense that actors always consider those interests of others that are important to them. One reason is, for example, that we have transactions that influence actors who are not contractual partners (external effects). Therefore, these actors do not have the opportunity to enforce their demands by opting out. Furthermore,

there are actors who do not possess enough resources to enforce their interests. Since they are not able to deny their agreement to a transaction, they depend on self-interested actors without own interests at stake to respect those interests (Pfeffer & Salancik, 2003). We do not analyze these difficulties in detail but rather deal with the question why the coordination mechanism of markets could be desirable. One argument is that self-interested economic activity as constituent characteristic of a social order that coordinates interests via markets requires freedom of choice (Schmiel, 2013; Vanberg, 1997, 2005, 2011a, 2011b). This freedom has to be granted to every individual as a universal good. Freedom of choice thus requires that legal regulations apply to all individuals equally and this means that equal freedom of all market participants limits the individual freedom of choice (Böhm, 1960). A social order can only guarantee freedom of choice as a universal right if equality before the law also exists as a universal right (Schmiel, 2013; Vanberg, 1997). Therefore, freedom of choice and equality before the law are fundamental prerequisites for such a social order. From a neoclassical perspective, freedom of choice and equality before the law are instrumental values. Thus, the neoclassical approach understands these values as means to achieving ends like pareto-efficiency. As a result, the extent of freedom of choice and equality before the law depends on their contribution to social welfare (van Aaken, 2012; Sen, 1988). We do not follow this opinion, on the contrary: it is not that freedom of choice and equality before the law are means to achieving a market system but rather a market system is a means to achieving freedom of choice and equality before the law (van Aaken, 2012; Buchanan, 1986; Sen, 1988; Vanberg, 2014). Unlike a market system, which has no intrinsic value, freedom of choice and equality before the law have an intrinsic value in democratic societies. They are fundamental rights, for example according to articles 2 and 3 of the German Basic Constitutional Law (Schön, 2010), according to articles 3 and 7 of the Human Rights Charter of the United Nations, and according to articles 6 and 20 of the Charter of Fundamental Rights of the European Union. To be clear: from a critical rationalist view, it is of course possible to challenge these value judgements with arguments. However, we do not find any arguments for giving more weight to a market system than to freedom of choice and equality before the law. In sum, freedom of choice and equality before the law are fundamental requirements for a market system and therefore for a social order that coordinates interests via markets. Furthermore, freedom of choice and equality before the law are also social values (Schmiel, 2016a; Vanberg, 2011b) that the market system has to achieve.

Since the tax system is part of the social order, we assume tax goals should conform to social values. In consequence, equality of taxation should conform to freedom of choice and equality before the law. We put forward three arguments that equality of taxation in the sense of reducing expectable tax avoidance is compatible with freedom of choice and equality before the law. As we saw above, the Federal Constitutional Court substantiates equality before the law as equality of taxation and in particular as horizontal and vertical tax equity (Bundesverfassungsgericht, 2004, 2012). Therefore, our first argument is that equality of taxation is compatible with equality before the law because it means equality before the law regarding tax law. Our second argument is that tax rules that do not reduce expectable tax avoidance decisions conflict with equality before the law because taxpayers do not have equal opportunities to avoid taxes. Taxpayers who have the resources to employ tax consultancies have more opportunities to develop tax avoidance strategies than taxpayers who do not. A tax law that does not aim at reducing tax avoidance grants taxpayers with tax consultancies more freedom of choice than other taxpayers. In consequence, there is a direct conflict with freedom of choice. Our third argument is that tax avoidance decisions that reduce the absolute tax revenue indirectly contradict freedom of choice and equality before the law. Reducing the absolute tax revenue through tax avoidance decisions essentially entails that public goods can either not be financed or need to be funded by (higher) public debt or by tax increases. Markets are public goods as well and have to be financed through taxes. Tax avoidance decisions thus essentially conflict with the financing of markets and the financing of other public goods, all of which freedom of choice and equality before the law are supposed to secure. 'Other public goods' also include the educational system and social security system if we duly consider both a negative view of freedom (defined as the absence of restraints and interference by others) as well as the positive freedom to act (Berlin, 2002a, 2002b; Sen 1988). In consequence, equality of taxation can be seen as compatible with freedom of choice and equality before the law as social values under genuine uncertainty. As a result, equality of taxation is an adequate tax goal regarding the requirement that tax goals have to be compatible with social values. Yet, although equality of taxation is an adequate tax goal, it can be reasonable to restrict it in some cases. It can, for example, make sense to implement regulatory tax rules that encourage actors to protect the environment or to care for their future (Avi-Yonah, 2011). However, we should keep in mind that it is questionable whether tax rules can fulfill such goals under genuine uncertainty. Finally, we only argue that equality of taxation is compatible with freedom of choice and equality before the law. We do not say that it fulfills all requirements of freedom of choice and equality before the law regarding taxation. For example, from the perspective of freedom of choice, it is important to discuss the absolute burden of taxation, which is not a problem of equality of taxation. Figure 3 summarizes our results regarding the first part of our evolutionary analysis of tax law.



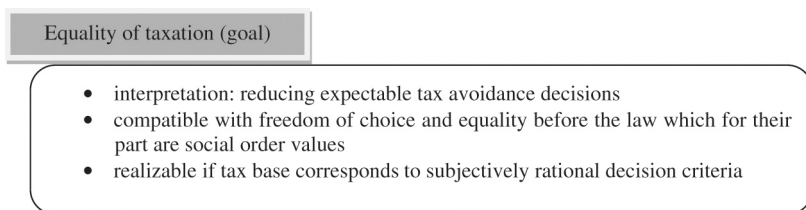


Figure 3: Equality of taxation as an adequate tax goal.

## 4 Authoritative principle and equality of taxation

### 4.1 How can we determine if the authoritative principle conforms to equality of taxation?

Equality of taxation in the sense of reducing expectable tax avoidance decisions can be supported by arguments. Thus, we deal now with the second part of the evolutionary tax law analysis. According to Figure 2, we have to ask whether the authoritative principle is compatible with other values and whether it supports tax equality. The authoritative principle is adequate if it conforms to equality of taxation in the sense of reducing expectable tax avoidance decisions. According to our evolutionary hypothesis about the mechanism between taxes and the actions of taxpayers, we see that tax rules could prevent tax avoidance decisions if they taxed the decision criteria (the objective) of taxpayers (Schanz & Schanz, 2011). Therefore, we can see that the reduction of tax avoidance decisions requires the taxable profit to be a subjectively rational decision criterion for taxpayers. Hence, the authoritative principle is an adequate tax rule if the commercial profit, either as EU-IFRS profit or as profit according to the national accounting principles, can be a subjectively rational decision criterion or a component of such a decision criterion. To analyze this, we need hypotheses on the actions of companies. According to the predominant (Hanlon & Heitzman, 2010; Scholes et al., 2015) nexus of contracts approach, companies are legal fictions (Fama, 1980; Jensen & Meckling, 1976) and legal fictions cannot act in a social science sense. The nexus of contracts approach is criticized from a perspective of social ontology (Gindis, 2007, 2009; List & Pettit, 2011), a legal perspective (Robé, 2011), and a social science perspective (Biondi, 2007; Vanberg, 1992). While *Vanberg* takes an individualistic approach and refers to individual action hypotheses, *Biondi* takes a dynamic holistic view but does not explicitly refer to action hypotheses. We also take an individualistic approach that explains firm actions through actions of individuals (von Hayek, 1948; Popper, 1995). Therefore, firm behaviour does not mean that firms act in a literal sense. Rather, the actions of individuals constitute the behaviour that we ascribe to companies. Additionally, we use the macro-micro-model as a basis to explain correlations between macro factors and the actions that we ascribe to companies. The macro factors influence actions of several individuals. These actions of individuals constitute the actions that we ascribe to firms on the macro level (Opp, 2011). However, methodological individualism does certainly not mean that the actions that we ascribe to firms are identical with individual actions of firm members on markets. Firm members are not only shareholders/partners, employees, or creditors but also other people who transfer resources and the immediate control over these to a firm (Vanberg, 1992).

Since we expect that personal companies and corporate actors act differently, we distinguish between these. The main characteristics of personal companies are the small number of shareholders/partners on the one hand and the management by the shareholders/partners on the other hand. Personal companies can be organized in different legal forms, for example as sole proprietorships, partnerships, or corporations. In contrast to personal companies, corporate actors have a large number of shareholders, an executive board manages the company, and it is not necessary that the managers are also shareholders. Corporate actors can have the legal form of a public limited company, a limited company, or a partnership in which only corporations are liable to unlimited extent. Table 2 summarizes these characteristics:

Table 2: Characteristics of personal companies and corporate actors.

Main characteristics	Personal companies	Corporate actors
Number of shareholders/partners	Small	Large
Management	Shareholders/partners	Executive board
Legal forms	Sole proprietorships, partnerships, corporations	Public limited companies, limited companies, partnerships in which only corporations are liable to unlimited extent

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As we can see, this differentiation according to substance over form does not necessarily correspond to the differentiation between partnerships and corporations.

#### 4.2 Is commercial profit a subjectively rational decision criterion for personal companies?

Why is it possible that personal companies take future commercial profit or discounted future commercial profits as their decision criterion? According to our definition, in personal companies, the shareholders/partners decide. Therefore, we assume that they decide in their own interest. However, we have to consider that their actions in an organized form differ from their individual actions on markets. The reason is that they act under the constitutional constraints of company rules that differ from the constraints of market rules. Thus, their own interest as shareholders/partners could deviate from their individual own interest (Vanberg, 1992). We take the prospect theory of Kahneman/Tversky as a basis and assume that individuals who act in their own interest follow a psychological criterion in their decisions (Kahneman & Tversky, 1979; Tversky & Kahneman, 1981). This means for instance that they use heuristics (Tversky & Kahneman, 1974, 1992). Experimental studies about actions of individuals regarding taxes support the use of heuristics in tax decisions (Blaufus, Bob, Hundsdorfer, Kiesewetter, & Weimann, 2013). This behavior is not limited to individual acting on markets. We can find the use of heuristics and rules of thumb also in firms (Biondi & Marzo, 2011).

Against this background, we have to ask which superordinate decision criterion managers of personal companies (who are at the same time shareholders/partners) use. It is conceivable that they use simple heuristics, especially static criteria. It is also conceivable that they use more complex heuristics, e. g. multi-period criteria, which imply considering gains and losses of several periods as well as interest effects. In this context, individuals may take net present value as reference since it is often used in scientific tax planning recommendations (Schanz & Schanz, 2011). In this case, they set a criterion that would be perfectly rational under neoclassical model conditions. However, this does not imply that the neoclassical model conditions are met but rather that it is subjectively rational for individuals to set net present value as a heuristic (Kliemt, 2011).<sup>8</sup>

Regardless of whether managers follow static or multi-period criteria, we have to ask how they calculate the components of these criteria. It is possible that they use commercial profit as a simple heuristic and follow the expected commercial profit of the next period or an average commercial profit. If personal companies have to prepare a financial statement, it is reasonable that they use this profit concept as a simple heuristic. If they use commercial profit as a heuristic for simplification, it is not relevant whether they have to prepare the statement according to EU-IFRS or to national accounting principles. They will use the profit concept as a decision criterion that the law requires. Therefore, both an EU-IFRS profit concept and a national accounting principle concept can be a subjectively rational decision criterion. An argument against this relevance of commercial profit in decisions is that normative decision theory recommends that individuals consider payments in their decisions. In contrast to this, commercial profit is an accrual accounting concept. However, in Germany and in some other countries, company law rules that limit the distribution of profit tie in with the commercial definition of profit and equity. In consequence, the payments shareholders/partners are entitled to receive from their company without the risk of having to repay them because of the demands of other shareholders/partners, the company, or creditors normally depend on commercial profit. This is always the case in business partnerships and in corporations (Hommel & Schmitz, 2013). In consequence, if shareholders/partners follow a decision criterion which refers to payments, commercial profit will be relevant because it determines the payments to them.<sup>9</sup> Therefore, shareholders/partners who took these connections into account would act subjectively rational. To sum up: If EU-IFRS are relevant for all statements, we can assume personal companies to use EU-IFRS profit as heuristic in case they follow heuristics. If EU-IFRS focus on the consolidated annual accounts and the probably more conservative national accounting principles are relevant for individual financial statements, it is reasonable that personal companies use this profit concept as a simple heuristic. Furthermore, regardless of whether they use simple heuristics or heuristics that are more complex, it is possible that they use national commercial profit that aims at creditor-protection as a criterion because it determines the maximal profit they can expect from the company. Therefore, it is conceivable that the commercial profit can be a subjectively rational decision criterion for personal companies. So, the authoritative principle is an adequate means to achieving equality of taxation.

We want to emphasize that we focus on the question if the existing commercial profit concept can be an adequate tax base. We do not analyze whether we have more reasons to take a conservative profit concept as tax base instead of the EU-IFRS profit concept. Similarly, we do not ask if it is better to take EU-IFRS profit concept as tax base although national accounting principles are relevant for individual statements.

### 4.3 Is commercial profit a subjectively rational decision criterion for corporate actors?

Why is it possible that corporate actors take future commercial profit or discounted future commercial profits as a decision criterion although scientific recommendations challenge that either is an adequate tax planning criterion (Scholes et al., 2015). We put forward the hypothesis that the actions that we ascribe to corporate actors differ from the separate actions of firm members on markets and also from the organized actions of firm members in firms. Our hypothesis is that the actions that we ascribe to corporate actors consist of several individual actions not only by firm members. Thus, we have to expect actions that we ascribe to corporate actors to differ from firm members' actions. Our argumentation is as follows: In the light of genuine uncertainty, there is a range of conflicts of interest between company members. We can, for example, expect conflicts between the shareholders, between the shareholders and other firm members, or between managers and other firm members (Berle & Means, 2009; Furubotn & Richter, 2005; Jensen & Meckling, 1976). Since under genuine uncertainty markets are not perfect, markets cannot solve these conflicts. Rather, firms are places of conflicts and the question arises which actors can enforce their interests (Cyert & March, 2003; Pfeffer, 2011; Pfeffer & Salancik, 2003). In perfectly competitive markets, we can find a balanced relationship among all firm members because all actors have objectively rational alternatives. This is not the case under genuine uncertainty. Here, firm members differ regarding their power and so, we have to ask what makes actors powerful. Therefore, we take the core hypothesis of the resource dependence approach as a basis.<sup>10</sup> The resource dependence approach refers to Emerson's power dependence theory. According to this theory, power is not an attribute but rather a relationship between actors (Emerson, 1962). The specific point of the resource dependence approach is that it emphasizes the relevance of resource power and resource dependence. Resource power means that there are individual or corporate actors who possess resources that are vital for the relevant company. The resource dependence approach assumes a broad interpretation of resources. Not only physical resources are conceivable but also resources like knowledge or reputation (Pfeffer & Salancik, 2003). Moreover, it is important to note that the relation of power and dependence is not an objective relation. Rather, this relation depends on the actors' perceptions. Both the resource powerful actor and the dependent actor perceive that they are powerful or dependent respectively. From the perspective of this theory, managers who have a personal interest in the survival of the company consider the interests of (individual or corporate) actors whom they perceive as powerful. Since the perceived resource dependency is relevant, it is likely that managers and firm members perceive power differently (Davis & Cobb, 2010; Nienhüser, 2008; Pfeffer & Salancik, 2003). Moreover, since the power dependence theory emphasizes that power is not an attribute but a relationship, actors try to reduce their own dependence and to extend the dependence of others (cf. Emerson, 1962). Thus, the relations between powerful and dependent (individual or corporate) actors are not fixed but variable (Davis & Cobb, 2010; Nienhüser, 2008; Pfeffer & Salancik, 2003). There are many studies that test the resource dependence approach and their results support this (Nienhüser, 2008). Therefore, we suppose that the perceived resource power of certain (individual or corporate) market actors, which are not necessarily firm members, on the one hand and the perceived resource dependence of other actors on the other hand influence decisions (Davis & Cobb, 2010; Nienhüser, 2008; Pfeffer & Salancik, 2003). Moreover, actions that we ascribe to the company consist of several individual actions because employees and other actors have to implement managerial decisions. However, under genuine uncertainty, it is not clear how to realize decisions. In contrast to perfectly competitive markets, it is necessary that employees and other actors interpret managerial decisions. Furthermore, they have to choose means to realize these decisions. In contrast to perfectly competitive markets, this is not an algorithm but an individual decision process. Therefore, we have to expect that the actions that we ascribe to the firm usually do not correspond to the managerial decisions, neither from the managers' perspective nor from the perspective of other firm members (Cyert & March, 2003).

If we take these action hypotheses as a basis, we can expect that commercial profit is a subjectively rational decision criterion under the following conditions. Firstly, if actors with perceived resource power provide critical resources on condition that the company is successful, the company will have to prove its success. Secondly, if these individual or corporate actors with perceived resource power use commercial profit as a success indicator, we can expect that managers will take commercial profit as a subjectively rational decision criterion. However, do we have arguments that actors use commercial profit as a success indicator? Empirical studies point out the relevance of financial accounting for decisions in groups (Graham, Hanlon, & Shevlin, 2011). Moreover, empirical studies show that the information needs depend on the type of capital provider (Cascino et al., 2013). For example, debt providers use conservative accounting for their decisions. In contrast, professional equity investors prefer unbiased accounting. Therefore, we can assume that a profit concept that protects creditors by limiting the distributable profit is a relevant criterion if managers perceive debt providers as powerful actors. In contrast, if they perceive professional equity providers as powerful, it is reasonable that they use the EU-IFRS profit concept as decision criterion. Therefore, it is conceivable that the commercial profit can be a subjectively rational decision criterion for corporate actors. These hypotheses can explain the results of empirical studies, namely that effects occur in public companies because of taxation (Feld et al., 2013; Hanlon & Heitzman, 2010).

However, reducing tax avoidance of groups is not predominantly a question of the profit concept. Since we have to assume that actors use commercial profit according to the consolidated statement as a performance indicator, tax avoidance reduction requires taxing the group profit instead of taxing the separate entity profit. Otherwise, groups can shift profits for example by debt financing. Especially cross-border operating groups can shift profits from a country with a high tax rate to a country with a lower tax rate.<sup>11</sup> The reason is that such strategies reduce explicit taxes without reducing the group profit (Fuest et al., 2013).<sup>12</sup> In consequence, reducing tax avoidance of groups requires taxing the group profit (Biondi, 2017). Therefore, in the case of groups, the authoritative principle should apply to the compulsory consolidated EU-IFRS profit concept. Furthermore, this argument supports the implementation of the Common Consolidated Corporate Tax Base (CCCTB) concept. The idea of CCCTB is that the European Union member states harmonize their profit determination rules (Spengel et al., 2012) and that groups that operate cross-border within the European Union have to calculate a consolidated European tax profit (European-Commission, 2015). The member states in which the company operates then share this consolidated tax base according to an agreed formula. Each member state taxes its share of this tax profit with the national tax rate (Schreiber, 2013; Spengel et al., 2012). Since the consolidated EU-IFRS profit concept can be a subjectively rational decision criterion, we have arguments to take this concept as CCCTB tax base.

To sum up, if EU-IFRS are relevant for all statements, we can support by arguments to take the consolidated profit as tax base in the case of groups. Furthermore, if EU-IFRS are relevant for all statements, we can support by arguments to take this profit concept as tax base also for other corporate actors. Yet, if the national accounting principles are relevant for individual financial statements, we have reasons to implement the national commercial profit concept as tax base for these other corporate actors. In short, the authoritative principle is a means to achieving equality of taxation. However, let us highlight again the focus of our paper: We ask if the existing commercial profit concepts can be an adequate tax base. Yet, we do not analyze if we have more reasons to take a conservative profit concept as tax base instead of the EU-IFRS profit concept. Neither do we ask if we have more reasons to take EU-IFRS profit as tax base concept although national accounting principles are relevant for individual statements.

#### 4.4 Objections to the authoritative principle

In sum, since we have reasons that commercial profit can be a subjectively rational decision criterion, the authoritative principle is a means to achieving equality of taxation in the sense of reducing expectable tax avoidance decisions. Nevertheless, we have to consider objections to the authoritative principle. From a critical rationalist perspective, we have to deal with these objections.<sup>13</sup> A first critical argument against the authoritative principle is that not equality of taxation but decision-neutrality is an adequate tax goal. Consequently, proponents of this tax goal demand a decision-neutral tax base and therefore a cash flow tax or the taxation of the 'economic profit' (Schanz & Schanz, 2011; Wagner, 2000, 2014). However, decision-neutral taxation is only realizable in perfect markets (cf. chapter 3.1). Therefore, decision-neutral taxation does not fulfill the feasibility postulate 'ought implies can'.

According to a second opinion, the authoritative principle contradicts equality of taxation because it treats taxpayers with business income differently from other taxpayers although these are equal issues. While, for example, taxpayers who calculate their taxable income via tax balance sheets have to consider losses as soon as they arise, other taxpayers are not allowed to do so. Rather, losses of other taxpayers do not reduce taxable income until they are realized. Therefore, economists who take this view argue for a modified cash basis accounting for all taxpayers combined with an immediate full loss offset that should substitute loss anticipating (Schanz & Schanz, 2011; Schneider, 1997). Usually, tax systems deduce losses from positive income of the same period. If this positive income of the same period is not sufficient, they deduce the residual loss from income of former periods (loss carryback) or later periods (loss carryforward). In contrast, an immediate full loss offset instead of tax loss carryforwards and tax loss carrybacks provides a tax credit irrespective of whether the taxpayer paid taxes in the past or will pay taxes in the future.

For example, a corporation buys 1.000 shares for 60 € per share in period X0. The corporation plans to sell the shares in period X1. On 31.12.X0 (balance sheet date), the market value is 55 € per share. The company sells the shares in period X1 for 55 €. Usually, accounting rules demand to anticipate the loss of 5.000 € in period X0<sup>14</sup> and to deduce it from positive income or (if that is not sufficient) to carry it back or forward. In contrast, taxpayers that do not prepare a balance sheet do not anticipate the loss. Rather, the realized loss in period X1 is deduced from positive income or is respectively carried back or forward if this is not sufficient.

Taxpayers may interpret this difference as an unequal taxation of equal cases. Therefore, some economists argue for a modified cash basis accounting for all taxpayers combined with an immediate full loss offset. According to this approach, taxpayers are not allowed to anticipate losses. Rather, they get a tax credit (to the amount of the realized loss multiplied by their tax rate) in period X1. Yet, the important characteristic of an

immediate full loss offset is not only the timing of loss deduction but also that taxpayers get a tax credit irrespective of whether they paid taxes in the past or will ever have a positive income. However, this view firstly ignores that taxpayers who obtain cash flow from separate acting on markets on the one hand and taxpayers who obtain cash flows as firm members of personal companies or of corporate actors on the other hand are not in an equivalent situation. As we pointed out, the organized actions of shareholders in personal companies and in corporate actors differ from the individual actions on markets because they act under the constitutional constraints of company rules that differ from the constraints of market rules. Furthermore, the actions that we ascribe to corporate actors differ also from the organized actions of firm members in firms because these actions consist of several individual actions not only by firm members.

We have, for example, to consider that taxpayers whose partnerships or corporations obtain cash flows usually cannot automatically take out the company's cash flows. The argument only holds in the case of individually earned cash flow versus cash flow made in a sole proprietorship (Schmiel, 2012).<sup>15</sup> Secondly, this argument requires the prior implementation of an immediate full loss offset because so far, we do not have this in any country (Schanz & Schanz, 2011). However, implementing an immediate full loss offset also needs arguments. Proponents argue that an immediate full loss offset avoids tax effects and treats losses and gains symmetrically. Yet, the proponents' arguments for an immediate full loss offset are not well founded from an evolutionary perspective. Since an immediate full loss offset avoids tax effects only in a neoclassical perfect market, these arguments are descendants of the 'Nirvana-approach' (Demsetz, 1969). In the light of genuine uncertainty, neutral taxation is not realizable and we have to assume that tax effects occur. One reason is that an immediate loss offset contradicts the tax law rule that taxpayers must have the intention to achieve income. To achieve taxable income means achieving a positive taxable income in the overall period. Tax rules interpret the case of a total loss such that the intention to achieve income is missing; thus, losses cannot be deducted. We can find this rule in German tax law as well as in the tax law of other countries (Ault & Arnold, 2010). In consequence, we can expect that an immediate loss offset would provide additional incentives for taxpayers to declare their out payments for hobbies and private spending, for example, as taxable income in order to obtain a tax credit. Furthermore, from our perspective, reducing tax avoidance is a means to achieving equality of taxation. The overriding question is: how should we distribute taxes so as to realize equality before the law? It is consistent with our perspective that taxpayers with a total loss do not pay taxes; yet, there is no reason that they should receive a tax credit irrespective of whether they paid taxes in the past or will ever have a positive income. Therefore, we refute the objection to the authoritative principle that an immediate loss offset should substitute loss anticipation because it is not reasonable.<sup>16</sup>

Thus, the authoritative principle is an adequate means to achieving equality of taxation for personal companies and corporate actors. Furthermore, equality of taxation regarding groups requires taxing the consolidated tax base of the group. This supports the implementation of CCCTB and the application of the authoritative principle on consolidated statements for groups as well as on the compulsory single statements for personal companies and other corporate actors.<sup>17</sup> Figure 4 summarizes the results of our evolutionary analysis of the authoritative principle.

#### Authoritative principle (means)

- Supports equality of taxation because commercial profit can be a subjectively rational decision criterion
  - if personal companies use EU-IFRS/national commercial profit as heuristic/national commercial profit determines maximal profit shareholders can expect
  - for corporate actors if actors with perceived resource power provide critical resources on condition that the company is successful and use national commercial profit/IFRS as a success indicator
- objections against the authoritative principle (contradictions to other values) are not reasonable

**Figure 4:** The authoritative principle as an adequate tax means.

## 5 Results

This paper asks if a one-book system that takes the commercial profit concept as a basis (the so-called authoritative principle) is an adequate tax rule from an evolutionary point of view. Since we have to consider different commercial profit concept purposes, we analyze both the case that EU-IFRS are relevant for all statements and

the case that EU-IFRS focus on the consolidated annual accounts and the national accounting principles are relevant for individual financial statements. We can find a controversial discussion of the authoritative principle. In contrast to previous studies, we ask if the authoritative principle is adequate from an evolutionary perspective. An evolutionary perspective means a perspective characterized by genuine uncertainty. We present a framework for evolutionary tax law analysis that we develop from a critical rationalist perspective. From this perspective, tax rules are means to achieving tax goals. Tax goals should be compatible with social values under genuine uncertainty (ethical dimension) and they should be realizable (empirical dimension). Regarding the empirical dimension, we need empirical hypotheses that fulfill critical rationalist requirements. That means that assumptions and hypotheses should be empirically confirmed.<sup>18</sup> Since equality of taxation is a fundamental tax goal, we examine if the authoritative principle is an adequate means to achieving equality of taxation and if this goal itself is adequate. Therefore, our framework includes an interpretation of equality of taxation under genuine uncertainty, a hypothesis on the functioning of markets under genuine uncertainty, an interpretation of realizable and desirable social values under genuine uncertainty, as well as tax effects hypotheses and action hypotheses of personal companies and corporate actors under genuine uncertainty. Surely, this framework is not limited to our research question. In principle, it is a framework for analyzing every existing or conceivable tax rule.

In contrast to the mainstream of accounting literature, we come to the result that the authoritative principle is an adequate means to achieving equality of taxation, which is in turn an adequate tax goal from an evolutionary perspective. Figure 5 shows the results of our evolutionary analysis:

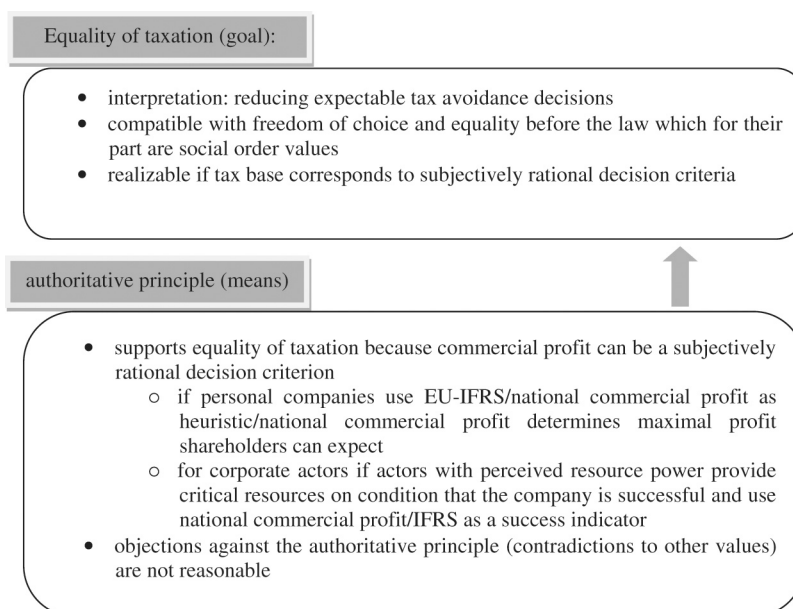


Figure 5: Evolutionary analysis of the authoritative principle.

Equality of taxation requires interpreting whether issues are equal or unequal regarding the taxpayers' ability to pay. As Figure 5 shows, we argue that there is a correlation between unequitable taxation and tax effects that reduce the explicit tax payment burden. These so-called tax avoidance decisions indicate unequitable taxation. Thus, if the legislator understands tax rules as equitable, this includes the basic hypothesis that tax rules reduce tax avoidance decisions. In consequence, we need empirical hypotheses about tax avoidance decisions to test the legislative hypothesis of equitable taxation. From an evolutionary perspective, the interpretation of equality of taxation as reducing expectable tax avoidance decisions is an adequate tax goal because it is compatible with freedom of choice and equality before the law, which in themselves are social values that the social order has to pursue. Firstly, the German Federal Constitutional Court substantiates equality before the law as equality regarding tax law. Secondly, tax avoidance decisions that reduce the absolute tax revenue also generally contradict freedom of choice and equality before the law as universal rights.<sup>19</sup> Furthermore, equality of taxation in the sense of reducing (not preventing) expectable tax avoidance decisions is realizable.

The authoritative principle is an adequate tax rule if it conforms to equality of taxation in the sense of reducing expectable tax avoidance decisions. This is the case if the commercial profit can be a subjectively rational decision criterion or a component of such a decision criterion. We take the evolutionary tax effects hypothesis, the prospect theory, and the core hypothesis of the resource dependence approach as bases. From this perspective, we have arguments that commercial profit can be a subjectively rational decision criterion for personal companies as well as for corporate actors. Since we have to expect that groups take the consolidated profit as

a decision criterion, we have to apply the authoritative principle to the consolidated statement. Furthermore, reducing tax avoidance requires a group taxation concept, for example a concept like CCCTB.<sup>20</sup> The objections to the authoritative principle, for example the objection that (not equality of taxation but) decision-neutrality is an adequate tax goal, and that the authoritative principle contradicts equality of taxation because it treats taxpayers with business income differently from other taxpayers although these are equal issues, are not reasonable.

This paper focuses on the question if the existing commercial profit concept can be an adequate tax base but not if we have more reasons to take a conservative profit concept as tax base instead of the EU-IFRS profit concept. Just as little, the paper examines if we conversely should take the EU-IFRS profit as tax base concept although national accounting principles are relevant for individual statements. Furthermore, we do not discuss other cases than that EU-IFRS are relevant for all statements and that EU-IFRS focus on the consolidated annual accounts. For example, we do not analyze the case that certain companies can choose their commercial profit concepts.

## Acknowledgment

We thank Yuri Biondi and two anonymous reviewers for valuable comments.

## Notes

- 1 Cf. § 5 (1) s. 1 German Income Tax Act (EStG).
- 2 For an analysis of profit determination rules from an evolutionary perspective see Schmiel (2012).
- 3 Critically evaluated by Caldwell (1980).
- 4 Cf. chapters 3.1, 4.4.
- 5 Strictly speaking, we also have to ask who should be held able to pay. In other words, we have to deal with the question whether it is the companies themselves that should be seen as able to pay, or whether it is the shareholders only in case they are individuals (cf. Schmiel, 2016b). This is an important question although not our subject in this paper.
- 6 Cf. Sorensen (2007) and Schanz and Schanz (2011).
- 7 In contrast Schubert (2012), who develops an evolutionary welfare criterion.
- 8 For a differentiated treatment of the performativity of markets, see Aspers (2007).
- 9 According to § 122 German Commercial Code (HGB), partners can take out the profit unless it harms the partnership. However, they are not allowed to reduce their capital share without the agreement of the other partners. In stock corporations, § 233 German companies act (AktG) forbids to pay a higher dividend than a specific commercial profit. According to §§ 29–31 German limited liability company act (GmbHG), in limited companies, the shareholders could demand a specific commercial profit, too. If payments to shareholders cause the equity to be smaller than the share capital, the company shareholders must repay them to the company. Cf. similar result but divergent argumentation Schmiel (2012).
- 10 See also Avi-Yonah (2004) regarding a reference to the resource dependence approach in tax research. In contrast, neoclassically founded theories of the firm, principal-agent-theories, or the behavioral theory of the firm do not consider power (Cyert & March, 2003; Furubotn & Richter, 2005).
- 11 Of course, personal companies and other corporate actors also have possibilities to avoid taxes. However, these do not follow from the authoritative principle.
- 12 Thus, it is hardly surprising that we have contradictory empirical studies in the field of book-tax conformity. While some studies – which consider consolidated statements – come to the result that book-tax conformity reduces tax avoidance (Atwood et al., 2012; Desai, 2003, 2005; 2015; 2005), others – which do not consider consolidated statements – deny this (Hanlon et al., 2005).
- 13 Cf. a ‘comparative institutions approach’ Vanberg (2001, p. 9226).
- 14 Cf. EU-IFRS 9.5.4.4.
- 15 Consequently, it would be consistent that sole proprietorships did not have to draw up a tax balance sheet.
- 16 Of course, an adequate loss deduction system (loss carryback and loss carryforward) is necessary but that is in detail not a question of the authoritative principle.
- 17 It is very interesting that Vanberg recommends a similar distinction regarding taxation although his argumentation is different (Vanberg, 2011c).
- 18 Cf. chapter 2.
- 19 Cf. chapter 3.
- 20 Cf. chapter 4.

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## Jurisdiction register

Court	Date	Reference number	Source
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Bundesverfassungsgesetz (2004)	09.03.2004	2 BvL 17/02	<a href="http://www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/EN/2004_03_09_BvL17_02.html">http://www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/EN/2004_03_09_BvL17_02.html</a>
Bundesverfassungsgesetz (2009a)	17.01.2009	1 BvR 2192/05	BVerfGE 125, 1–39
Bundesverfassungsgesetz (2009b)	23.09.2009	2 BvL 3/02	BVerfGE 124, 235–267
Bundesverfassungsgesetz (2010)	21.05.2010	1 BvR 611/07	<a href="http://www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/EN/2010_05_21_BvR611_07.html">http://www.bundesverfassungsgericht.de/SharedDocs/Entscheidungen/EN/2010_05_21_BvR611_07.html</a>
Bundesverfassungsgesetz (2012)	18.07.2012	1 BvL 16/11	NJW 2012, 2719–2722
Bundesverfassungsgesetz (2015)	17.12.2014	1 BvL 21/12	BStBl II 2015, 50–91

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