Decision heuristics and tax perception – An analysis of a tax-cut-cum-base-broadening policy

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A B S T R A C T

In this paper, both a conjoint analysis and a lab experiment are conducted to analyze the influence of changes in the tax rate and the tax base on the perceived tax burden. Our results show that the majority of individuals do not make rational tax decisions based on the actual tax burden but rather use simple decision heuristics. This leads to an irrationally high impact of changes in nominal tax rates on the perceived tax burden. Taxpayers favor tax options that apply a lower tax rate on their gross income over a higher tax rate applied on their net income despite the lower actual tax burden of the latter option. This result suggests that politicians could combine increasing fiscal revenues and decreasing subjects' tax perception. Furthermore, overestimation of tax rate changes increases considerably when information on tax rate is considered first (framing effect).

1. Introduction

Following the United Kingdom and the United States, in recent decades, many countries pursue a policy of tax-cut-cum-base-broadening (OECD, 2010: 11), i.e., they reduce the nominal tax rate and simultaneously increase the tax base. One recent example is the introduction of a final withholding tax on interest income in many OECD countries. These countries cut the nominal tax rate on capital income but abolish the possibility to deduct capital income-related expenses (Genser & Reutter, 2007). Moreover, several countries provide explicit tax options that reflect the above mentioned tax-cut-cum-base-broadening policy. Exemplarily, small corporations in Russia may choose between a lower tax rate on their gross
income and a higher tax rate on their net income. In France and Germany taxpayers may—under certain conditions—choose whether their dividends are taxed under a progressive tariff based on their net income or under a flat tax based on their gross income. The aforementioned tax reforms are usually reasoned by expected efficiency gains and tax simplification (e.g., Kopczuk, 2005). We propose a behavioral approach as an additional explanation as to why politicians pursue such a policy of tax-cut-cum-base-broadening: the use of decision heuristics that lead to an irrationally high impact of nominal tax rate reductions on taxpayers’ perceived burden.

Previous economic and psychological research already shows that attitudes toward tax policies are subject to several biases (McCaffery & Baron, 2004). As early as 1960 Schmölders finds evidence that a high percentage of entrepreneurs overestimate their tax burden (Schmölders, 1960: 84f). Especially, if tax complexity is high or if taxes are non-salient, subjects make substantial decision errors (Boylan & Frischmann, 2006; Chetty, Looney, & Kroft, 2009; Rupert, Single, & Wright, 2003; Rupert & Wright, 1998). In addition, research shows that price complexity influences buyers’ price perceptions and demands. Breaking down the price into several components (e.g., base price and shipping costs) leads to a decrease in the perceived price and an increased demand for the corresponding commodity (see Morwitz, Greenleaf, & Johnson, 1998). Krishna and Slemrod (2003) discuss the potential meaning of these price research results for tax policy and Chetty et al. (2009) find that using prices plus sales tax instead of the net amounts leads to a significant reduction in demand. The following article is also based on this idea and is, to our knowledge, the first to examine whether the perceived tax burden is dependent upon which price component (tax rate or tax base) is changed.

The calculation of the tax burden is regarded as a complex task (Kirchler, 2007: 32). As we know from previous research decision heuristics are used in such complex tasks, particularly. Therefore, it seems reasonable to assume that subjects will use heuristics in our tax framing. Even though there are papers on the use of decision heuristics in tax contexts (e.g., McCaffery & Baron, 2003), a paper on the relationship between decision heuristics and a tax-cut-cum-base-broadening policy is missing.

The main purpose of this study is to examine whether the use of decision heuristics leads to a misperception of changes in nominal tax rates compared to changes in tax deductions. We analyze (i) whether decision heuristics are used in choosing between tax systems that differ, exclusively, in the nominal tax rate and the amount of tax deductible expenses, (ii) whether the use of decision heuristics will induce subjects to overemphasize the importance of nominal tax rate changes relative to changes in the amount of tax deductible expenses, and (iii) whether framing effects drive the misperception of nominal tax rate changes compared to tax base changes.

To this aim, we conduct (i) a survey study (conjoint analysis) with a sample of German working individuals that represents the population in terms of age, education, gender, and income and (ii) a lab experiment with working individuals who are compensated according to their experimental performance. By combining these two methods we are able to benefit from the respective strengths of both procedures. First of all, conjoint analysis allows us to draw a large (representative) sample. Moreover, we are able to measure preferences on the individual level. This incorporates the advantage of conjoint analysis to identify whether individuals choose a decision heuristic over the rational ranking. On the other hand, conjoint analysis is a mere preference measurement whereas a lab experiment sets monetary incentives. Besides, while in conjoint analysis the task is performed just once, the lab experiment enables us to execute the task multiple times.

The remainder of this article is organized as follows. First, in Section 2 we discuss the effects that decision heuristics may have on the perceived importance of nominal tax rate changes and derive our hypotheses. The sample, method, and results are presented in Sections 3 and 4, “Conjoint Analysis” and “Experimental Validation”, respectively. A discussion of the results and the implications for tax policy and research are carried out in Section 5.

2. Hypotheses

We consider hypothetical tax options and put subjects in the position of a choice between these alternatives that, for a given income, differ only in terms of the nominal tax rate and the allowed deduction of income-related expenses.1 This setting mirrors the often proposed policy option to eliminate itemized deductions (e.g., Pitt & Slemrod, 1989; Slemrod, 1989). Opposition to itemized deductions is in line with public opinion as 54% of Americans would be willing to give up some deductions to make the tax system simpler (Tax Foundation, 2005). According to Efflers and Hessing (1997) subjects favor higher standard deductions over itemized deductions because taxpayers “prefer being lazy to becoming tired”. However, our main purpose is to study whether the use of decision heuristics leads subjects to misperceive nominal tax rate changes compared to tax base changes. We are not interested in the preferences for tax simplification. To control for such preferences subjects are explicitly informed that each tax system from which they can choose leads to the same compliance effort. Therefore, rational decision makers choose among these alternatives based on the actual tax burden \( B_i \), which can be written for the \( i \)th alternative as

\[
B_i = \tau_i Y - \tau_i D_i
\]

where \( \tau_i \) is the tax rate, \( D_i \) is the deduction of income-related expenses, and \( Y > D_i \) is taxable revenue (identical for all alternatives).

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1 It is important to note that we are not looking at tax reform models that differ such that certain economic activities are taxable in one alternative but not the other. As is well known from literature (see e.g., Willner & Granqvist, 2002) a base-broadening, rate-reducing policy that taxes previously untaxed opportunities while reducing the tax rate on all taxable opportunities could lead to efficiency gains even if tax payments remain the same. By contrast, we are studying the effect of taxing a single (already taxable) economic activity differently in each tax option.
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