Inheritance Taxation: Redistribution and Predistribution.

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Abstract

It is well known that taxes on the transfer of wealth typically raise very little revenue. However, this does not mean that they are ineffective as tools for redistribution. In this paper we show how important such taxes can be in the long-run distribution of wealth, reducing equilibrium inequality (the "predistribution" effect) by a much larger amount than what is apparent in terms of the immediate impact of the tax (the "redistribution" effect).

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1 Introduction

Taxes on the transmission of wealth have had a mixed fortune as tools for economic policy makers. In some countries they were once seen as an engine of transformative social reform during the 20th century. But in recent times the objectives and purpose of this form of taxation have seemed to be less clear to policy makers and the general public. It could be argued that there has even emerged a new consensus that these fiscal instruments – estate taxes, inheritance taxes, bequest taxes, gift taxes, capital transfer taxes – are useless or even dangerous as agents of redistribution. Some countries, such as Australia and Sweden, have gone as far as abolishing the tax (Henrekson and Waldenström 2016, Pedrick 1981); others have seriously contemplated doing so.

In this paper we analyse this issue using a simple model of intergenerational wealth transmission that allows for heterogeneity in family composition. In the context of this model we show how the equilibrium distribution of wealth is related to the effective savings rate from one generation to the next and the parameters characterising the family heterogeneity. We show that in addition to the immediate redistributive impact of the tax and the transfers that the tax make possible, the tax induces a change in wealth dynamics and the equilibrium wealth distribution – the phenomenon known idiomatically as "predistribution".

The paper is organised as follows. Section 2 briefly reviews the importance and nature of bequest and inheritance taxes in practice. Sections 3 and 4 set out the model and explain the way it works in determining the wealth distribution. Section 5 explains formally the distinction between "redistribution" and "predistribution" and section 6 illustrates the importance of this distinction in a simulation. Section 7 concludes.

2 Inheritance and bequest taxation

What is the economic motivation for a tax on wealth transfers? Let us briefly consider this in terms of three simple criteria of taxation.

Revenue raising. From the point of view of the practical policy maker this is, perhaps, the most important criterion of the three. It is clear that taxation of wealth transfers is never going to be a substantial revenue raiser. This is evident from Table 1 which shows the percentage of total tax revenue raised by inheritance, gift and bequest taxes in four OECD countries over a half century: the maximum, just over two-and-a-half percent of total revenue, was achieved by the UK in the mid-1960s. Compare this with Table 2 that tells the companion story for income taxation: it is clear that, in the UK and the US in recent years, the personal income taxation raises 50 to 100 times more revenue than taxes on

the transfer of wealth.[1] It is, perhaps, unsurprising that some fiscally pragmatic countries seem to have decided that this form of taxation was simply not worth the trouble of collecting.

	1965	**1980**	**1990**	**2000**	**2007**	**2009**	**2011**	**2012**	**2013**	**2014**
Canada	1.46	0.07	0.00	0.00	0.00	0.04	0.04	0.03	0.04	0.04
Sweden	0.39	0.21	0.19	0.22	0.00	0.00	0.00	0.00	0.00	0.00
UK	2.62	0.59	0.65	0.62	0.77	0.50	0.54	0.57	0.60	0.66
USA	2.06	1.15	1.01	1.23	0.81	0.75	0.39	0.49	0.61	0.53

Table 1: Estate, inheritance and gift taxes as percent of total tax revenue

	1965	**1980**	**1990**	**2000**	**2007**	**2009**	**2011**	**2012**	**2013**	**2014**
Canada	22.61	34.10	40.84	36.81	37.07	36.22	36.06	36.42	36.21	36.34
Sweden	48.75	41.04	38.51	33.24	30.87	28.79	27.53	28.03	28.38	28.60
UK	33.06	29.41	29.40	29.34	29.94	30.41	28.07	27.47	27.68	27.43
USA	31.67	39.08	37.67	42.22	38.30	34.32	38.79	38.50	38.74	39.30

Table 2: Individual income taxes as percent of total tax revenue

Efficiency. It is difficult to say anything about the efficiency aspects of inheritance and bequest taxation without a clear understanding of the motives for making bequests as Cremer and Pestieau clearly explain: "If bequests are accidental, estate taxation is quite efficient. However, if people are motivated to work and to save by the idea of leaving their families an inheritance, the tax will be distortionary" (Cremer and Pestieau 2006, p.1109). The empirical evidence on what drives bequest behaviour is mixed. In this paper we make no claim for or against the efficiency impact of this form of taxation relative to other forms of taxation where the nature of individual decisions and their impact on efficiency is better understood. However, in section 3, we do develop a simple and fairly standard model of bequest behaviour that is used to characterise the redistribution and predistribution processes.

Equity. The temptation is to say that, given that bequest or inheritance taxation raises so very little revenue (Table 1) there cannot be much resource to redistribute and therefore this form of taxation can have only a small impact on inequality. This reasoning on bequest taxation, popular among abolitionists, is mistaken. It focuses only on a simple "one-shot" impact assessment of the tax – what could be raised and redistributed in a single time period. However, the

[1] Source for Tables 1 and 2: OECD (2016).

presence of the tax will affect the dynamics of intergenerational transfers and the equilibrium distribution of wealth. This is the essence of the "predistribution" argument concerning bequest taxation: a small tax on wealth transfers that yields only a very modest revenue in any year can nevertheless exert a powerful leverage on the long-run distribution of wealth, as we will show.

3 Model

Consider an individual who comes from a family of k kids. He or she has wealth W_t at time t where time is discrete and each unit of time corresponds to one generation. We need a simple story of where the wealth comes from and where it goes. In the absence of government involvement in the redistribution of wealth, wealth comes from lifetime earnings E_t and inheritance I_t. Some of this is dissipated in the form of consumption over the lifetime and some is passed on as a bequest to the next generation. If the government is involved, there are two new features: (1) taxation of wealth or of wealth transfers; (2) the use of the revenue raised by the tax.

We will assume that there is a tax on bequests which, in its simplest form, is equivalent to the same tax on inheritance. The tax could be made progressive by letting the marginal rate increase with the size of the bequest. Alternatively we could assume that the tax is used to fund a "demogrant" D_t, a form of public wealth transfer. So, with the government involvement, individual (gross) wealth comes from three sources: the demogrant, lifetime earnings and inheritance:

$$W_t = D_t + E_t + I_t. \tag{1}$$

So individual wealth consists of the person's own production (earnings E_t) plus two forms of transfer, one private (I_t) and one public (D_t). The determination of the government-provided demogrant can be considered after we have examined individual behaviour. We first consider each of the two non-government components of wealth in (1).

3.1 Individual behaviour

We characterise the individual's behaviour according to certain simple rules. However, these rules are consistent with conventional maximisation behaviour as shown in Cowell and Van de gaer (2017).

Earnings. We assume that people are free to choose E_t given their wealth and the prevailing wage rate; in other words they choose whether or not to work and the proportion of their lifetime that is devoted to work. We further assume that earnings decrease with wealth (leisure is a normal good) in the following way:

$$E_t = \overline{E} - \nu W_t, \tag{2}$$

if $W_t < \overline{E}/\nu$ and zero otherwise, where $\overline{E}$ represents the maximum earnings that a person could choose to make over the lifetime and ν is a positive parameter capturing the taste for leisure.

Inheritance. In the absence of taxation, if the parents have equal wealth and make equal bequests, and if k children share equally in the inheritance, the relationship between inheritance and parental bequest would be

$$I_t = \frac{2}{k} B_{t-1}, \tag{3}$$

where B_{t-1} is the amount left by each parent in the previous generation $t-1$. Clearly, equation (3) immediately raises the question of the determination of the size of the bequest.

Bequests. We will assume that an individual's bequests are proportional to total wealth

$$B_t = \beta W_t, \tag{4}$$

where β is a positive parameter consisting of the savings rate on total wealth multiplied by the one-generation growth factor of wealth.

3.2 Government intervention

There are three aspects of government activity that need to be considered:

Taxation. We assume that there is a tax at a uniform proportional rate τ on all bequests. Allowing for this, (3) is modified to become

$$I_t = \frac{2\,[1-\tau]}{k} B_{t-1}. \tag{5}$$

Clearly, for a proportional bequest tax, we would have the same outcome if the tax had been levied at the same rate on inheritance.

Demogrant. There is a variety of sensible assumptions that could be made about the way the transfer D_t is paid: for example it could be conditioned on the current generation's circumstances and tapered above a specific wealth level, in which case we have $D_t = D(W_t)$. For the most part of our discussion we assume that there is universal eligibility for the demogrant and that this wealth transfer, is paid equally to all.

Budget constraint. We could assume a zero demogrant and still have something to say about the equalising role of taxation (see section 4.3 below) – in such a case the proceeds of the tax are effectively discarded, or spent in ways that lie outside the model. However, it is more natural to assume that the demogrant is funded by the bequest (inheritance) tax subject to a government budget constraint.

The assumptions made about the form of the tax and the demogrant make the government's budget constraint easy to write down. From (4) and the

assumption of a proportionate tax, the amount raised by the government from a person with wealth W_{t-1} is $\tau\beta W_{t-1}$. Then, given the assumption of a uniform demogrant, the budget constraint is just $D_t \leq \tau\beta\overline{W}_{t-1}$ where $\overline{W}_{t-1}$ is the mean wealth of the parental generation (the population alive at time $t-1$). Assuming that the government will want to provide the maximum demogrant possible for a given τ, the budget constraint at time t is binding and may be written out in full as

$$\int D\left(W_t\right) dF_t\left(W\right) = \tau\beta \int W dF_{t-1}\left(W\right), \tag{6}$$

where F_t is the distribution of wealth at time t (in generation t). In the special case of a uniform demogrant we have

$$D_t = \tau\beta\overline{W}_{t-1} = \tau\beta \int W dF_{t-1}\left(W\right). \tag{7}$$

4 The economy and equilibrium

Here we focus on tax policy in equilibrium. But we can consider equilibrium either in the short run or the long run.

4.1 Short run

To make the short-run equilibrium in period t precise in the no-tax case we need only to specify the joint distribution of period-$(t-1)$ bequests and family size: these determine the distribution of wealth that is present in generation t. Given the bequests made by the $t-1$ generation, the inheritance for each person is exogenously given. We may think of the short-run equilibrium as one conditional on the period-$(t-1)$ bequests.

So imagine a person at time t who comes from a family where there were k kids and where each parent had left an amount B_{t-1}. Using (1)-(3) with $D_t = 0$, we find the person's overall wealth is given by

$$W_t = \begin{cases} \frac{1}{1+\nu}\left[\overline{E} + \frac{2}{k}B_{t-1}\right] & \text{if } B_{t-1} < \frac{k}{2}\overline{B}, \\ \\ \frac{2}{k}B_{t-1} & \text{otherwise,} \end{cases} \tag{8}$$

where

$$\overline{B} := \frac{\overline{E}}{\nu} \tag{9}$$

is a threshold bequest level.

Now suppose that a redistribution scheme (τ, D_t) is introduced. Once again, the pre-tax inheritance for each person is exogenously given. Given the assumption of a uniform demogrant, then using (1), (2) and (5), individual wealth is

now determined by

$$W'_t = \begin{cases} \frac{1}{1+\nu}\left[\tau\beta\overline{W}_{t-1} + \overline{E} + \frac{2[1-\tau]}{k}B_{t-1}\right], & \text{if } B_{t-1} < \frac{k}{2}\overline{\overline{B}}, \\ \tau\beta\overline{W}_{t-1} + \frac{2[1-\tau]}{k}B_{t-1} & \text{otherwise,} \end{cases} \tag{10}$$

where

$$\overline{\overline{B}} := \frac{\overline{E}}{[1-\tau]\,\nu} - \frac{\tau\beta\overline{W}_{t-1}}{1-\tau} \tag{11}$$

is another threshold bequest level and $\overline{W}_{t-1}$ is mean wealth evaluated on (1) in the previous generation $t-1$. Notice that this incorporates a short-run response from the individuals at time t: the introduction of the demogrant and the taxing away of part of the bequest before the inheritance is received produces a change in lifetime earnings in the current generation according to (2) and this is built into (10). We see from (9) and (11) that $\overline{\overline{B}} > \overline{B}$, if

$$\overline{W}_{t-1} < \frac{\overline{E}}{\beta\nu}, \tag{12}$$

a condition that is empirically reasonable.

Consider the short-run change in personal wealth brought about by the introduction of the scheme (τ, D_t). If the condition in the first line of (8) is satisfied, then so too is the condition in the first line of (10). In this case a person characterised as (k, B_{t-1}) experiences a change in wealth given by

$$\Delta W := \frac{\tau}{1+\nu}\left[\beta\overline{W}_{t-1} - \frac{2}{k}B_{t-1}\right]. \tag{13}$$

However, there are other possibilities for (k, B_{t-1}), corresponding to two other combinations of the conditions in (8) and (10). Using (13) and summarising all three possibilities, we find that the change in individual wealth brought about by the scheme is given by

$$W'_t - W_t = \begin{cases} \Delta W & \text{if } B_{t-1} < \frac{k}{2}\overline{B}, \\ \Delta W + \frac{\overline{E} - \frac{2\nu}{k}B_{t-1}}{1+\nu} & \text{if } \frac{k}{2}\overline{B} \le B_{t-1} < \frac{k}{2}\overline{\overline{B}}\ , \\ [1+\nu]\,\Delta W & \text{if } B_{t-1} \ge \frac{k}{2}\overline{\overline{B}}. \end{cases} \tag{14}$$

The short-run equilibrium impact of the redistribution scheme represented by the tax and demogrant is given by the distribution over the population of the amounts $W'_t - W_t$ in (14). Here "equilibrium" means simply that the government budget constraint is exactly satisfied given the scheme's parameters (τ, D_t) and the previous generation's mean wealth $\overline{W}_{t-1}$. From (14) we may infer the break-even bequest level for someone who came from a family with k kids. If it were the case that $B_{t-1} < \frac{k}{2}\overline{B}$ then this break-even level would be at $\frac{1}{2}kB^*$, where

$B^* := \beta\overline{W}_{t-1}$; if the person's parents had each made a bequest higher than that, his wealth would be reduced were the (τ, D_t) scheme to be imposed, and vice versa. But is it reasonable to assume that the break-even bequest falls in this first zone of equation (14)? It is easy to check that condition (12) ensures that

$$B^* < \overline{B} < \overline{\overline{B}}.$$

The implication of this is that the break-even bequest lies somewhere in the zone where individuals choose to work. For those in the wealth range above that zone, the (τ, D_t) scheme unambiguously reduces their wealth and may induce some previously non-working individuals to supplement their reduced wealth with earnings in the labour market.

4.2 Long run

In the long run it is no longer satisfactory to assume that certain components of the model are exogenously determined by factors that lie in the past. Specifically, we should allow for the fact that if a redistribution scheme is introduced in generation t_0, then all the planned bequests made in generations $t \geq t_0$ will be affected by the scheme. We need to extend the model to allow for this and examine the nature of equilibrium in the extended model.

The model is extended by linking together the generations through their bequest behaviour. From (1) and (5), we have the following difference equation in wealth:

$$W_t = D_t + E_t + \frac{2\beta\,[1-\tau]}{k} W_{t-1}. \tag{15}$$

The difference equation is complicated by two things: (1) the size of D_t, the demogrant in period t, depends on $\overline{W}_{t-1}$, the wealth distribution at t-1 through the government budget constraint (6) which is assumed to hold at every t; (2) the size of E_t, earnings in period t, depends on W_t, the individual's wealth at time t through equation (2).

Equation (15), combined with information about the distribution of families by size, determines how the wealth distribution changes over the generations: $F_t \to F_{t+1}$. We have an equilibrium distribution if, for all t, $F_t = F_{t+1} = F_*$, which enables us to characterise the long-run equilibrium in which we can analyse bequest/inheritance taxation. Of course the government budget constraint has to hold for every wealth distribution in every period: so in the equilibrium distribution we have a demogrant D_*. We compare the long-run effects of bequest taxation schemes by comparing the equilibrium wealth distribution F_* for different variants of the scheme (τ, D_*). Finding the equilibrium distribution will, in general, involve numerical estimation or simulation. But, in simple cases, we can determine the changes in F_t and the equilibrium distribution F_* analytically; such simple cases are useful in understanding the nature of the long-run equilibrium and as a benchmark for richer versions of the long-run equilibrium.

4.3 A special case

Let us focus on a simple case where earnings are zero (typical of the upper tail of the distribution as we may deduce from equation 2) and where the demogrant is zero – for example, the case where the demogrant is tapered at high wealth levels.

To set up the connections between distributions in successive generations, as mentioned in section 4.2, we first need assumptions about the distribution of families and the nature of family formation. Specifically we assume strict assortative mating (so that in any family the parents have equal wealth) and that there is a given distribution of families by number of children $(p_1, p_2, ..., p_K)$ where $p_k \geq 0$ is the proportion of families with k children, $\sum_{k=1}^{K} p_k = 1$, $\sum_{k=1}^{K} kp_k = 2$. There are no families with zero children or with more than K children and people inherit only from their parents. Given that there is a proportion p_k of families with k children then, for an arbitrary W, the following must be true:

$$F_t(W) = \sum_{k=1}^{K} \frac{1}{2} k p_k F_{t-1}\left(\frac{kW}{2\beta\left[1-\tau\right]}\right), \tag{16}$$

which gives the connection between F_t and F_{t-1}. Equilibrium requires that the distribution function remains unchanged through the generations, so that $F_{t-1} = F_t = F_*$, for all t in (16). Cowell and Van de gaer (2017) show that the equilibrium distribution F_* that satisfies this equation must take the form of a Pareto distribution:

$$F_*\left(W\right) = 1 - AW^{-\alpha}, \tag{17}$$

where A and α are constants. Substituting the form (17) into (16) the parameter α in the equilibrium distribution is found from the equation

$$\sum_{k=1}^{K} p_k \left[\frac{k}{2}\right]^{1-\alpha} = \left[\left[1-\tau\right]\beta\right]^{-\alpha}. \tag{18}$$

From this we find that a higher τ is associated with a higher α: this means that increasing the tax-rate on bequests (inheritances) must reduce inequality.

5 Redistribution and Predistribution

The concepts of long-term and short-term equilibrium give us a convenient way to distinguish between simple redistribution by a tax-demogrant scheme and what has come to be known as "predistribution." Redistribution is usually thought of as the apparent impact of taxes and transfers on the inequality existing at a point in time; predistribution refers to the way that government policy may have already acted to change the distribution previous to this point in time.

The short-run equilibrium analysis discussed in section 4.1 is close to many routine studies of tax incidence. We only have one behavioural response to consider, the change in earnings that may arise when a person's wealth is altered

by the introduction of the tax-cum-demogrant scheme. The short-run redistributive impact of the scheme can be considered by looking at the inequality of wealth implied by (10) and comparing it with that implied by (8). Of course this is conditioned on a particular set of bequests from the previous generation.

The long-run analysis in section 4.2 allows for an extended feedback response of behaviour as bequests adjust, generation by generation. We only compare redistribution schemes, or compare a new redistribution scheme to a world without redistributive bequest taxes and demogrant, in the context of equilibrium distributions. Imagine that a tax reform takes place at t_0 and that after a further $t_* - t_0$ periods (generations) the system has reached the new equilibrium distribution. Then in period $t_* + 1$ we could carry out a redistributive analysis in terms of both short- and long-run equilibrium. The short-run analysis is similar to what we have described in the previous paragraph, but with the exogenous bequests being those that apply in the equilibrium distribution reached at t_* under the tax-cum-demogrant scheme. The *long-run analysis* compares the equilibrium distribution at t_* (by definition the same as the distribution at $t_* + 1$) with the equilibrium distribution that was in force just before the tax reform at t_0. We could consider the *short-run analysis* at any of the $t_* - t_0$ periods. It is interesting to think through the apparent redistributive effect viewed at $t_* + 1$: the short-run view, just discussed, takes the structure of bequests made in generation t_* as exogenously given; the long-run view takes account of the whole process that was triggered by the tax reform at t_0 and that has worked out through the $t_* - t_0$ periods to result in the bequests associated with the new equilibrium distribution.

6 An illustration

As an illustration we investigate the effect of a thirty percent tax-rate on bequests that is used to fund an across-the-board flat demogrant so that the government budget is balanced. We do this for a society in which there is strict assortative mating and in which there is perhaps the simplest possible case of differential family structure, where the distribution of families by number of children $(p_1, p_2, p_3) = (0.5, 0, 0.5)$.[2] We further assume that the parameter β (the savings rate times the growth factor of wealth) takes the value 0.95.

Consider a situation where the economy is in a long-run equilibrium with $\tau = 0$: no bequest tax. Our first task is to simulate the long-run distribution of wealth given the parameter values we have just stated and following the dynamics explained in section 4 and set out in more detail in Cowell and Van de gaer (2017). The equilibrium distribution has a Paretian upper tail where equation (18) gives the equilibrium value of Pareto's α: for these parameter values we find $\alpha = 1.355$. The Gini coefficient corresponding to the Pareto tail alone – in other words for inequality among the rich in isolation – would take the value 0.5848 . But the equilibrium distribution is not Paretian throughout

[2]This assumption ensures that the population is stationary.

its support – see Cowell and Van de gaer (2017) for an explanation. The empirical approximation to this equilibrium distribution is depicted by the shaded histogram in Figure 1. The Gini coefficient for the empirical approximation to the original equilibrium is 0.6913 – see the "before" column of the "short run" row in Table 3. This total inequality incorporates (1) the component consisting of the within-group inequality of those with wealth in the upper tail (0.5848), (b) the within-group inequality of all the non-rich and (c) the between-group inequality arising from the difference in means between the rich and non-rich groups. The fitted line in Figure 1 depicts the associated Pareto distribution with $\alpha = 1.355$.

	before	after
short run	0.6913	0.5168
long run	0.2811	0.2174

Table 3: Gini coefficient before and after tax

Now suppose that the 30 percent bequest tax is introduced; along with a uniformly provided demogrant satisfying equation (7). As explained in section 5, there is a short-run behavioural effect consisting of the labour supply response by those at the bottom of the distribution (people whose wealth lies in the Pareto tail do not work). The unshaded histogram in Figure 1 depicts the wealth distribution after the short-run impact of the bequest tax and demogrant. The "after" column of the "short run" row in Table 3 shows the inequality that emerges when one takes into account just the one-round short-run impact of the tax.

The distribution represented by the unshaded histogram in Figure 1 is not an equilibrium for this economy. We now simulate the new long-run equilibrium by iteration using the dynamic equation (15). The resulting equilibrium from this iteration is shown in Figure 2, where the distributions have broadly the same interpretation as in Figure 1: the shaded histogram represents the notional pre-tax (and pre-demogrant) wealth distribution in equilibrium; the unshaded histogram represents the distribution of disposable wealth in long-run equilibrium. The bottom row in Table 3 shows the Gini coefficient for each of these two distributions in Figure 2.

The "redistribution" effect can be seen by either of the two rows in Table 3: we can see that the impact effect of the bequest-tax combined with the demogrant that it funds appears to reduce wealth inequality by around a quarter. From either of the two columns in Table 3 we can get an estimate of the "predistribution" effect – it is clear that this is much larger in that the Gini coefficient is reduced by just under 60 percent. The overall effect of introducing the tax and demogrant is found by comparing the bottom-right corner with the top-left corner: in this case the Gini coefficient is reduced by almost 70 percent.

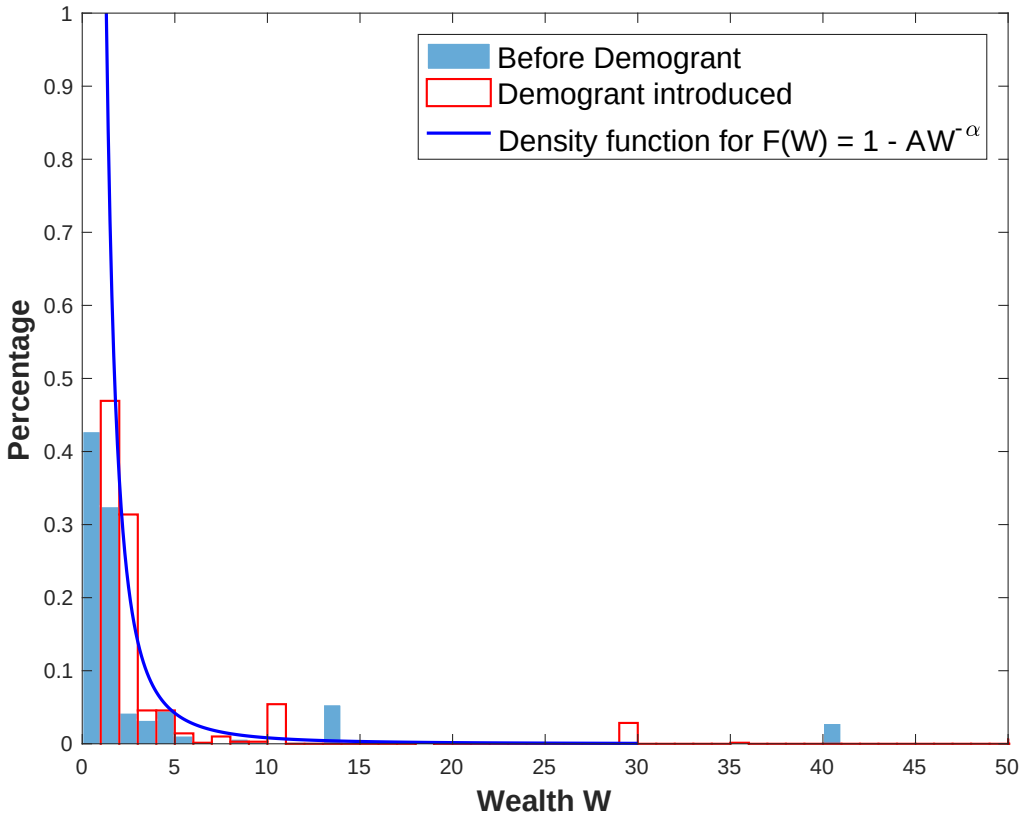

Figure 1: Bequest tax and demogrant – short run impact

7 Conclusions

The simplified calculations presented in section 6 convey an important lesson that should be taken to heart by policy makers. It is certainly true that in almost all implementations of bequest or inheritance taxation the rates and the coverage have been modest and, as a consequence, the immediate impact in terms of revenue raising is also modest. However, this misses an important point concerning the economic and social process that is associated with the tax base. Changing the tax rate, or abolishing the tax altogether, will change the amounts passed on from one generation to the next and will thereby change the amounts of wealth accumulated in different parts of the distribution: the wealth distribution in subsequent generations changes and so the long-run equilibrium distribution of wealth changes. This long-run effect – the "predistribution" effect of the tax – will typically be much larger than the short-run impact of the tax. A modest bequest or inheritance tax can indeed be a powerful engine of long-run change.

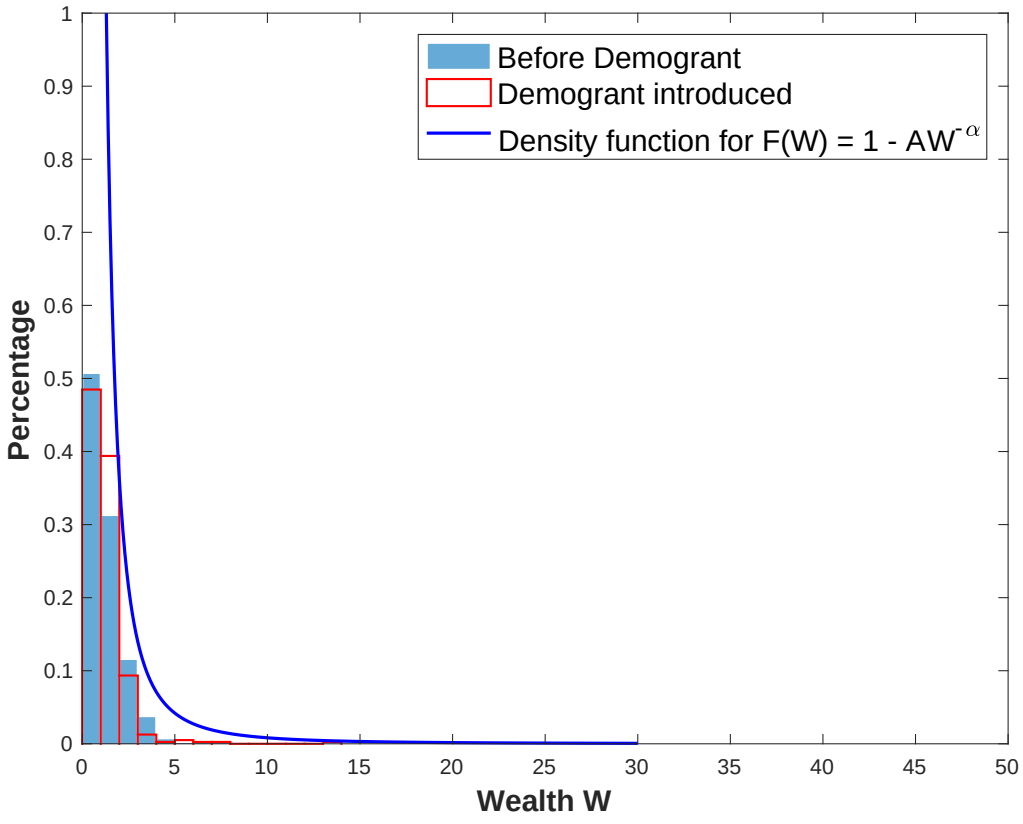

Figure 2: Bequest tax and Demogrant – long-run equilibrium

References

Cowell, F. A. and D. Van de gaer (2017). Condorcet was wrong, Pareto was right: Families, inheritance and inequality. PEP Discussion Paper 34, STICERD.

Cremer, H. and P. Pestieau (2006). Wealth transfer taxation: a survey of the theoretical literature. In L.-A. Gérard-Varet, S.-C. Kolm, and J. Mercier-Ythier (Eds.), *Handbook of the Economics of Giving, Reciprocity and Altruism*, Volume 1, Chapter 16, pp. 1107–1134. Amsterdam: North Holland.

Henrekson, M. and D. Waldenström (2016). Inheritance taxation in Sweden, 1885-2004: the role of ideology, family firms, and tax avoidance. *Economic History Review 69*, 1228–1254.

OECD (2016). *Revenue Statistics 2016*. OECD Publishing.

Pedrick, W. H. (1981). Oh! To die down under! Abolition of death and gift duties in Australia. *Tax Lawyer 35*, 113–142.