Measuring Tax Complexity

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Introduction

The aim of the paper is to try to provide a conceptual framework within which to think about issues relating to measuring tax complexity, and to pose questions rather than come up with definitive answers. Put differently, rather than plunging in and trying to produce a measure/number for the sake of having a measure/number, I want to stand back a bit and ask some more ground-clearing questions about what one is trying to measure and why; and using the answers to these questions to shape how a measure could/should be constructed. I then apply these considerations to the measure that the OTS is currently proposing.

Since I am trying to provide a more over-arching view, I will simply sketch out my thoughts rather than pursue any one issue in considerable depth. The paper should be thought of as providing a basis for discussion of how to measure tax complexity rather than an exhaustive treatment of the topic.

The paper is in 4 sections.

Section 1: What is tax complexity?

Section 2: What are consequences/costs of tax complexity?

Section 3: Measuring Tax Complexity

Section 4: Assessing the Current Measure

Section 1: What is Tax Complexity?

Although the concept of tax complexity is widely used and much discussed, with the complaint always being made that the tax system is "too complex" – no one ever complains that the system is "not complex enough" – the concept turns out to be a bit more elusive when one tries to pin it down.

Certainly it is a concept that doesn't figure in standard economic analysis of tax systems, and has not been given any very precise definition. I think that much of the popular discussion of tax complexity uses the term "complexity" as a catch-all term that might encompass a number of different features such as lack of transparency rather than complexity per se.

In thinking about what one might mean by tax complexity the first issue to address is what do we mean by "the tax system".

By a tax system we have in mind the set of tax laws/rules that define the various rates and duties that apply to the various transactions that individuals and companies might undertake and to the set of administrative procedures that individuals and companies have to go through in order to comply with the rules relating to providing information, completing tax returns, paying tax, and undergoing investigations where tax returns are challenged.

But right away one has to recognise that there are in fact many different tax systems that could be relevant for UK taxpayers. For very many individuals and quite a lot of companies with rather simple tax affairs the relevant tax system will be the UK tax system. But for a large number of individuals and companies the relevant tax system will be some part of the international tax system that involves the tax rates, rules, and the administrative conditions applying in many different countries. Which countries might matter will vary from taxpayer to taxpayer depending on the variety of countries in which they actually conduct transactions or might contemplate conducting transactions.

The complexity of the international system lies largely outwith the control of UK government, but one should at least be aware that for a significant number of UK taxpayers adjusting various features of UK tax system may have little impact on the overall complexity of the tax system they actually face, and indeed that some "simplifications" of UK tax system – by say bringing some tax rates in line with one another – may increase the complexity of the international system if it moves tax rates in the UK out of line with those in other parts of the world.

Now in thinking about the complexity of any given system, I think it is helpful to distinguish two different features of a tax system and its consequent complexity: Design complexity and operational complexity.

1.1 Design Complexity

The first is what I call the *tax design* features of a tax system. This is something that reflects the number of different commodities that are taxed but also the number of different tax rates that apply to those commodities.

It might be thought that one way to measure complexity is to count the number of different tax rates – but this is potentially misleading.

To fix ideas, suppose you had an economy where there were N different commodities, H different types of household, and F different types of firm, where realistically, N is a very large number and H and F are also likely to be large. There will be many households of each type and many firms of each type. Ignore externalities, and assume a closed economy.

One tax system of which you could conceive is one that taxes all N commodities at exactly the same constant proportional rate irrespective of household and firm type. It might be argued that this is the most minimally complex system and give it a complexity index of 0.

Now when you tax commodities you essentially raise the price of things that consumers buy – e.g. bread – and lower the price of things they sell – e.g. labour. The net result is that consumers get less bread for every hour they work. But if you tax **everything** at exactly the same rate (e.g. have 20% income tax and 20% VAT on everything) then, in a very simple context, you are essentially doing the same thing (reducing the amount of bread people get per hour of work) twice over. You could achieve the same thing by having a higher rate of tax on income (40%) and a zero rate of VAT.

What this very simple example suggests is that a tax system in which there is a single rate of tax – in the example 20% – applied to all commodities (consumer goods and income) may arguably be **more** complex than that in which there are two different tax rates – in the example a single rate of tax of 40% on income, coupled with a zero rate of tax on all consumer goods – simply because in the second case there are far fewer things that are effectively being taxed.

At the other extreme you could think of a tax system that not only taxes all commodities at different rates but also has non-linear taxes with multiple bands and rates for various commodities, and these tax rates and/or bands can vary by household and firm type. We might all agree that this will have an extremely high level of complexity.

Now any given tax system has multiple aims:

i. The first is to raise revenue to fund public expenditure.
ii. The second is to promote economic efficiency (growth and productivity) by raising this revenue in a way that minimises what economists call distortions – the difference between the allocation of resources that arises with taxes and that which would have happened without taxes. This involves:
    - taxing “bads” such as pollution rather than “goods” such as work and savings;
    - where “goods” have to be taxed, taxing more heavily those things that are more “sticky” (less mobile).
iii. The third is to promote fairness by having progressive income taxation and taxing less heavily those things that are consumed heavily by the poor and more heavily those things that are consumed heavily by the rich.

The traditional treatment of tax design by economists focuses on these three objectives, and assumes that taxpayers are fully compliant. However in the current climate of concern about tax avoidance it is important to recognise another objective:

iv. To reduce opportunities for non-compliance through avoidance and evasion.

To some extent this is covered by the efficiency objective since avoidance often arises when similar things are taxed at different rates – which creates a distortion – but nevertheless this objective would tend to point to a flatter tax system than might emerge from the first three objectives alone.

The theory of tax design helps us understand how to optimally design a tax system that achieves these objectives[2]. Associated with this "optimal" system will be some level of complexity – in the sense that different commodities are taxed at different rates and so there are multiple tax rates. But the fundamental point is that some degree of complexity is an inevitable consequence of any tax system that has the aims of raising revenue, redistributing income and doing so in as least a distortionary fashion as possible.

Now any given tax system will typically have a design that is far from optimal as defined above. This may not always be associated with excessive complexity – it may just be that the tax rates are wrongly set. For example the rate of tax on some bads may be too low while that on some goods is consequently too high. Re-balancing the system may not reduce its complexity as measured by the number of different things that are taxed at different rates.

But often tax systems do end up having too many different tax rates/reliefs as politicians pursue additional objectives which may have a strong political imperative at a particular moment of time, but which then recedes as the economic and political climate changes, leaving the rate/relief in place. This results in the need for periodic overhaul and reform. So the issue is whether, in reducing complexity, one is aiming to reduce what one might call this unnecessary complexity – which involves having some view of what the right degree of complexity is and where differences in tax rates are warranted.

So a major issue which has to be confronted is whether, in trying to measure complexity, the aim is to measure the extent to which the tax system is **unnecessarily complex**, or whether one is trying to measure just its total/absolute level of complexity without differentiating fundamental complexity from unnecessary complexity.

In order to measure unnecessary complexity one first has to ask what is the policy purpose behind various tax measures and whether the resulting system of rates is well crafted to achieve those measures.

It will also be important to recognise that policy purposes can change over time. Here is an example. When vehicle excise tax was first introduced it was done as a revenue raising measure. Since, over time, car-ownership had become a necessity rather than a luxury, and so had become relatively price-insensitive, taxing vehicle ownership was quite a sensible policy from the point of view of raising revenue in a way that minimises distortions, since it chimes with the objective of taxing most heavily those commodities that are in inelastic

[2] Since the different objectives can conflict with one another, the precise design depends on what weight you give to these objectives.

demand. But more recently vehicle duty has been seen as a tool to help achieve environmental objectives and, as a result, the rate of duty has been differentiated by emissions standards. So the **total** complexity of vehicle excise duty could be said to have increased. However the change in policy objective could be thought to have raised the level of **fundamental** complexity, and so there may have been no change in the level of **unnecessary complexity.**

1.2 Operational Complexity

The second feature of a tax system is what might call its *operational complexity* which essentially reflects how easy/costly it is for an honest taxpayer to comply with the informational, filing and payment requirements/obligations of the tax system.

It is important to recognise that while there are many such costs, they do not all have to do with complexity. For example for taxpayers with cash-flow issues there may be costs of meeting the payment obligations; there is an inevitable fixed cost in time/money in filling out ones tax return – however complex the system.

But there are aspects that I think can be said to relate to complexity, and what I have in mind is how easy it is for a taxpayer to map the various transactions they undertake and the terms in which they understand these transactions into the categories used by the tax system and the language in which these are described. To some extent this aspect of complexity will relate to the tax design complexity discussed above – other things being equal the more distinctions that there are between different categories of transaction and the tax rates these attract the more costly it may be for taxpayers to complete their returns.

But operational complexity could arise for other reasons:

i. The first is that the fit between the terms in which the taxpayer conducts their affairs and the way the tax system treats different transactions could be low. The tax system may treat as different types of transaction that the taxpayer treats as identical, or treats as identical transactions that the taxpayer regards as different.
ii. Secondly the language that is used to define transactions may be difficult for taxpayers to understand. There is an understandable desire by HMRC to write tax law and guidance in a language that reduces legal ambiguity and will survive challenge by lawyers and courts. But this can often sound rather stilted, and may not be the language in which individuals understand or describe their affairs. There may be more effective ways of combining the two objectives – using the legally tight terminology but giving an illustration in more common language which will be accurate in the vast majority of cases.
iii. Inconsistencies in tax law/guidance. I recall being told that there are something like 56 different definitions of a child in the US tax code.

iv. Taxpayers may not fully perceive/understand the logic behind the various steps through which they have to go through to complete tax returns. The complexity can be reduced by giving taxpayers as many opportunities as possible to answer a simple question and then skip a great number of steps that do not apply to them.

While these factors can contribute to what may be called *operational complexity* there is an extent to which this complexity will fall over time as taxpayers learn about the tax system, and become more familiar with its definitions. So a fifth aspect of *operational complexity* has to do with

v. Frequency of changes.

In discussing *tax design* complexity I distinguished between **fundamental complexity** and **unnecessary complexity**. The same distinction could apply to *operational complexity*. There may be certain irreducible information requirements that a tax authority needs from taxpayers. But over time informational requirements can change – because, for example, of changes in technology that allow HMRC to capture information provided in one context and apply it in many others, thus reducing the need to capture essentially the same information repeatedly.

So drawing all this discussion together, when one talks of reducing tax complexity there are a number of different things that could be meant:

i. Retaining the existing tax design but delivering it in a less complex way – essentially by reducing operational complexity by, for example, writing legislation/guidance in a form that is easier to understand or removing unnecessary informational complexity.
ii. Retaining the given aims of the tax system but trying to achieve these in a less complex way – by reducing the **unnecessary** *design* complexity.

Section 2: The Costs/Consequences of Complexity

Even if we could provide a tight definition and reliable measure of what I will call *tax complexity per se* as discussed in the previous section, there is the "so what?" question of why it matters.

There are a number of reasons why tax complexity could matter:

i. Distortions. If the design of the tax system is unnecessarily complex it could create unwarranted distortions, and this has costs that can in principle be measured as lost GDP. However I stress again that there is no automatic link between complexity and the distortionary costs of the tax system.
ii. Non-Compliance. Tax complexity can create opportunities for tax avoidance that can create significant costs to the economy in terms of both reduced efficiency and

fairness. The efficiency losses arise for a number of reasons amongst which are: (a) in the presence of avoidance, tax rates have to be higher than otherwise in order to raise given revenue and (b) very bright people are being employed to both devise and then to detect and counter elaborate schemes of essentially paper transactions to move money around and reduce tax liabilities. Equity losses arise because these schemes are expensive and so it is typically the better off who can avail themselves of them. Nevertheless it is important to recognise that tax avoidance may actually be a way of reducing some of the potential distortionary costs induced by excessive complexity.

iii. Compliance Costs. Since the pioneering UK work of Cedric Sandford[3], economists have put a lot of effort into measuring the costs to taxpayers of complying with the tax system. These costs can be measured in terms of the amount of resources – particularly time – that are incurred by taxpayers in meeting their obligations. In cases where taxpayers use professional advisers to undertake some of the tasks required in fulfilling compliance obligations, compliance costs can be measured by the financial costs incurred in using such professionals. While, as stressed above, not all compliance costs arise because of complexity, nevertheless the factors giving rise to what I called *operational complexity* will give rise to compliance costs.

iv. Legal Uncertainty. *Operational complexity* can potentially give rise to legal uncertainty[4]. This arises when taxpayers do not fully understand what their true tax liabilities are – how certain transactions should be treated for tax purposes – and/or, if they do not understand the basis on which the tax authority comes to a different view on how they should be treated if the authority challenges the tax return.

It is important to get a sense of which taxpayers are affected by which degrees of complexity. PAYE is very complex because it has to cope with the full complexity of the vast range of individual circumstances that can conceivably arise. Yet the vast majority of PAYE taxpayers have very simple affairs and may be unaffected by this complexity. The complexities of the international tax system have to be mastered by multi-national corporations – who need to master the complexities of many other systems of international legislation – e.g. competition law, environmental regulation, intellectual property law.

Section 3: Measuring Tax Complexity

[3] See, for example, Sandford, C.T., M.R. Godwin and P.J.W. Hardwick, *Administrative and Compliance Costs of Taxation*, Fiscal Publications, Bath, 1989

[4] The issue of legal uncertainty is discussed in many contexts, but has not been subject to any systematic analysis by economists. In a joint paper with my colleague, Professor Yannis Katsoulacos, I formalise the concept and analyse its implications in the context of Competition Policy. See Katsoulacos, Y. and D. Ulph(2012), "Legal Uncertainty and the Choice of Enforcement Procedures". The implications of legal uncertainty in the context of tax policy remain to be explored.

Having discussed what might be meant by tax complexity and its implications, in this Section I turn to consider some general issues relating to how one might measure it.

3.1 What to measure

Following the previous discussion there are in principle two things that one might want to measure:

i. The first is what one might call the *complexity of the tax system per se* – the factors referred to in Section 2. Here one might try to develop a measure of *design complexity* and of *operational complexity.* Both would raise significant conceptual and practical problems – certainly to construct direct measures. This would be particularly true if one was trying to measure what I called the **unnecessary** complexity of the tax system.

ii. The second is to measure the *costs of complexity* – the factors referred to in Section 3. While economists do have some measures of the distortionary costs of a tax system and of the compliance costs, it is more difficult to measure those parts that are directly attributable to complexity.

In principle one might want to measure both – and so know both how intrinsically complex the tax system is AND the costs of this complexity (how much it matters).

Of course trying to measure these various dimensions of complexity directly raises formidable conceptual and practical problems. Some of the issues to be considered are as follows:

- One problem is that both the complexity of the tax system per se and the costs of the tax system involve multiple components. So even if one could come up with satisfactory measures of the individual components there remains the problem of combining these to get some overall measure. It is not at all clear where these weights would come from, so one may end up with a wide range of numbers depending on what weights are applied.
- Given the problems of getting direct measures of some of the components of complexity, there may be some indirect/proxy measures that could be used. For example one might think of measuring the number of pages of tax legislation as a proxy for design complexity.
- An alternative approach to getting indirect/proxy measures is crowdsourcing. A carefully structured questionnaire covering the various dimensions of tax complexity could be sent to a variety of people with a professional interest in the tax system asking them to assess its complexity on a scale. By combining these scores one might get a fairly reliable measure of the various components and dimensions of complexity.

- Indeed in measuring some of the costs/consequences of complexity it is interesting to ask whether one is doing this because one is interested in these costs (as I have argued, we should be) or whether one sees this as an indirect way of measuring the complexity of the tax system per se.

3.2 Why measure

In thinking about what might be a good measure of tax complexity it is worth asking what the measure is going to be used for. A measure might serve one purpose quite well but be a very poor measure for another purpose.

To give an example, one reason one might want to measure tax complexity is the fairly academic one of trying to compare tax complexity either over time or across countries. Using the number of pages of legislation may be a pretty blunt measure of tax design complexity, but it may do not too bad a job of tracking changes in complexity over time. However it is unlikely to be anything like robust enough to serve as a cross-country measure of complexity.

My understanding is that the primary purpose of measuring tax complexity is to guide decisions as to where to direct efforts to reduce complexity.

But in that case it is far from clear why one would want to construct some aggregate measure. In thinking about the complexity of the tax system *per se* it would seem to be really quite important to separately measure *tax design complexity* from *operational complexity*, and to measure the costs of tax complexity separately from the measure of tax complexity *per se*. That way one can tell not just whether tax complexity is high but also whether this is imposing a considerable cost, and whether to direct efforts to reforming the design of the tax system or the guidance/information that is given to taxpayers.

Given that, as I said above, there is a considerable degree of arbitrariness in the weights applied to combining various sub-measures into an overall measure of tax complexity, it seems far better to just keep track of all the sub-measures and use these to make decisions about where to direct reform.

However I recognise that there is an attraction in having some overall measure, not least because it provides an indicator of whether there is a significant problem of complexity that needs to be addressed and whether steps that are taken to reduce complexity are effective.

Section 4: Assessing the Current Measure

My comments are based on the version, Draft 3, that was produced at the end of July 2012.

I have the following observations:

- The index seems to combine elements of both the measurement of complexity *per se* with the measurement of some of the costs of complexity. I think it would be far better to separate these out more clearly and track them separately.
- Similarly in measuring tax complexity *per se* there are elements that reflect *tax design complexity* – no of pages of legislation, no of reliefs etc. – and others that measure some components of compliance complexity – readability. As indicated above I think it would be better to separate these out more clearly and track them separately.
- I am not sure that the readability index adequately captures the factors in compliance complexity that I identified above. However I have not studied this index in sufficient depth.
- There seems to be quite an element of double counting. So there are a number of different measures of tax design complexity – number of pages, number of reliefs etc. Also you have some crowd-sourcing data alongside some fairly direct measures of complexity. So you seem to be combining different ways of measuring the same thing alongside elements that measure genuinely different things. I think it would be better to be much clearer about those elements that measure genuinely different facets of tax complexity from those which are trying to measure the same thing in different ways. I think that more thought should be given to how you combine different data that is trying to measure the same thing. Rather than just adding them up you should think more about whether you can use the data as cross-checks on one another.
- I am far from persuaded that HMRC operating costs should be included in a measure of tax complexity. Of course just as complexity can have implications for the costs incurred by taxpayers in complying with the tax system, so, other things being equal, increased complexity could lead to increased costs of administering the tax system. But other things are not equal. If the Chancellor decides to cut public expenditure and so reduces HMRC's operating costs, that does not mean that the tax system has become less complex[5].

So my overall view is that there are some interesting elements here but that rather than striving so hard to combine them all together into a single number, more thought should be given stripping out the various elements and combining them into sub-indices of the various components of tax complexity – separating out complexity per se from the costs/consequences of complexity. The less you aggregate up the less vulnerable you are to the problem that your conclusions might be heavily dependent on the particular weights that are given to the various factors – for which there is very little basis.

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[5] Indeed, over time, such a cut in resources might lead to increased complexity to the extent that less resources were devoted to drafting and checking legislation etc.

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