On the political economics of taxation[1]

Micael Castanheira
(ECARES, Université Libre de Bruxelles, Belgium)

Gaëtan Nicodème
(European Commission, CESifo and
CEB and ECARES, Université Libre de Bruxelles, Belgium)

Paola Profeta
(Università Bocconi, Italy)

Abstract

Previous analysis have found mixed results on the effects of flat taxes, in terms of efficiency, equity and tax complexity. After reviewing some of the main theoretical arguments that suggest that the political process plays a crucial role in shaping tax systems, we apply them to the case of flat taxes in Estonia.

Keywords: political economy, taxation, personal income tax, flat tax, Estonia

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I. Introduction

The normative analysis of taxation focuses on how the government should minimize the "excess burden", i.e. the economic losses, from taxation. Economic distortions created by taxes are typically expected to move the allocation of factors, goods and services away from an allocation that could be considered as economically "efficient". However, there is often a wide gap between the prescriptions of an "optimal" tax system and actual tax systems. Many tax systems are redistributive to serve an equity purpose, which may have positive economic effects (e.g. reducing social unrest and criminality). Hence, a tentative explanation would be that different countries have varying degrees of aversion against inequality, which would explain why countries prefer to maintain a "non-optimal" tax system. Yet, there are recurrent cases in which the tax system is neither efficient economically nor efficient at redistributing income.

One of the most important changes in personal income tax systems around the world has been the proliferation of so-called flat tax systems, characterised by a broad tax base and a (low) single rate. During the last fifteen years, about twenty countries have adopted a version of this system. Flat taxes are praised by their proponents for their simplicity and efficiency and are thus seen by many as economically efficient. Neutralizing tax systems is one of the major trends in the recent evolution of tax systems in European countries: tax base broadening and the reduction of tax rate differentials have been relatively common policies over the last years. Even when not implementing flat taxes, many countries have reduced the number of tax brackets for the personal income tax and/or they are reducing taxes on labour. Meanwhile, there is a general tendency for countries to broaden the tax base, at least regarding the sources of capital income. There are indeed many advocates of a common and uniform treatment of all sources of capital incomes, and several governments embraced this goal. Proponents of tax neutrality emphasize three main effects: the first one is efficiency. The distortionary effects of taxation tend to be reduced, partly because the elasticities of the different income sources also get reduced. On the other hand, one should not forget one conclusion of the optimal tax literature: taxing different bases and different income levels at the very same rates may entail significant efficiency losses (Ramsey, 1927). The implementation of the tax neutrality principle may include a shift away from labour taxation. European countries recently performed many reforms in this direction, including the reduction of social security contributions, the increase of taxes on property, and an increase in environmental taxes.

The second argument is to promote equity, in the form of both vertical and horizontal equity. Vertical equity has in particular played a central role in recent tax reforms, being tightly related to the progressivity of the tax system. Regarding horizontal equity, the main intuition is that a single and broad tax for any source of income, including labour and capital, should be preferred if the appropriate measure of the "ability to pay taxes" is comprehensive income (Simons, 1938). Then, individuals with equal ability to pay taxes (as measured by comprehensively defined incomes) should pay equal taxes regardless of the source of their income. The issue of horizontal equity has often been neglected, based on the justification that it would become a minor problem once the income tax structure is simplified. In this paper, we instead argue that there are strong political motivations behind the large diffusion of distortions away from the horizontal equity principle. The third motivation is to reduce complexity. That is, increase the simplicity of the income tax structure. From that viewpoint, some argue that comprehensive flat rate taxation is the most neutral and the least complex system. In Estonia for instance, this motivation played an important role in the choice of a flat tax in 1994. More generally, decreasing the number of brackets may lower administration costs, and thus free revenue for other public goods. Finally, the presence of multiple brackets may induce some taxpayers to reduce their (measurable) income in order to be eligible for a lower tax rate (see Hettich and Winer, 1999).

In practice, however, the results of flat taxes have been mixed. Optimal tax theory is indeed rather ambiguous about the degree of linearity of personal income tax systems. Extending the logic of the Ramsey rule to personal income taxes (PIT), one may wish to tax different income sources at differential rates (see Saez, 2001[2]) and therefore the superiority of flat taxes is far from demonstrated[3]. Keen, Kim and Varsano (2008) and Nicodème (2007) provide a detailed account of the pros and cons of flat taxes both in terms of their microeconomic and macroeconomic effects, and come to relatively mixed conclusions about their efficiency and complexity gains. Most interestingly, Keen et al. (2008) show that the effects of flat taxes on equity aspects depend heavily on their design and that their performance on that ground compared to previous progressive tax systems is an empirical question. This highlights the fact that flat tax systems show many variations in their characteristics across countries and over time. No country has introduced the original Hall and Rabushka (1983, 1985) proposal of a single tax rate on both business and individual cash-flows and very few countries have implemented systems without specific tax allowances or tax-deductibility of some items. Moreover, some countries with flat taxes are introducing new tax provisions that erode even further the idea of broad-base-low-rate flat tax systems.

This observation cannot be explained by optimal taxation considerations. Instead, explanations for this move away from efficient tax systems can be explained by the political process, which plays a crucial role in shaping tax systems. The political economy literature suggests that more intense political competition, under some conditions, induces parties to give up more efficiency in order to achieve better targetability. Parties are actually seen to always use targetable tax systems in equilibrium, *i.e*. tax systems that are sufficiently different from a broad-base/single-rate system. This is not a normative statement; it is simply a description of the features of the equilibrium of the political "game" as modelled in that literature. Yet, it has important implications for flat tax systems. Estonia is an interesting case in this respect as this country started the new wave of flat tax adoptions in 1994. Estonia regained independence in 1991, and had to introduce a new tax system from scratch. There was thus no status quo bias. After a short-lived attempt at implementing a progressive personal income tax system, Estonia adopted a broad-based, flat-tax, with the same rate as for corporate income. This system proved quite successful, but was nevertheless progressively de-emphasized by the government, around the time of legislative elections. It reduced the tax base in 1999, and initiated a reduction in the tax rate in 2004. We interpret these events in the light of the theories reviewed in the paper and infer that the government's strategy is quite consistent with them. In particular, we put forth the hypothesis that, in light of this evidence, the flat tax system might not be liveable in the long-run, because it does not reproduce the features of a political equilibrium.

The remainder of the paper is organised as follow. Section 2 reviews the political economy literature applied to tax reforms. Section 3 details the personal income tax reforms

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[2] Saez (2001) shows that the Ramsey Rule can also be used to compute the optimal marginal tax rates in an optimal income tax scheme. However, his purpose is not to distinguish between different income sources. A noticeable feature of recent tax reforms has been the introduction of various forms of the so-called Dual Income Tax model, which taxes capital income of individuals at a separate (usually both flat and lower) tax rate.

[3] In particular, this superiority is not robust to alternative welfare functions.

undertaken by Estonia since 1991 and show that the country is moving away from flat taxation. Conclusions follow.

II. Political Economy of tax reforms

2.1. The political process shapes tax systems.

Optimal taxation theory fails in many cases to explain the evolution of tax systems. Indeed, in democratic societies, political parties and politicians want to win elections and the political process plays a crucial role in shaping the tax systems. Economic incentives alone seem to be insufficient for reforms to be implemented and political incentives might be instrumental in achieving tax changes. These political incentives reflect the political system, the preferences of voters and politicians and those of stakeholders, possibly organised as pressure groups.

Scholars have tried to explain reforms using the median voter theorem of Black (1948) and Downs (1957a, 1957b). In a simple framework in which two competing political parties try to lure voters whose preferences are represented along a single dimension (e.g. their desired tax rate), they will maximize their number of votes by adopting the policy preferences of the median voter. This theory has expanded further in multiple dimensions to explain the size of the government (Meltzer and Richard, 1981), and hence the equilibrium level of the tax rate, but it failed to be empirically validated. Perhaps the reason is that the theory is somewhat too simplistic to explain a political process that is complex with non-linear tax systems and non-uniform benefits.

One has therefore to consider a more elaborate setup in which the policymaker can design a complex tax system. Probabilistic voting models and Colonel Blotto games offer such framework with predictions that voters who are more elastic electorally should end up benefitting from lower tax rates and that the more competition between parties, the less the equilibrium tax system focuses on aggregate efficiency.

2.2 Probabilistic voting models and Colonel Blotto games: lower taxes for swing voters and an efficiency-targetability trade-off

When electing their representatives, voters take many variables into account besides their economic interests. Probabilistic voting theory allows finding an equilibrium outcome in such multi-dimensional race (Lindbeck and Weibull 1987, Dixit and Londregan 1998, Profeta 2007). Political parties will try to maximize their expected number of votes based on the probabilities to get the votes of each group of voters. In the tax field, probabilistic voting models allow to jointly determine the equilibrium tax rates for different groups of voters. This offers a realistic outcome for the tax structure with the most electorally mobile groups being offered the most favoured tax treatment (see Warksett, Winer and Hettich, 1998). In other words, the equilibrium tax structure would mimic a Ramsey rule in which geographical mobility is replaced by electoral mobility. Swing voters end up paying lower taxes. Such framework may explain observed tax design and reforms with political parties trying to attract in priority swing voters. Even more, proposed policies will fit preferences of swing voters who are larger in size and shall be independent of the political leanings of the parties since policies primarily try to please swing voters and not parties' preferences. Reforms shall therefore be undertaken in a similar way under both left- and right-wing governments.

Probabilistic voting models are nicely complemented by Colonel Blotto games theory (Borel, 1921; Myerson, 1993). This theory hypothesizes a fictional Colonel Blotto who fights an opponent on multiple battlefields and has to allocate his troops across those, not knowing the allocation decisions of his opponent. In this zero-sum game, the winner on each battlefield will be the one that has put the most troops and the overall winner is the one that has won the most battlefields. This theory may be applied to many political competitions and in particular to tax policy. Myerson (1993) can indeed be applied to a situation in which candidates face a budget constraint and have to allocate 'net' taxes across voters[4]. Offering a low (net) tax to a voter means that she will vote for you with a very high probability. But the budget constraint means that you will have to impose a higher tax on other voters, who will start supporting your opponent(s). The typical equilibrium of such a game is in mixed strategy. One immediate consequence is that the features of the election in terms of voting system and number of candidates will affect the equilibrium outcome. This is clear from the works of Myerson (1993) and Lizzeri and Persico (2001, 2005) who show that the higher the political competition, the higher the social waste in equilibrium.

Crutzen and Sahuguet (2009) and Castanheira and Valenduc (2006) apply this type of game to tax systems. Crutzen and Sahuguet (2009) provide a formalization of the political economic determinants of a tax system based on this type of games. In the absence of public good and distortionary taxes, the optimal tax rate is obviously zero. However, the political system gives incentives to politicians to levy taxes to finance socially-wasteful transfers offered to targeted voters, and this makes the tax system to become both inefficient and unfair. They find that the efficiency loss displays an inverted U-shape relationship with the distortionary effect of taxes. If taxes are only marginally distortionary, taxes can be high at the equilibrium and efficiency losses will remain small. If they are very distortionary, then politicians will set them at a low level to avoid loosing too many votes and this low level also ensure low efficiency losses. The situation is different with intermediate distortionary effects which still provide incentives for politicians to set high taxes and hence create high efficiency losses. Moreover, they show that if politicians have at their disposal targetable taxes, they will always use them at equilibrium regardless of the efficiencies they create.

Politicians therefore face an efficiency-targetability trade-off. This has profound implications for tax policy, and in particular for flat taxes. Simple, broad-base, single rate taxes do not provide the adequate tools for policymakers to play colonel Blotto games. In particular, they do not offer enough flexibility to target specific voters with diverse preferences and hence to gain their support. Flat taxes do not appear to fulfil the conditions to be a political equilibrium and this raise the question of their survival in mature tax systems.

2.3. Reforms: how broad and how fast?

While the previous section describes the type of tax and redistribution systems that pre-electoral political interactions should produce in the long-run, this section focuses on the process of change from an existing system, the *status quo*, to another. The idea is the following: consider a politician who, after having been elected, decides to engineer a reform meant to improve, say, efficiency. This reform will affect the welfare of many different groups differently. Typically, some groups will be hurt and may oppose reform. Thus, “good” reforms may not easily be implementable. This section focuses on this implementation process in front of such political constraints.

Engineering good economic reforms is difficult. An issue in itself is to identify which policies may improve upon the existing situation. Since we focus on the political economy

[4] By 'net', we imply here the tax to be paid minus the transfer.

aspects of reform, we ignore this issue and assume that good reform plans are already on the table. The question is which political economic hurdles reform-minded policymakers will face, and how they may address them. We will see that building a sufficiently broad coalition of actors who support the reform may actually require modifying some aspects of the economically "ideal" reform plan. Oddly enough, economically inferior reforms may be more palatable politically.

A second question that arises is whether a politician actually has the incentive to press for economically superior reforms: some reforms might be politically suicidal. We will review the argument that crises can be necessary to trigger reform: the idea is that crises may increase the support for reform. This argument has been bitterly criticized, though. Finally, while most of the literature focuses on the reform process itself, we wish to also relate it to the reasons why the status quo emerged in the first place.

2.3.1. The status quo bias

A representative-agent approach would advocate that any policy increasing efficiency (or some other goal: GDP, profits or aggregate welfare) should be implemented. According to this view, unless the politicians' incentives are somehow distorted, efficiency (or the other goal) should be close to its maximum at any point in time. Thus deviations from the optimum would only be due to distortions in the policy-making process. Such a 'Leviathan view' of policy inefficiencies leads to the conclusion that, to improve welfare, one must improve decision-making processes, e.g. by cutting down the power of politicians and of special interest groups.

This view is flawed. We begin this review by considering a direct-democracy approach to reform, where democracy suffers no distortion: a welfare-enhancing reform is on the table, and voters must decide whether to implement it or not. We will see that even such an efficient decision-making process suffers from a *status quo bias*. Pioneering this research, Fernandez and Rodrik (1991, p 1146) address the following question: "*Why do governments so often fail to adopt policies that economists consider to be efficiency-enhancing?* […] *The answer usually relies on* [the fact that] *the gainers from the status quo are taken to be politically 'strong' and the losers to be politically 'weak,' thereby preventing the adoption of reform*". Formally their theory emphasizes the individual uncertainty generated by reforms: by the very nature of the reform process, those who stand to lose from the reform are easily identifiable, whereas those who stand to gain face more uncertainty. This individual uncertainty generates a <u>double hurdle for reforms</u>: a reform must attract both *ex ante* and *ex post* majority support. According to this approach, proposed reforms must overcome the *status quo bias*, that is, obtain support from a majority both *ex ante* and *ex post*. By contrast, a purely economic approach would focus on aggregate gains.[5]

To illustrate this, one can look at the analysis of Valenduc (2006), who studies the possibility of introducing a flat tax in Belgium. According to the principles of the flat tax, marginal rates would be decreased, but the tax base broadened, and many tax allowances and expenses would be removed. His analysis computes which rates would be achievable under a double scenario: first, the new system must be budgetary neutral. Second, in the absence of any information about possible adaptation by the population, the employment status and wage

[5] Note that efficiency gains are a *necessary*, but not sufficient, condition to satisfying both the *ex ante* and the *ex post* constraint. In a different setup, the two concepts may be somehow unrelated: imagine that a majority of 50%+1 voter earn for sure a very small benefit, whereas 50%–1 voter lose for sure a very large amount: political constraints may be satisfied, even though efficiency would require blocking the reform. Thus, both the economic gains *and* the political constraints should be considered in any sound cost-benefit analysis.

of each individual must be assumed unchanged. This second assumption underlines the nature of the individual uncertainty faced by each citizen: one can easily compute what would happen to one's net income *all other things being equal,* but less easily grasp what would happen at the macroeconomic level. For instance, the new system might generate more employment, which would increase one's employment or wage prospects, reduce social welfare spending, and therefore lead to further tax rate cuts. But, from an ex ante basis, each voter will tend to perform the very same exercise as Valenduc (2006) and check whether future taxes paid would likely increase or decrease for a given income. His simulation results show that the *ex ante* constraint can definitely not be met in Belgium: net wage inequality would increase dramatically, and only the top two deciles would really gain (the impact is almost nil for the 7th income decile). Among socio-economic groups, some wage earners and self-employed people would gain, but unemployed, disabled, and retired people would lose a lot more. Thus, even though its proponents argue that a flat tax has substantial effects on efficiency, a flat tax reform would be politically unfeasible in Belgium.

2.3.2. Bundling and speed of reform

This *status quo bias* was an important concern at the time when transition countries initiated their reforms. However, the lessons learned from their experience now prove to add a lot of value for the reform processes faced by other countries in the world (see the books by Sturzenegger and Tommasi 1998 and by Roland 2000 for more detail). The main debate at the time was between advocates of a big bang strategy (such as Boycko, Shleifer and Vishny 1995) and advocates of gradualism (such as Roland 2000). The former argued that the fall of the Berlin wall offered a potentially narrow window of opportunity to implement reforms. Thus, all reforms had to be initiated immediately and governments should be fast on all fronts. The latter argued that many uncertainties were present and that circumventing oppositions required a piecemeal approach. Complementarities between different facets of the reform process may reinforce either type of argument.

The presence of aggregate uncertainty relates to the potential benefit of a reform: will it pay off or not? Aggregate uncertainty creates an *option value of learning,* which may have different implications. One possibility is that our understanding of the problems at hand is improving over time. Independently of our actions, more information will come along. In that case, it may be optimal to defer an apparently profitable reform: future information may reveal that it is actually bad. In this case, we should observe reforms that are implemented late, but vigorously and quickly.

Another possibility is that reforms must be experimented "at home" to learn how good it is. In this case, it might be optimal to have an extensive experimentation process. For instance, one may test the reform on specific sectors or areas, or to implement it gradually. Dewatripont and Roland (1995) propose a model in which a major reform can be split into two smaller reforms, but both must be carried out to fully grasp the benefits of the complete reform. Uncertainty surrounds these benefits, which can either be positive or negative. A big-bang strategy implements all reforms at once, and produces all benefits and costs immediately. The gradual strategy introduces only one of the smaller reforms in the first step. Once the outcome of that smaller reform is observed, the population decides whether to implement the second reform or to return to the status quo. The costs of reversal are increasing in the magnitude of the reforms already implemented. They show that the gradual strategy dominates if the first reform has a sufficiently high probability to reveal that the whole process should be stopped: this saves on reversal costs. Thanks to the option value of an early reversal, gradualism also facilitates social acceptance of the whole reform process, in particular if the second part of the reform is "politically difficult": under gradualism, this second reform is only implemented if one learns that its benefits are sufficiently high. Thus, some of the ex ante oppositions may be quelled by providing a possibility to block the entire process at the interim stage. Dewatripont and Roland (1995) also show that reformers should first implement the reforms that (i) have the highest expected payoffs, (ii) have the highest risk for given expected payoffs and (iii) have a high probability to reveal information about the value of the entire reform process: the first and second reform should be complementary.

This aspect of gradualism refers to the *speed* of reforms. Another issue is the (un)bundling of reforms in terms of the number of groups to take up at once. Dewatripont and Roland (1992) show that it may be fruitful to unbundle reforms that cannot overcome the status quo bias. The idea is simply to divide the reform in two steps that do not harm the same voters. The first step only targets a sufficiently narrow group of the population and has then the ex ante support of a majority. Once this first reform is passed, the group that was initially opposed, precisely because of this first step, will support the second step if it increases its own welfare.

Martinelli and Tommasi (1997) object that often, and particularly in Latin America, reforms are an all-or-nothing process: gradual reforms might be impossible, whereas big bang reforms are feasible, even if only at some periods of history. They propose a model in which each group has veto power such that, by assumption, divide-and-rule tactics cannot work. Each small reform pleases two groups, and hurts one. Thus, every single reform would be vetoed. Yet, there also is a “grand reform” that corrects all distortions at once. In that case, it is the strategy of bundling many reforms together that becomes the only politically feasible strategy. Framed differently, in countries where many groups have veto power, reforms might be delayed until the time when distortions eventually hurt all groups, who then accept to vote the grand reform. In contrast, when the executive is sufficiently powerful to exploit divide-and-rule tactics à la Dewatripont and Roland (1992), the gradual strategy might allow an earlier start of the reform process.

There can thus not be a unique answer to a problem that proves complex. We can nevertheless draw a few clear-cut lessons: first, even though some reforms can be economically superior, they may prove politically unfeasible. In the process of building a coalition to make reforms politically feasible, policymaker may either need to defer some aspects of the reform or to bundle this one reform with others that are, a priori not necessarily related. For instance, a tax reform that temporarily increases inequality may require an increase in the social safety net (bundling) or may have to be introduced only progressively (e.g. a progressive increase in the tax rate of previously untaxed income sources). Secondly, as argued by Rodrik (1996), reforms will be politically more sensitive if they generate a lot of inter-group redistribution compared to the size of expected efficiency gains. Developing his argument further, we believe that reforms are never as dichotomous as “do” or “do not”. In reality, the possibilities to experiment, to delay or accelerate, to bundle or unbundle, mean that policymakers can always manipulate this “redistribution-to-efficiency gain” ratio. Sometimes, it may prove valuable to reduce efficiency gains if that reduces the redistributive effects more-than-proportionately.[6]

The issue is that the simple *possibility* of tailoring reforms to political constraints also comes at a cost: every group has an incentive to fight and press for a modified reform that saves it from bearing the cost of the reform. The more negotiable are the reform details, the higher is this incentive, and the more reforms end up being delayed (Alesina and Drazen 1991; see also Drazen 1998 for a survey). Thus, governments have sometimes to put themselves in a situation where burden shifting across groups is made impossible. This is why

[6] Castanheira, Galasso and colleagues (2006) provide cases studies for various sectors and countries.

adding constraints on the reform process makes it easier sometimes to reform. Common examples are the reliance of national governments on international constraints, e.g. coming from the IMF or the European Commission, to justify that some measures are inescapable. According to the theory of Alesina and Drazen (1991), this is a well-justified strategy: this mutes each group's incentive to pursue the war of attrition at the source of reform delays. Another implication of their analysis is that reforms are more likely to take place when economic conditions worsen. Intriguingly, pressure groups may keep opposing the reform *even though they expect the situation to keep worsening* (Laban and Sturzenegger 1994). However, Rodrik (1996) criticizes this type of claim as *unfalsifiable*: if a reform takes place, it is meant to address some problem; is that a "crisis"? And if no reform takes places, does it mean that the crisis was "not deep enough"?

2.3.3. Policymaker incentives and policy distortions

In the above section, we focused on the hurdles faced by a pro-reform policymaker who behaves as a social planner. If that was the whole story, increasing or decreasing delegation to policymakers should not produce much of a difference in equilibrium outcomes. Yet, facts tend to prove the opposite: increasing the powers of voters, through referenda for instance, has a deep impact on the equilibrium tax structure and on the way public goods are financed. Three stylized facts related to direct democracy are that (1) "*public expenditures are lower where direct democratic instruments are available*" (Feld and Schnellenbach 2008, p19); (2) excludable public goods tend to be increasingly financed through *user charges* rather than *general taxes* (Feld and Matsusaka 2003). Finally, (3) redistribution is also affected: direct democracy is associated with lower levels of welfare spending, but without affecting inequality in the same way (Feld et al. 2007), which suggests that direct democracy leads to reforms that better target redistribution. Thus, the fact that policy is delegated to a policymaker does have an impact on equilibrium outcomes. There can be several reasons for this. One is that professional politicians have access to better information. Carrillo and Castanheira (2008) and Castanheira, Crutzen and Sahuguet (2010) show that politicians develop better policies when voters have better information, but information may also trigger welfare-reducing actions on other dimensions: it reinforce party polarization, and political parties may reduce intraparty competition (see also Schultz, 2008).

Another reason is that politicians focus on a longer (or shorter) term than voters.[7] Yet another potential reason is that politicians have other incentives than to enhance the electorate's welfare.

Politicians may pursue objectives that are disconnected from the electorate's needs or the institutional system may give them perverted incentives. The Leviathan view of government sustains the former idea: the fact that economic outcomes are different under direct and representative democracy is supposedly a proof that, when given autonomy, politicians divert resources to fulfil their own aims. This idea is however not falsifiable as such. Even the fact that the size of government is smaller under direct democracy may not reflect abuse by politicians; it may instead reveal differences in voter preferences, if they prefer both direct democracy *and* smaller governments in some areas, versus representative democracy *and* larger governments in other areas. Iversen and Soskice (2006) provide an explanation along these lines for the choice of electoral systems. A large literature (see Coate and Morris, 1995, Dewatripont and Seabright, 2009, Persson, Roland and Tabellini (1997, 1998, 2000, and 2003) or Diermeier and Feddersen (1998) shows that before making policy

[7] Major reforms or even "legal revolutions" have been undertaken by "enlightened" politicians who acted despite opposition by voters, who eventually supported that policy when they realized that the leaders were right.

recommendations, one should understand the policymakers' incentives. It is suboptimal to impose economically efficient reforms if the institutional processes lead them to eventually reverse that reform. It is productive to propose big bang reforms only when distortions have reached sufficient levels and the reform is perceived as unavoidable (Alesina and Drazen 1991, Martinelli and Tommasi 1997). In the absence of a "crisis situation", political constraints may instead call for subtler reforms either by avoiding an attack on all pressure groups at once or to introduce reforms gradually, to demonstrate the usefulness of the reform process (Dewatripont and Roland, 1992, 1995). Whichever the economic situation, the analyses of Coate and Morris (1995) and Dewatripont and Seabright (2009) suggest that the proposed reforms should be very visible as such, but make some transfers less than obvious: when political constraints and long-term equilibria are taken into account, the reform also becomes valuable to the political class.

A last question that arises is whether one actually needs a pro-reform government to implement reforms. Cukierman and Tommasi (1998) emphasize an important and subtle effect in that regard: the population expects pro-reform governments to push for reforms, and may thus not believe that the reform is necessary. In that case, the pro-reform government may fail to implement its reforms, due to a lack of popular support. In contrast, if a non-reform government is in power and ends up concluding that reform is necessary, it may face much less opposition, since the population will more easily trust that the reform is inescapable. This is probably the reason why there is little or no evidence that tax reforms are more likely to be implemented either by left-wing or by right-wing governments.

2.4 What is the political economy behind tax base broadening?

In this section we link some of the theories described to the current tax systems, making an application to the case of one of the main changes occurring in European tax systems. As noticed by Alt et al. (2008), many European countries have been reducing statutory income tax rates (in particular top and basic rates) in the last decades, while broadening their tax base in parallel. As they detail, the UK marginal rates of statutory income tax have been cut substantially over the past 30 years. Yet, the share of taxes in GDP remained more or less constant. As they explain (p. 12) "*whilst statutory rates have been cut, thresholds and allowances have tended to rise in line with inflation, whilst earnings have risen more quickly, leading the number of higher rate tax-payers to grow from 674,000 in 1979-80 to 3.3 million in 2006-07 – this process is known as 'bracket creep' or 'fiscal drag'*." Many other countries followed a similar tax policy: since 1980, the US, Canada, Ireland, Japan, France, Germany and Italy, among others, have cut their statutory marginal rates. However the burden of income tax has fallen significantly only in Japan and Germany. In the other countries, the statutory rate cuts have been combined with measures of tax base broadening and/or fiscal drag to maintain the tax-to-GDP ratio constant.

How can we explain these government choices? We can think at them as a political strategy: income tax "cuts" are popular and easy to observe due to their transparency, while the overall tax burden is more difficult to measure, since it depends on income distribution and many other less observable elements. The underlying process is thus closely related to the theories developed by Coate and Morris (1995) and by Dewatripont and Seabright (2009): it is politically very valuable to display action and be considered as the engineer of a tax rate cut. Yet, one may at the same time organize a hidden mechanism of redistribution through less visible mechanisms, here the fiscal drag. Accordingly, the political debate focused mainly on the reforms of the statutory *rates*, while actively ignoring the influence of *thresholds*, even though they are just as important in determining the actual tax burden.

Another element which may help explaining the observed trends is the choice between gradualist and big-bang reforms (see Section 2.3.2). Define *total taxable income Y* as:

$$Y = \sum_i \alpha_i y_i$$

and other sources of income and their associated taxes as:

$$T^{other} = \tau^z \sum_i \beta_i z_i + \tau^c \sum_j \gamma_j c_j \ ,$$

where z_i are these other sources of income and c_j is consumption of good j.

In that setup, tax broadening may be reached by raising the coefficients α_i and/or β_j associated with specific sources of income. Suppose that a given increase of these coefficients is planned to reach the goal of tax broadening and/or some targets for the tax revenue. These changes may be done gradually or rapidly. Gradualism implies that changes are made sequentially, as opposed to contemporaneously, *i.e.* for all sources of incomes at once. The former strategy is typically more feasible on political grounds, as gradualism implies less opposition when increasing tax rates. The status quo bias is also more easily circumvented when changes are made slowly (see section 2.3.1). Too much gradualism may however lead to piece-wise and incoherent reforms. On the opposite, big bang and holistic reforms are easier when it is necessary to display major changes and to commit the government to reform, but at the cost of stiffening opposition, which may even block the reform. Examples of big bang tax reforms can be found in Sweden and the US. In most other European countries instead, gradualist and piecemeal reforms have been more common.

Part III. The political economics of the flat tax reform in Estonia

Estonia became independent in 1991 and had immediately to pass a new personal income tax (PIT) law. This first law featured progressive tax rates of 16%, 24% and 33%.[8] Nevertheless, due to high inflation, tax brackets had to be adjusted very often and there was an acute need for a more efficient and functional personal income taxation system. All this was happening in a context in which tax officials still had very little knowledge and skills in tax matters. In 1994, Estonia introduced a deep reform of its tax system and opted for a flat tax system for personal income taxation. Such a reform was considered as a major innovation in Europe. Under this new system, the statutory PIT rate was relatively low at 26%, but the tax base was broader than in the first system: all three income sources – labour income, capital income and capital gains, ware taxed at the same rate (that also matched the corporate tax rate). The system was made progressive by allowing for special exemptions and deductions available for some categories of taxpayers, such as families with several children and retired people.

The parliamentary discussions during the preparatory period emphasized three main reasons for having a flat personal income tax rate system (and a uniform rate for individuals and corporations): simplicity, fiscal capability and low compliance costs for both taxpayers and civil servants. As mentioned already, the Estonian tax administration and taxpayers were indeed still relatively inexperienced in tax matters and it was necessary to establish a system that would be both efficient functionally and easy to manage. The introduction of a flat rate tax system was therefore primarily justified by its simplicity rather than by considerations of

[8] Between 1992 and 1994, the corporate tax rate was 35%.

economic efficiency. There are indeed several potentially negative consequences associated with a flat tax rate system, such as an increase in after-tax income inequality (loss of progressivity). Those were however rather unclear at the time of the reform and have thus been largely ignored. In this sense, Estonia is an interesting case study in terms of tax design. We will see that some economic effects of this tax system have been quite positive (Estonia did not actually mind much about the lack of redistribution, after years of Communist rule). Yet, despite this apparent success, the government introduced tax reforms between 1999 and 2007 that reduced the share of the PIT in the overall budget. We then put forth the hypothesis that the political economy processes reviewed in Part II imply that flat tax system is not politically sustainable.

3.1. Political and economic environment before the new Income Tax Act (1991-1993)

Estonia regained independence in 1991 and elected its first "full-time" Parliament ('Riigikogu' in Estonian) in 1992 for a four-year mandate. Political parties typically nominate their candidates in each of the eleven electoral districts and also present a national list of candidates for the 101 positions in the Parliament. During its transition from a command economy of the early nineties, Estonia went through a lot of turbulence. This deeply affected both the economic structure of the country and the Estonian society as a whole. Transition triggered radical changes in firm ownership and in the entire economic structure, which initially resulted in high inflation and ballooning unemployment. Shadow economy activities spread significantly and criminality seemed hardly under control. In addition, a new currency – the Estonian Kroon – was introduced in June 1992. The debates in the Parliament about a new tax regime were therefore taking place amid a feeling of acute economic crisis.

The urgency of creating a new tax system was due to the absence of an explicit tax system in Estonia until it regained independence in 1991. Under communism, many public services were provided directly by companies and collective farms (*e.g.* culture and sport facilities, medical services, etc.) and the bulk of firms' revenue was directly channelled to the State to finance other public provisions. There was no experience of a personal income tax. Therefore, establishing new and efficient tax institutions and adopting tax laws were vital issues in the process of economic reforms and democratization. Together, the acute crisis and the absence of a valid status quo were thus ideal conditions for a swift and significant reform (see Sections 2.3 and 2.4).

The outcome of the 1991 election revealed an extreme dispersion in the votes. The VIIth Riigikogu, which operated during the period 1992-1995, was composed of representatives from the traditional socialist party, right-wing parties, royalists and independent members.[9] The Parliament was composed of several fractions and coalitions, whose composition changed constantly. In that sense, the Parliament portrayed a changing society as the consolidation of political parties was at an early stage and there was ample room for many different interest groups. The main political parties are listed in Table (4), from right to left in the political spectrum. As we can see from the table, right-wing parties had an absolute majority in the Parliament. Mr. Mart Laar, leader of *Pro Patria*, became the government leader and was eventually appointed as a prime minister. This first Parliament created a new legislative system from scratch and implemented radical market economy reforms.

[9] Many independent members were actually elected on a party list, but left their party after being elected.

Table (4). Political Structure of Estonian Parliament, 1993

Party	Orientation	Declared position	Seats
Pro Patria (Isamaaliit)	Moderate nationalists	Right	29
Estonian Independence Party (ERSP)	Hard-line nationalists	Right	10
Estonian Citizen	Hard-line nationalists	Right	8
Coalition Party (Kindel Kodu)	Centrists	Centre	17
Centre Party (Rahvarinne)	Centrists	Centre-left	15
Socialists/ Moderates (Mõõdukad)	Socialists	Left	12
Royalists	Not defined	Left	8
Other parties	Green; Business interests		2
			Total 101

Source: Estonian National Electoral Committee

Our focus is on the political economy processes behind the creation of the new tax regulation. As we shall see, the political situation and the division of powers in the Parliament actually supported radical changes in tax policies. Three main aspects must be emphasized:

1. The Estonian society was at the time very opened to radical reforms (see section 2.3). Estonians studied and considered the merits of many different new models of governance, institutions and regulations. There was a clear consensus for radical reforms such as a radically new tax system.
2. The absence of pre-existing tax legislation played a major role. As emphasized by Fernandez and Rodrik (1991), the biggest obstacles to tax reforms are very often related to the costs of moving from one system to another and to the associated uncertainty. Since there was no existing set of tax rules, the Estonian Parliament had its hands free to adopt any desired tax system. Such *Tabula Rasa* was definitely one of the preconditions for being able to implement most of the recommendations of the *Basic World Tax Code*[10] and a *flat tax* system in Estonia. As argued in Section 2.3.1, a low value of the *status quo* removes the bias against reforms, and enhances their political feasibility.
3. While discussions in Parliament about the merits of different tax systems were of high quality, its practical implementation was much more problematic. Tax collection offices lacked experience as well as human and technical resources. Furthermore, Estonia had just experienced liberalization and democracy. Taxing revenues was widely seen as an attack against newly acquired personal liberties. Therefore, the implementation of a new tax system was somehow treated with hostility.

The legislative procedures for adopting a new PIT were actually very short and took less than two months at the end of 1993. The new Income Tax Act came already into force in January 1994. As shown by the parliamentary proceedings, there were very little headed-up discussions and conflicting positions.[11] Despite the fact that the first draft of the new legislation introduced many changes, "conflicts" were based on individual opinions and not so much along the lines of political groups.

3.2. Political environment after the new PIT

The Estonian personal income tax system maintains its features since adoption. Its foundation is the combination of a flat and relatively low tax rate with a broad tax base. This

[10] The Basic World Tax Code was a project developed by Harvard University to provide countries with draft tax legislation. http://www.taxanalysts.com/www/website.nsf/web/basicworldtaxcode?opendocument
[11] However, more than 200 proposals for amendment were submitted, many of which were of technical nature.

means that there are very few deductions and exemptions available to individuals. The most important ones are mortgage interest, educational expenses, gifts and donations and payments to certain voluntary pension schemes. As explained in Section 1.2., limiting the number of exceptions makes the system more neutral and less vulnerable to manipulation by taxpayers. The political situation yielded support to the main principles of this PIT system. The government coalitions were indeed constantly ruled by right-wing parties that declared the flat tax principle as one of the cornerstones of their tax and economic policies. The ruling coalition has thus always supported the concept of the flat tax rate system. Table (5) provides an overview of the main political parties elected in the Estonian Parliament.

This does not mean that there were no attempts at changing the system. During national election campaigns, the left-wing "Centrist Party", a member of the government coalition, has proposed to replace the existing flat tax system by a progressive one. The proposal may however have reflected a desire to affirm the party's ideological values rather than a real policy option: the party's representatives were not very active in proposing and pushing for legislative change. This behaviour is consistent with the result that ideological reasons may not be effectively pursued in proposing radical policy changes when the party's expectation is that there is no political support for such a change, for instance because ideological reasons are not a major driving force in shaping voters' preferences (see the probabilistic voting argument in Section 2.2.2).

Table (5): Political Structure of the Estonian Parliament. 1995-2007.

Party	Focus	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Right-wing parties														
Reform Party	Neo-liberal	+	+		+	+	+	+	++	+	+	++	++	++
Pro Patria	Conservative	+				++	++	++						
Res Publica	Neo-conservative									++	++	+		
IRL [1] (merger between *Pro Patria* and Res Publica)	Neo-conservative													+
Left-wing parties														
Center Party	Center left	+						+	+		+	+	+	
Social Democrats	Social Democrats	++				+	+	+						+
People’s Union	Rural	+	+	+	+	+			+	+	+	+	+	

Code: (+) participation in government; (++) post of prime minister

1. After national election 2007

Source: Lauristin M. & Vihalemm P. (2009), p. 19

3.3. Economic developments and PIT

This section draws some conclusions about the economic functioning of the flat tax in Estonia since its introduction. Since socio-economic conditions have changed over the last 15 years, it is convenient to divide the period in 2 stages and consider in each of them the role of the PIT and its interplay with various economic processes.

3.3.1. It worked! 1994-2003

Over the first decade, the new PIT almost completely fulfilled the optimists' views formulated upon its introduction. Growth was strong and the Estonian economy recovered rapidly after the decline caused by the Asian and Russian economic crises in 1998-1999. It is clearly beyond the scope of this paper to establish a causal relationship between economic performance and the flat-tax in Estonia.[12] It is however important to stress that this tax system worked quite efficiently in terms of its capacity to collect tax revenues, at least during this first period. This achievement was not so obvious at the time of introducing the reform. Yet, the flat rate tax system became an integral part of the Estonian economic system and even a trademark of the country's innovative economy. It was flagged as the example that many Eastern and Central European countries subsequently followed.

Table (6) provides an overview of PIT tax collection after the 1994 reform. The tax rate remained at 26% until 2005. The total revenue from the PIT increased constantly in nominal terms but, as a fraction of GDP, it fell gradually from 8.5% to 6.5% over the 1995-2003 period. It also fell as a fraction of total government revenues, from 20.2% to 17.7% in 2003. So, despite its effectiveness, the government actually shifted the overall tax burden away from the flat PIT tax. What happened?

First, the PIT legislation was constantly overhauled: labour mobility had increased, and income sources became more diversified. These processes forced permanent modifications of the personal income tax code. As a result, it became progressively more detailed and complex. Second, legislative elections were held in 1999. A revised Income Tax Act was adopted in that year. It maintained the main characteristics of the PIT system but extended various deductions (e.g. family benefits) and improved some technical procedures for tax reporting. Concretely, while the share of PIT in total government peaked at 21.1% in

[12] There is some evidence that flattening the tax schedule could be beneficial for GDP per capita, notably by favouring entrepreneurship (Johansson et al., 2008). This could however be at the expense of equity considerations.

1999, it began to fall afterwards, down to 17.7% in 2003. The effect was even stronger if one considers all direct taxes together: while they added up to 27% of total government revenue in 1998, their share dropped to 21.6% in 2000. After that, it hovered between 21% in 2001 and 2002, and 22% in 2003.

To sum up, while the PIT system seemed to achieve many of its objectives and had massive public support, it was progressively de-emphasized by the government. The first break happened in 1999, an election year. Using the argument of Crutzen and Sahuguet (2009 –see section 2.2.3), one may thus interpret these events as evidence that the flat tax system was not sufficiently *targetable* to maximize political support. Any (pleasant) political promise thus had to be very broad reaching. Two instruments are available: the government can manipulate the tax base or the tax rate. In 1999, it decided to reduce the tax base by increasing the number of exemptions. Interestingly enough, the share of *indirect* taxes in GDP actually increased after 1999. Such taxes are typically more easily targetable, and have less obvious redistributive effects (see Section 2.3.3). The incentives to dispel them thus seem to have been weaker.

Table (6). The Estonian tax structure

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
GDP current price (bn EEK)	**43.2**	**56.7**	**69.9**	**78.42**	**83.5**	**95.5**	**108.2**	**121.4**	**136.0**	**151.0**	**173.5**	**205.0**	**238.9**
GDP real growth, %					-0.1	9.6	7.7	7.8	7.1	7.5	9.2	10.4	6.3
Inflation rate			9.3	8.8	3.1	3.9	5.6	3.6	1.4	3.0	4.1	4.4	6.7
General government total revenues (bn EEK)	18.3	22.3	27.7	30.3	30.8	34.6	37.9	43.9	49.8	53.97	61.7	76.1	91.2
of which: taxes and social security (bn EEK)	*15.7*	*19.5*	*24.1*	*26.8*	*27.3*	*29.9*	*33.0*	*37.8*	*42.1*	*46.1*	*53.2*	*63.7*	*78.3*
of which: PIT (bn EEK)	*3.7*	*4.4*	*5.2*	*6.2*	*6.5*	*6.6*	*7.1*	*7.8*	*8.8*	*9.5*	*9.7*	*11.7*	*14.6*
PIT in % total tax revenues	20.2%	19.7%	18.8%	20.5%	21.1%	19.1%	18.7%	17,8%	17.7%	17.6%	15.7%	15.4%	16.0%
PIT in % GDP	8.6%	7.8%	7.4%	7.9%	7.8%	6.9%	6.6%	6.4%	6.5%	6.3%	5.6%	5.7%	6.1%
PIT nominal rate	**26%**	**26%**	**26%**	**26%**	**26%**	**26%**	**26%**	**26%**	**26%**	**24%**	**24%**	**23%**	**22%**
Direct taxes (D.5) PIT and CIT (mio EEK)	4.7	5.2	6.5	8.1	8.2	7.4	7.8	9.2	11.0	12.0	12.2	14.8	18.7
Direct taxes in % GDP	10.9%	9.3%	9.3%	10.4%	9.8%	7.8%	7.3%	7.6%	8.1%	8.0%	7.0%	7.2%	7.8%
in % of all taxes and SSC revenues	30.0%	26.9%	26.9%	30.4%	29.9%	24.9%	23.8%	24.2%	26.1%	26.1%	23.0%	23.2%	23.9%
Indirect taxes (D.2)	5.7	7.6	9.6	9.8	9.81	11.872	13.467	15.2	16.6	18.2	22.8	27.6	33.0
Indirect taxes in % GDP	13.2%	13.4%	13.7%	12.5%	11.8%	12.4%	12.4%	12.5%	12.2%	12.1%	13.2%	13.4%	13.8%
in % of all taxes and SSC revenues	36.2%	39.1%	39.9%	36.6%	35.9%	39.7%	40.8%	40.2%	39.3%	39.6%	43.0%	43.2%	42.2%

Source: Eurostat, Statistics Estonia.

3.3.2. It stopped working! 2004-2008

Another national election was held on March 2, 2003. In the same year, Estonia voted a referendum in favour joining the European Union (by two thirds of the votes). The period that followed was characterized by an exceptionally high economic growth (especially in the construction and retail sectors) and a fast increase in both personal revenue and government expenditures. Significant inflow of foreign investments, easy access to credits and strong labour market induced a real estate boom. An additional major source of economic growth was the loan-based domestic consumption. However, the flip side is that the economy overheated and the country's international competitiveness declined. Indeed, due to the absence of tax brackets, the Estonian PIT system did not feature any automatic stabilizer.

Thanks to this economic expansion, the government budget started to display a surplus (1.7% of GDP in 2003 and 2004). The right-wing parties (Res Publica and Reform Party), which were dominating the government coalition, thus decided to actually implement the promises made during the campaign, namely decrease tax rates. The decision, voted in the parliament on December 17, 2003, was to reduce the flat PIT and CIT rates from 26% to 24%. In 2005, the Income Act deepened this reduction to 23% in 2006, and 22% in 2007. Interestingly, this implied that the nominal tax rate had to drop by 4 points in 2007, *i.e.* when the next legislative elections were scheduled. Just as interestingly, the government made these decisions amid the doubts raised by many international organizations, such as the IMF, which was pointing at the risks of a pro-cyclical fiscal policy in Estonia. A possible interpretation, along with the theories of Coate and Morris (1995) and Dewatripont and Seabright (2009), is that the government increases its political support if it can show that it is very active, even if its decisions may be welfare reducing – at least as long as costs and benefits are not too visible (see Section 2.3.3).

The outcome was dismal: the reduction of the PIT tax rate fed directly into inflationary processes and created difficulties for Estonia to adopt the euro. As a consequence, economic resources moved towards domestic consumption instead of investment and innovation. The decline in the PIT rate also meant that the budget revenue shifted further towards indirect consumption taxes. In 2007, direct taxes only represented 36.2% of total taxes, down from 45.5% in 1999. Note however that this movement is also explained by the external constraints imposed by the EU, which requires a harmonization of the minimum levels of VAT and excises. Those were considerably below the required levels in Estonia. The outcome of these different elements is that the cyclicality of the government revenue increased noticeably, as we highlight below.

3.3.3. What next?

A new economic situation started in 2008 with the global economic crisis. Global economic decline has had an immediate and severe impact on the Estonian economy, which saw its growth rate plummeting. At the end of 2008, the Estonian economy entered in recession with a 3.6% GDP decline year on year. This decline is still expected to deepen at the time of writing. As one can expect from the above discussion, the economic decline bred a sharp public sector deficit that now calls for significant cuts in the state budget. The political mood vis-à-vis the existing PIT system is thus at a turning point. In February 2009, the Centrist Party proposed again to switch from a flat tax to a progressive PIT and proposed a bill to the Parliament.

Similar proposals came in April from the Social Democratic Party, which is part of the ruling coalition. These episodes show that when the economic decline is severe and deficits are enlarging, society is desperately looking for a “lifebuoy” to cope with budget deficits.

3.4. Lessons

The events unfolding in one country can obviously not be the basis for an encompassing theory of the political economy of a broad-based, single rate tax system. The interpretation we offer of these events may also be quite contentious. We thus only wish to propose a hypothesis, which will require further and more systematic work in the future. The hypothesis is that (1) the flat PIT system proved quite efficient economically during the last 15 years of strong growth but (2) it was nonetheless politically unsustainable. The argument is that to attract popular support, parties must either propose a reduction in the tax base or in the tax rate. Given the breadth of the system and its lack of targetability, this implies a structural fall in the share of the flat PIT in government revenues. Instead, with a targetable PIT, political competition can focus on some groups only (the swing voters according to the theories summarized in section 2.2.2), which makes the system politically sustainable in the long run. If that hypothesis is valid, economic efficiency is not a sufficient condition for a tax system to be perennial. It is more important that it be sufficient complex and not too neutral, so that parties are actually able to exploit the strategies identified by the theories reviewed in the second part of the paper.

IV. Conclusions

Economic theory on optimal taxation provides many prescriptions on how to shape tax systems to reach economic efficiency by minimizing excess burden of taxation. Similarly, achieving fair tax systems also requires specific designs for tax systems. Despite the economic case for such ‘optimal’ tax systems, actual ones are often shaped in a way that achieves neither efficiency nor fairness and recommended tax reforms are implemented in few countries only. It is therefore of high policy interest to better understand the determinants of tax reforms. This paper is aiming to this goal. It also provides ample discussion and evidence from several countries, in particular Estonia.

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