European Journal of Science and Theology, *June 2013, Vol.9, Supplement 2, 167-174*

INTERGENERATIONAL EQUITY OF PUBLIC DEBT

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(Received 20 March 2013, revised 1 April 2013)

Abstract

The government borrowing represents an alternative to increase current taxation. Politicians and voters would rarely (perhaps never) accept higher taxation to cover their current spending. The intergenerational equity of public debt means that it is not the future generations, but those who receive the public goods and services that should pay for them. This paper aims at showing that not all the public spending must be covered through present taxes, but only current expenditure, while expenditure for capital accumulation should be covered when the benefits will occur. The paper also intends to show that financial stability requires a better management of public debt over the business cycle and a fiscal attitude closer to the concept of balanced budgets.

Keywords: equity, deficits, public debt, generations

1. Introduction

The intergenerational implications of the accumulation of a high stock of public debt are not at all a new field of investigation in the economic or social sciences. The emergence of this approach, especially in the latest four years, has been driven by the fast deterioration of debt stock, in most member states of EU and in the USA as well, both in absolute amount and on a per capita basis.

For this reason, we analyzed the main theoretical and empirical concerns regarding the intergenerational impact of public debt starting from D. Ricardo, J. Meade, J. Buchanan, F. Modigliani, P. Krugman, R. Barro. The main theories formulated over the last century have evolved from the optimal distribution of public debt (domestic lenders/internal creditors), which should not lead to a transfer of wealth to foreign creditors, to the supplementary charge on taxation, effect that might be produced by the high public debt.

The conclusions of this approach revealed that intergenerational impact of public debt can be positive only if the borrowed resources are spent on projects that produce social and economic yields in the future, not only in the present, and thus the burden of public debt could be offset. Otherwise the intergenerational effects would be strongly negative, primarily due to long-term

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growth of taxation that should be honoured by non-borrowers of financial resources.

There are obviously different opinions in relation to the intergenerational transfer of public debt. For example, Stephen Williamson believes that the idea according to which a large public debt is a burden for the future generations represents only a part of a narrative and intuitive discourse for those who want to convince us that the public debt, by definition, is a big mistake [1].

In spite of several important theoretical concerns raised around the equity of intergenerational transfers occasioned by a large stock of public debt, these concerns have not yet materialized in tangible policy measures in the long-run, neither to the European Union nor the USA.

However, we have to appreciate *The Charter of Budget Honesty Act* 1998, by which the Australian Treasury have to draw up every five years an intergenerational report which evaluates the government policies on long-term sustainability for 40 years, including the major demographic changes and their implications for fiscal and budgetary policies.

2. Debt burden through tax transfer

After mid-twentieth century, James Buchanan and Richard Wagner tried to define the public debt burden caused by the present and the future generation in terms of intergenerational equity. Buchanan and Wagner started their analysis from the analogy with the tax burden and paid particular attention to: Who has to pay higher taxes? Which generation bears the burden of public debt? How much each citizen has to pay? and, especially, When they have to pay it? [2] For these economists, the burden of public debt represents 'the opportunity cost of public goods that are financed through debt'. The standard meaning of the opportunity cost is defined as the sum of sacrificed alternatives. From the perspective of public debt, the opportunity cost is the value of private goods, sacrificed in exchange for public goods through public debt.

Buchanan also justifies his ethical claim that it is immoral for one generation to burden another for its own benefit stating that it is "grossly immoral to finance current public outlays on consumption, including transfer payments, by an issue of debt" [3].

James Meade and Franco Modigliani followed the long-term implications of public debt on economic growth and the consequences in the field of intergenerational equity. James Meade has shown that there must be drawn a clear distinction between external debt and domestic debt [4] the external debt representing a burden for the community, producing real goods and services transfers between debtor and creditor, while domestic debt is a transfer from citizens, as taxpayers, to citizens as property owners and so nothing will be lost.

Modigliani considers that regardless of the fact that government action to expand the public deficit could involve a future cost for society this does not mean that such an action should not be taken. In terms of intergenerational income Modigliani considers as being much more significant the present gains

than the sacrifices in the future; also if the government is spending for projects that produce a yield in the future, gross debt burden could be offset by their results and the gross yield net result would be quite positive [5].

Based on the same assumption that government borrowing is only the alternative to increasing current taxation - debt is just taxation by another name - Richard Musgrave confirms and continues the Ferguson's view [5] and believes that not future generation as suggested, but public services users have to pay for this debt [6]. Although it looks apparently the same thing the choice between taxation and debt produce different economic effects. Thus, if the effect of taxation can be found in reduced private consumption, the public debt will reduce the private capital formation. Consequently the future generations will inherit a lesser capital gift and their potential consumption will be reduced.

This view does not automatically require that all budget expenditures must be covered through taxes, but the following must be distinguished:

- the costs incurred by current public needs must to be covered by the current generation;
- the expenditures for capital accumulation must be covered when their benefits will occur.

In fact the inheritance or accumulation of a large volume of governmental debt, called by Krugman the 'debt overhang', will be at a time transferred to higher taxation [7] most affected being the future generation, because the present people would not accept to pay for it.

3. Budget honesty and public spending

Until the Keynes, the public finance management was not related to general economic analysis. It was anticipated that the State should act as an individual and should administer the public finances with high caution, which meant that the state budget must be in balance, revenues equalling expenditures – the balanced budget paradigm. Keynesian analysis enabled the integration of public finances in general economic activity. Public budget has been redefined from a simple component of action to the principal economic policy tool, useful in regulating potential market failures occurred over the business cycle and particularly on the stimulation/contraction of aggregate demand.

The Keynesian theories crucially influenced the macroeconomic policy after the Second World War, in order to remove the negative effects of the Great Depression and the war, by combating unemployment and hyperinflation, by achieving growth in real terms, growing the national incomes and increasing social benefits for all. But the Keynes's recommendations about the fiscal policy were only partially met. Thus Keynes suggests that the fiscal policy should be necessarily countercyclical: in bad times the government may increase government spending and may reduce the taxation for helping production. But these expansionist policies must be abandoned in times of economic boom and restrictive measures in fiscal policy must be implemented, as well as budgetary restrictions. However governments have misunderstood the Keynesian

recommendations and they have read it only through their electoral objectives, thus continuously growing the public spending through public debt and almost never increasing taxation.

In 1997, Richard Musgrave has warned that, in the last half century, governments have assumed more and more functions and have become larger and bushier and currently continues to grow, so their action should be reduced or at least stopped [8]. The first consequence of the out sizing governments took the form of surging of public spending in a context in which the economic growth rates were quite modest, the revenues collected from taxes being insufficient for equalization of the increased of spending and thus appearing more frequently deficits. Moreover, most part of this increase of spending was due to transfers for social allowance and less to use for public investments and growth.

Schuknecht and Tanzi have exposed, based on historical data, the fast speed of increase in government spending in industrialized economies, especially in the second half of the twentieth century, showing that even if the main argument was the increase in the population wellbeing, additional costs have not brought a substantial support on community's welfare (Table 1) [9].

Table 1. The increase of government spending in industrialized countries (1913-1990 – percent in GDP).

Country	**1913**	**1920**	**1937**	**1960**	**1990**
Australia	16,5	19,3	14,8	21,2	34,7
Austria	-	14,7	20,6	35,7	48,6
Canada	-	16,7	25,0	28,6	46,0
France	17,0	27,6	29,0	34,6	49,8
Germany	14,8	25,0	34,1	32,4	45,1
Ireland	-	18,8	25,5	28,0	41,2
Japan	8,3	14,8	25,4	17,5	31,7
New Zealand	-	24,6	25,3	26,9	41,3
Norway	9,3	16,0	11,8	29,9	54,9
Sweden	10,4	10,9	16,5	31,0	59,1
Switzerland	14,0	17,0	24,1	17,2	33,5
U.K.	12,7	26,2	30,0	32,2	39,9
U.S.A.	7,5	12,1	19,7	27,0	33,3
Average	12,3	18,7	23,2	27,9	43,0

For example, in Italy, one of the European economies which had accumulated a huge public debt, the fast growth, especially between 1974 and 2008, was due to extensive plans for the construction of the welfare state [10]: more expensive health policies or more generous social allowances, which had no impact by comparison to the costs involved.

For these reasons Jensen and Raffelhüschen, exploring the welfare reform and the intergenerational transfer of tax burden in Denmark, consider that the welfare programs may:

- demoralize the incentives to work and by this means give rise to rigidities in the functioning of labour markets;
- increase the size of government and so raise the level of distortionary taxation, in turn constituting obstacles to economic efficiency and growth;
- lead to cumulative deficits and mounting public debts, thereby passing tax burdens onto future generations that, eventually, may threaten the fiscal sustainability of the welfare state [11].

Whatever the arguments behind the past decades expansion of current public spending may be, is obviously that in the absence of strong fiscal discipline, it becomes difficult if not impossible to sustain these spending, fuelling public debt each year. As it can be seen, European countries, especially the Nordic states, have become 'champions' of these increases in government spending and the new member states are adopting about the same tendency as well.

In the European Union, as in the case of most part of the industrialized countries, the sustainability of public finances and the equity of intergenerational transfers are under the threat of the strong worsening of the demographic perspectives. The sharp decline in the birth rate coupled with a significant increase in life expectancy - aging population - attenuates the significant productivity gains achieved in recent years and challenge the public pension systems based on the pay as you go.

Balanced budget rule was also seen as the outcome of intergenerational equity approach. Ricardo or Pigou strongly opposed the deficits and debt and think that all current spending must be covered by contemporary tax revenue. Poterba [12] and Buchanan claimed the inevitability of adopting stronger budgetary rules such as the balanced budget rule for limiting the politicians and the population's temptation to always permit higher deficit in current period. Any transfer of current deficit to government debt was seen as an unfair burden on future generations.

This approach to balanced budget rule was seen on a '*cash*' basis in which all expenditures, including capital public expenditure were considered to be covered by taxes in the year they are incurred.

Later, however, a transition was performed from '*cash*' approach to an '*accrual*' as meaning that the current capital spending is replaced by the notion of depreciation over the life time of the asset. Despite these clarifications, there remains still a problem of accounting the capital expenditures, the later being defined only incomplete by the physical durability of assets and less in terms of timing of producing the benefits. There are, for example, many other forms of public spending that are proved to benefit in different periods without requiring a durable asset.

4. Reaching the intergenerational equilibrium

Certainly, if the public debt crisis in European Union would have been stopped, our analysis and prospects wouldn't be so imperative. But, with some

few exceptions all European economy still fights with high deficits, low income and low economic growth. Moreover, Greece and Cyprus are still facing with potential *default* and no successful solution has been applied in order to remove the sovereign risk.

So, the stabilization of public debt is undoubtedly the compromise solution for any state confronted with fast and unsustainable growth of debt, which operate according the relationship:

Public Debt Rate x [Long-term interest rate x Long-term nominal growth] (1)

However, its stabilization at a very high level generates intergenerational transfer and discourages domestic saving rate. So, we can say that the ricardian equivalence concerning the compensation between private and public saving, works only up to a certain level of public debt which is considered sustainable.

Debt stabilization is necessary not only for ensuring the confidence of foreign investors, reflected in lower interest rates, but because, having to finance their deficits and to refinance debt the national states could lose a significant part of their budgetary and fiscal sovereignty.

Also, debt stabilization decisively depends on long-term nominal growth which can be reached only by strong policy package in order to stimulate the supply side of economy through fiscal or budgetary stimuli. Therefore, the need for achieving high economic growth and to accomplish the intergenerational equity principle requires the split of public expenditure in: current expenditure and expenditure for capital accumulation.

Fabrizio Balassone, Olivier Blanchard or Francesco Giavazzi recommends that a budgetary distinction between ordinary expenses and capital expenditures must be made because what matters above all is the capital accumulation. This different view, proposing that the budget for ordinary expenses should be in balance or in surplus, and accept that the budget for public investment and capital accumulation can operate with deficits – the so called fiscal policy 'Golden rule' adopted by the British Treasury in 1998:

$$\boldsymbol{d - i = g_c - t + rb \leq 0} \quad (2)$$

where ***d*** *is the deficit, seasonally adjusted,* ***i*** *- the net investments (% GDP),* $\boldsymbol{g_c}$ *– ordinary government spending,* ***t*** *– taxes,* ***r*** *– interests,* ***b*** *– public debt stock.*

Balassone considers that the possibility to borrow, without any restriction or conditionality, in order to finance public investments can lower the attention for the costs and benefits of each project [13] and this could be a big mistake. Therefore, the establishment of a supervisory body should be analyzed in order to evaluate de opportunity and the efficiency of each public project of investments.

The first methods of long-term assessment of equity of fiscal policies were named 'generational accounting'. The generational accounting shows in present value the net amount that present and future generation are expected to pay through taxes at present time and in the future. The generational accounts should be understood as government's intertemporal budget constraint [14].

In order to evaluate the implications of intertemporal budget policies and the financial viability of public finances in the long run, especially the redistribution between generations, the model developed by Cardarelli and Sartor on Italian debt evolution best reflects how budgetary policies affect economic growth, saving and capital accumulation.

Analyzing the specific case of Italy, where the public debt has been an important problem in the latest two decades, Cardarelli and Sartor started from the intertemporal budget constraint equation and added variables such as average net taxes paid during the period of life, changes in population, and the productivity gains. So, they have defined the Intertemporal Budget Gap and Intergenerational Budget Balance, in order to approximate how far current policies are from satisfying the intertemporal budget constraint.

Summarizing the 'generational accounting' paradigm, Kotlikoff has recommended a set of executive policies in order to achieve "the generational balance" [15]:

- the increase of income tax revenues;
- the reduction in all of transfers;
- the cuts of government spending.

We have to complete the Kotlikoff assumptions saying that the increase of income tax revenues will be reached only through full employment and faster economic growth; the reduction of all transfers can be achieved through a strong reform of local administrations and of public pension system; the cuts of government spending should be on long term and of high quality that must not lead to the reduction of private consumption and to decrease of aggregate demand breaking down the real economic growth and government revenues.

5. Conclusions

It is obviously that for answering at moral request of intergenerational equity of fiscal policy stronger rules must be applied, not only over the business cycle but also between generations. These rules should promote an optimal fiscal policy over the generations, implying the Barro's concept of intergenerational redistribution neutrality with his results in public debt neutrality so that all generations should live under identical conditions.

The fast growth of government spending in the last century from around 12% to over 43% of GDP, show us that this dynamic should not continue in industrialized economies and will be not sustainable. Moreover, in the industrialized economies, the pessimistic demographic trends create additional pressure on fiscal system which must be bear by the future generations.

The public debt should not be seen only as a terrible scourge if it results from capital accumulation from investments with high yields in present and in the future or from short-term shocks of the economy which will be offset as soon as the growth resumes. The stock of public debt should be managed so that the tax burden of future generations has not to be higher than the present generation. This implies either an increase in the birth rate and in the working population,

the full employment or some significant increases in labour productivity through more research and more innovation.

In other words, the principles of intergenerational sustainable management of public debt should involve stronger public finances; intergenerational equity in taxation; the impact of taxation and public expenditure should be distributed fairly between generations, including the pay-as-you-go public pension system; the government have to devise fiscal and budgetary policies so that generations may be able to benefit from public expenditure through debt must to cover the costs occasioned by it; loans debt burden is particularly suited for the accumulation of capital and know-how, with higher yields for both present and future.

Acknowledgement

This work was co-financed from the European Social Found through Sectorial Operational Program Human Resources Development 2007-2013; project number POSDRU/1.5/S/59184, 'Performance and excellence in postdoctoral research in Romanian economic science domain'.

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