The Measurement of 'Fiscal Burden' on GDP instead than on National Net Value Added Produced: A Chapter in Fiscal Illusion

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Summary

The main purpose of the present paper is to call attention to a major macro-economic fiscal illusion: the illusion arising fom the current official practice of expressing the main fiscal indicators – tax burden, size of Government in terms of public expenditure, impact of social expenditure on total income and overhang of public debt – as percentage of GDP rather than of some notion of net national income apt to correctly measure the amount of economic resources produced and available to the individuals members of the country considered.

The now current official and academic practice of measuring the incomes of Nations in terms of GDP rather than NDPF (Net Domestic Product at Factor Costs), it will be shown in the first part of the paper, causes a systematic undervaluation of the tax burden, by something between 25% (Sweden and Austria) and 15% (Switzerland). As a result, the tax burden in most European countries is well above 50% and in the Nordic countries near or above 65%!

The increasing protests of tax payers are, then, quite 'rational'.

We shall then argue that – because of the adoption of GDP to measure tax burdens – citizens-tax payers are systematically deceived

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about the true cost and size of the public economy and the true extent of private economy and thus their judgements in this area are distorted; consequently, the various kinds of micro-fiscal illusion currently adopted to conceal how big the real cost of Government is are more easily sustained.

In the second part of the paper, it will be shown that GDP is an 'artifact' useful – if not invented – for fiscal illusion. Its origin lies in the deliberate adoption of an inflated measure of national economic power. Indeed, it was first adopted in the late '30s and early '40s under the joint influence of the (German) organismic school of public finance and of the (then new) Keynesian macroeconomics, with the deliberate intention of inflating the official dimension of national production and therefore of the war potential of the countries confronting each other in the world conflict. It then became popular, being the most pervasive and handy aggregate employable for the policies of Keynesian macro planning which, after the war, and for a prolonged period, became fashionable, both for the industrialized countries and for countries in the process of industrialization. Both kinds of countries (for reasons of prestige) did not dare to adopt a more modest measure for their aggregate and *pro capite* income.

The third part of the paper concentrates on the development of the notion of national income adopted to assess the tax burden. Again we shall show that before the Keynesian revolution, both among scholars and in official quarters, the dominant notions of tax burden were those relating tax yields to net national product as being the closest to the notion of the (individuals') ability to pay. Only with Keynesianism and Government growth has the custom of referring to gross rather than net incomes and including both indirect taxes and all intermediate public goods (such as military expenditure) in the economic resources available to the nation before taxes to assess the tax burden become an 'obvious' procedure. This change took place, we shall argue, both because the individualistic point of view had been lost in favour of aggregative concepts of welfare and because a downward illusory bias was thus introduced in the figures on the tax burden, budgetary deficits and debt overhang to be left to future tax payers. But the right way to measure tax burdens and the size of Government is to rely on the value added obtained by the members of the nation, i.e. net national product at factor costs.

Part I

I.1. Fiscal illusion – a concept originally introduced in public finance literature by the British economist J.R. McCulloch (1845) in the last century but systematically theorised by the Italian economist Amilcare Puviani (1903) only at the beginning of this century and subsequently elaborated at the theoretical level by scholars such as Mauro Fasiani (1951) in Italy – is the systematically biased perception of fiscal parameter by the citizens leading to under-assessment of fiscal burdens and over-assessment of fiscal benefits. According to the above authors, fiscal illusion is the *intentional* result of manipulatory practices by the politicians in power (and related interest groups), by the public bureaucracies and by the supporters of state intervention. In a sense, then fiscal illusion has to be viewed as a chapter in the story of fiscal irrationality and opportunism.

While not overlooking this aspect of the phenomenon, however, it seems to the present author that sometimes fiscal illusions may be the *unintended* result of deceptive techniques of national accounting adopted by public bodies which, together with the complexities of fiscal and budgetary legislation, lead to the underassessment of fiscal burdens, public expenditures, budgetary deficit and public debt. Once these deceptive accounting techniques have been developed for other purposes, they may be applied to fiscal accounting, giving rise to fiscal illusion. Since they happen to lead to systematic underassessments of these magnitudes, to the satisfaction of governments, bureaucrats (and state intervention ideologues), they easily gain general acceptance in common practice and appear to be the (only) truthful measures of these phenomena. This appears to be the case with the employment of GDP as a measure of the tax burden and of the size of public expenditure and public deficits and debt, as well.

I.2. Contemporary research on fiscal illusion has mostly concentrated on *tax* illusion, as the tax price of public goods (leaving aside the area of illusion on the real size of public deficits and debt and that on the magnitude of Government) and a neutral attitude has generally been maintained on the question as to whether fiscal (tax) illusion is or is not an intentional phenomenon. Seven main types have been identified and discussed (Misolek and Elder 1988, Dollery and Worthington 1996):

1) *the complexity of tax structures* which may mislead tax payers on the effective burden they bear (Wagner 1976, Pommerhene and Schneider 1978, Breeden and Hunter 1985, Baker 1983);

2) *the automatic increase* of the burden of given taxes, without an explicit change in their rates, caused by the income (or product) elasticity characterising them[1] (Buchanan 1967, Oates 1975, Baker 1983) and by inflation (Tanzi 1986, Hunter and Scott 1987);

3) *the imperfect visibility* of taxes collected at the source which are hidden in the price of consumption or in factor prices (through withholding) (Pommerhene and Schneider 1978, Nelson 1986);

4) *lack of perception of the tax*, because of its shifting, unrelated to any legal provision of it, as in the case of real estate taxes shifted to tenants (Bergstrom and Goodman 1973, Martinez Vazquez 1983, Heyndels and Smolder 1994);

5) *centralization of Government structure and related complexity of tax systems* and authorities endowed with tax powers, making it difficult for any given tax payer to clearly perceive his aggregate individual burden (Misolek and Elder 1988).

To these five kinds of false perceptions of taxes one may add two kinds of tax illusions whereby no tax price seems to exist: i.e. the case of public expenditure financed by subsidies from other levels of Governments (flypaper effect) or by public debt. Here, indeed, beside the illusion, there is also the fact that a share of the burden is shifted to others without their knowledge, in the same country or in the same generations.

I.3. It seems to us that complementary to all these tax illusions is the tax illusion arising from false perception of the effective aggregate tax burden at the national level, making it virtually impossible to assess its effect on individual incomes.

[1] Obviously the income elasticity of tax rates may be related either to its real growth or merely to a price rise which increases nominal incomes.

TABLE 1

DOMESTIC PRODUCT, 1992

	GDPM	Indirect taxes minus subsidies	Depreciations	NDPF	NDPF / GDPM
USA	5953	503–32	749	4733	79.5
Japan	463	37–3	72	357	77.10
Germany	2794	364–47	359	2118	75.80
France	6987	1012–151	919	5207	74.52
Italy	1504	178–39	179	1186	78.85
UK	594	86–6	64	451	75.92
Canada	681	98–13	82	514	75.47
Austria	2035	325–61	252	1519	74.64
Belgium	7032	867–213	676	5702	81.08
Denmark	854	149–33	79	659	77.16
Finland	476	72–16	81	349	71.21
Greece	14846	3033–78	1270	10519	70.85
Iceland	382	80–11	49	264	69.10
Ireland	29609	4784–1488	2858	26313	88.87
Luxemburg	339	63–10	36	250	73.74
Netherlands	583	74–18	65	462	79.24
Norway	702	122–43	104	519	73.93
Portugal	11366	1705–243	489	9414	82.82
Spain	58852	6620–1478	6389	473111	80.39
Sweden	1440	234–80	194	1092	75.83
Switzerland	339	21–6	35	289	85.25
Turkey	1061	118–25	58	910	85.77
Australia	405	52–7	63	297	73.33
Average	77000	10923–218	7191	60.08	77.92

NDPF = Net Domestic Product at Factor Costs = Net Domestic Value Added.
GDPM = Gross Domestic Product at Market Prices.
Source: OECD.

The difference between the net domestic value added, i.e. the domestic net product available to citizens before taxes and GDP, is quite large. As a consequence, in most countries the share of net domestic product taken by the Government through taxation is near or over 60%. Measured in terms of GDP, however, in no country did the tax burden exceed 50% in 1992. But if reference is made to the net domestic added value, i.e. precisely to the aggregate of the incomes produced by the individual members of the country who

bear the taxes in 12 of the 24 (developed) OECD member countries, the tax burden exceeds 50%, while in 5 it is over 60! And in 10 it stands between 66 and 55%.

TABLE 2

TOTAL TAX REVENUE AS PERCENTAGE OF GDPM AND OF NDPF (1992)

Countries	Tax burden on GDPM		NDPF / GDPM		Tax burden on GDPM	
High burden						
Sweden	50.0		75.83		65.93	
Denmark	49.3		77.16		63.89	
Luxemburg	48.4		73.74		65.63	
Finland	47.0		71.21		66.00	
Netherlands	46.9		79.24		59.18	
Norway	46.6		73.93		63.03	
Belgium	45.4		81.08		55.99	
France	43.6		74.52		58.50	
Austria	43.5		74.64		58.28	
Italy	42.4		78.85		53.77	
		46.31		76.02		61.02
Medium burden						
Greece	40.5		70.95		57.08	
Germany	39.6		75.80		52.24	
Ireland	36.6		88.87		41.18	
Canada	36.5		75.47		48.36	
New Zeland	35.9		77.92		46.07	
Spain	35.8		75.83		47.20	
UK	35.2		78.85		44.64	
Iceland	33.4		69.10		48.33	
Portugal	33.0		82.82		39.80	
Switzerland	32.0		85.25		37.53	
		35.85		78.08		46.24
Low burden						
USA	29.4		79.5		36.98	
Japan	29.4		77.10		38.13	
Australia	28.5	29.1	73.33	76.63	38.86	37.99
Turkey	23.1	27.6	85.77	78.92	26.90	35.11
Average OECD Total*	38.8		77.36		50.63	
Average OECD Europe*	40.6		77.54		52.90	
Average EEC*	41.4		78.14		53.25	

* Unweighted.
Source: OECD.

I.4. In order to clarify what such a tax burden bearing on the effective net incomes produced actually means in the private or public sector by the citizens (or residents) of a given country, let us divide the year into days devoted to paying taxes and days devoted by the citizens to producing for themselves (and/or their family).

Plotting in a diagram, the number of months and days of the year in which the citizens have to 'work for the fisc' rather than for themselves, one will find that for the average citizen of nordic countries such as Finland, Luxembourg, Sweden, Denmark and Norway 'tax liberation day' falls in the third decade of August. Only after that period, i.e. from the last days of August, to December, does the average citizen of these countries 'work for himself'. In an other group of five European countries, including the Netherlands, Austria, France and Greece tax freedom day comes at the beginning of August or at the end of July. For Belgium and Italy it is in the middle and for Germany at the beginning of July.

On the other hand, those who claim that in Britain, after Mrs Thatcher, the level of taxation has been 'unduly' reduced, at the expense of social welfare and other prioritary public services, should consider that, measured in terms of the net domestic added value obtained for the citizens of this country, 'tax liberation day' falls in the middle of June.

I.5. Even if the 'aggregate' national tax burden, being an aggregate statistical average, is a concept different from that of the burden of taxes bearing directly or indirectly (through legal and economic shifting) on individual tax payers belonging to the different classes of income, with different economic activities, different families and different consumption habits, it remains true that the tax burden on the effective income produced by the representative 'working' (= productive) tax payer cannot but have the same value as the national tax burden as measured in terms of national net value added (unless some net additional income comes from abroad).

Therefore if the individual 'productive' tax payer is told that, 'on average', the national tax burden correctly measured is more than 60 or 50% of the national product (and not between 45 and 50% or, respectively, 40-45%), he will have the evidence that the average working (= productive) tax payer must bear such a burden; he or she will then be likely to be more attentive to the issues involved in his individual tax burden, and will have a better notion of the true cost of Government.

TABLE 3

TOTAL TAX REVENUE AS PERCENTAGE OF NET DOMESTIC PRODUCT AT FACTOR COSTS (NDPF)
(1992)

	Days of the year devoted to paying taxes		Days of liberation from taxes	
			day	*month*
Very high burden countries (60% or more)				
Finland	66.00	241	*28*	8
Sweden	65.93	240	*27*	8
Luxemburg	65.63	240	*27*	8
Denmark	63.89	234	*21*	8
Norway	63.03	230	*17*	8
High burden countries (50% or more)	—			
Netherlands	59.18	216	*3*	8
France	58.50	213	*30*	7
Austria	58.28	213	*30*	7
Greece	57.08	208	*25*	7
Belgium	55.99	204	*21*	7
Italy	53.77	196	*13*	7
Germany	52.24	190	*7*	7
Medium-high burden countries (40% or more)				
Canada	48.36	177	*25*	6
Iceland	48.33	176	*24*	6
Spain	47.20	172	*22*	6
New Zeland	46.07	168	*18*	6
UK	44.64	163	*13*	6
Ireland	41.18	150	*31*	5
Medium burden countries (30% or more)				
Portugal	39.80	145	*24*	5
Australia	38.86	142	*21*	5
Japan	38.13	139	*18*	5
Switzerland	37.53	137	*16*	5
USA	36.98	135	*14*	5
Low burden countries (less than 30%)				
Turkey	26.90	98	*7*	4

N.B. The year has been taken as made of 365 days in spite of the fact that 1992 was a leap year.

Furthermore, to a common citizen faced with these figures in most countries it might appear more evident that taxes have exceeded the upward limit consistent with the proper functioning of the market economy and freedom of choice.

I.6. Who – faced with this evidence – will be able to consider as bad Thatcherite or imprudent Lafferian economics policy suggestions pointing to tax reductions in order to have more growth and employment? The possible relation between the poor European performance in offering new jobs (and in preserving the existing ones) and its extraordinary level of tax burden will command greater attention. The Laffer curve may be ridiculed by supercilious theoreticians biased in favour of big Government but, in the meantime Europe, with its tax burdens exceeding 50% and sometimes 60%, is experiencing both a slow rate of growth and a smaller labour component in the rate of growth than industrial countries like Japan, the US[2] and the new Asian countries in the process of industrialization with lower tax burdens. However, it is beyond the scope of the present paper to analyze the relation between the ratio of fiscal burden in the aggregate and in its main components to national net product and the growth of that product and employment.[3]

I.7. But another question remains: that of the increasing protest of tax payers in a number of countries. If, under the effect of fiscal illusion, it may be labelled as a new wave of selfishness, with proper assessment of the data, it is hard to deny that it arises from the realities of a trying situation.

Once they have grasped the effective cost of big Government, voters tax payers may be more critical of its size and more ready to accept deflation of it, considering the ratio between marginal benefits and costs, both in terms of economic benefits and in terms of individual free choice versus collective action.

Indeed, the size of Government too, as properly assessed in terms of net domestic value added, i.e. what the country's market

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[2] See for instance Competitiveness Advisory Group (1995).

[3] A proxy, obviously, may be derived from the studies on the negative relation between the size of Government and growth. See Landau (1983), Marlow (1986), Scully (1989), Peden and Bradley (1988) *contra* Ram (1986).

On tax burden as negatively correlated with growth except when its increase is employed to reduce debts and deficits, see Martin and Fardmanesh (1990).

economy produces, appears extraordinarily big. While the unweighted OECD average, assessed in terms of GDP, is (in 1992) 45,20% of the national income, it jumps to 58,75% if assessed in terms of net national product or value added.

TABLE 4

SIZE OF GOVERNMENT PUBLIC EXPENDITURE AS %
(1992)

Countries	of GDPM	of NDPF
USA	35.10	44.15
Japan	32.20	41.76
Germany	49.00	64.60
France	52.10	70.21
Italy	53.60	67.97
United Kingdom	43.30	57.03
Canada	49.90	66.12
Unweighted average	45.20	58.75
Austria	50.50	66.99
Belgium	57.50	70.91
Denmark	60.70	78.66
Finland	58.30	81.87
Greece	50.60	71.41
Ireland	43.70	49.17
Netherlands	55.20	66.66
Norway	57.40	78.66
Portugal	52.20	63.02
Spain	44.60	55.47
Sweden	67.20	88.62
Australia	37.60	51.27

In a group of four nordic European countries – Sweden, Finland, Norway, Denmark -- characterized by a bulky welfare state, the relative size of Government as compared to the aggregate national product ranges between near 90% to near 80%!

In a second group of highly bureaucratic continental European countries, the size of Government ranges between 71 and 63%.

In countries like Britain, after the Thatcherite upheaval, the size of Government is still close to 60% of the national product (57% in 1992). Only in the two largest industrial countries, the US and Japan, is it below 45%.

TABLE 5

SIZE OF GOVERNMENT
IN THE VARIOUS OECD COUNTRIES
(% of NDPF)

Highly welfarist countries	
Sweden	88.62
Finland	81.87
Denmark	78.66
Norway	78.06
Highly bureaucratic countries	
Greece	71.41
Belgium	70.91
France	70.21
Italy	67.97
Austria	67.99
Netherlands	66.96
Germany	64.60
Portugal	63.02
Milder bureaucratic countries	
UK	57.03
Spain	55.47
Australia	51.27
Countries with Government below 50%	
USA	44.15
Japan	41.76

Part II

II.1. GDP is an artifact, a magnifying measure which inflates individual and aggregate welfare. Much of this exaggeration we owe to 'Keynesians' (as distinguished from Keynes). Before 'Keynes' revolution' the dominant theoretical concept of national income[4] was "national dividend": i.e. the revenue of the nation produced by and to be divided among its member citizens. Pigou in his *Economics of Welfare* (1920, 1932) following Marshall (1920) defines as national dividend the "*net*[5] aggregate of commodities, material and immaterial, including services of all kinds [...]. This is the true net annual income or revenue of the country or the national dividend".[6] According to this view, in order to assess the economic product and the level of economic welfare of a nation (and by inference, its "ability to pay"), one should not consider product gross of consumption of capital but product net of it: i.e. of the amount needed to "maintain the capital intact".[7] By "commodities and services of all kinds" Pigou meant only the economic ones, i.e. those "purchased" by the private consumers or enjoyed freely by them and having *a market*[8] *counterpart.*[9]

[4] It is wrong to argue, as the Ruggles (1949 and 1956) did, that national accounting was born *because of* the Keynesian revolution; but it is true that it found its scientific "organic" systematization with Keynesian macro-economics, which inflated it in its general post war pro-inflation bias. Unhappily Keynesianism, with its disregard of the "trees in the wood", took over in national accounting as it took over in macroeconomics.

[5] The italics is in Marshall's text, quoted by Pigou. See Marshall (1920, Book IV, ch. III, § 10).

[6] Pigou (1932, part I, ch. III, § 4).

[7] This expression, which became famous in the theoretical discussions of the '30, originated from Marshall (1920). See Book I, ch. III, § 10.

[8] Italics, here, is mine.

[9] Here Pigou drew on Sir J. Stamp (1920) and Bowley and Stamp (1927). In the case of "final" *personal* services, Stamp took to including some of them in national income, even if other authors were arguing that this was always a duplication, just as for those rendered by the Government he would include them only if one could do the same with the services of the private sector, like that of the doctors. This later point is made particularly clear in Stamp (1934). Another matter in which Pigou clearly draw on Stamp is that of the reconciliation of the national accounts on the product side and on the income side. According to Smart (1899, ch. III), the national income consisted of the payments given or credited to the individuals of the various classes during the given year. This was (obviously) nothing but the concept of income at factor costs. It should be noted that he included explicitly, in this total, all the payments to public employees. Pigou, following Marshall, adds to the aggregate of net domestic product (NDP), the incomes from abroad, to arrive at the national dividend. But he deducted public services not having a market counterpart and income paid to the other countries.

II.2. The ideas of the American fathers of national accounting, i.e. Kutznets (1934a, 1934b, 1936, 1937a, 1937b, 1937c, 1951), Copeland (1937) and Warburton (1934 and 1937), too, were a long way from GNP. Kutznets (1934a) defines national income thus:

> "If all the commodities produced and all the direct services rendered during the year are added at their market value and from the resulting total we substract the value of the part of the nation's stock of goods that was expended (both as raw material and as capital equipment) in producing this total, then the remainder constitutes the net product of the economy during the year".

Note that on including in national income only "direct services rendered" Kutznets excludes from it the services of the Government which are not specifically rendered to final consumers.

Two points need to be emphasized in this view.[10] First of all, it traces back national product to the individuals' productive efforts

> "it is referred to as the national income produced and may be defined briefly as that part of the economy's end product that results from the efforts of the individuals who comprise a nation".

Secondly, as Warburton (1937) puts it,

> "the [...] most important reason for advocating direct estimates of the value of the various type of final product is that they emphazise the fundamental aspects of the economic system [...]. The basic purpose of all economic activity is to provide commodities and services for the use of human beings and the chief public purpose of government [...] is to furnish the people more abundantly with the commodities and services they desire".

In other words, on the demand side, too, the emphasis must be on the individuals' welfare.

II.3. This microeconomic individualistic approach obviously could not but consider *net* product as the chief concept

> "National income produced may be defined briefly as the value of all commodities and services produced minus the value of the commodity wealth consumed in this production".[11]

[10] Actually in this article he summarizes the points of view of the researchers of the National Bureau of Economic Research (where he was Director of Research) and of the officials of the US Department of Commerce.

[11] See Kutznets (1937a).

In defense of adopting gross rather than *net* product, one might have argued the difficulty of giving operational meaning to the notion of "maintaining the capital intact", which – on the demand side of the accounts – underlined the difference between gross and net income in the (Pigouvian) conception.[12] But to cope with the problem of netting the product from consumption of capital one could always rely on the professional practice of business, adopting – subsequently – the proper corrections.[13]

II.4. The *gross* product became the king of national accounting with the adoption of Keynesian concepts as the grounds of national accounting and of the new theory of macro economic planning (*à la* Tinbergen). In the influential book by the Ruggles (1949 and 1956) the 'raison d'être' of national accounting is in fact no longer evaluation of the individual's economic product and wellbeing. It is primarily the need to know the amount of resources available to reach full employment.

> "The banking system realized that it was only in relation to information of this nature that credit control could usefully be employed with a view to keeping the economy on an even keel" (Ruggles and Ruggles 1956, ch. I).

National accounting – observe the Ruggles with approval – has been adopted by an increased number of countries in the post-war period to allow their Governments to be able to perform the new macroeconomic planning.

[12] An authority on US national accounting, Copeland (1937), in analogy with the business' concept of net income, actually defined national net income as "equal to the value of the goods and services consumed during the year plus the wealth at the end of the year minus the wealth at the beginning of the year". This concept could hardly become operational, because of the complex problem of assessing the changes in value of capital good not recorded in business accounts and in household investments portfolios. While the value of inventories must be assessed every year, there is no need for a firm to reassess every year the value of its fixed capital and normally this is not the practice followed. And obviously there is no yearly accounting of the value of private housing, as property tax estimates are not revised every year. Friedman (1937), however, was able to simplify the problem replacing this sophisticated, subjective notion of net change in wealth with that of depreciation as a consumption of capital plus (physical) consumption of inventories, if any. Obsolescence was not deducted, not being a physical consumption of capital; and the same was true of unsold finished products even if they no longer had a market value.

[13] Indeed Warburton, who had first introduced the notion of gross national product (Warburton 1934) bearing in mind the difficulties of assessing depreciation and depletion, did not consider this as an *insuperable* obstacle and kept, as dominant concept of national income, that of national net product (Warburton 1937).

> "The measures such as the Marshall plan designed to assist in them, can have meaning only in terms of the relevant economic magnitudes in the different countries. A suitable adjustment within any country must be defined in terms of full utilisation of capacity, workable trade problems and a reasonable and maintainable allocation of production between investment and consumption".

Aggregate demand is the chief determinant of investments, and the level of the latter interacting with the consumers' expenditure generates the ultimate aggregate demand and hence the effective level of output and of empolyment as well as the possible inflationary or deflationary gaps. In this kind of discussion, one disregards the microeconomic values, focusing on the macro mechanistic effect.[14] In these exercises, the focus is on *gross* investment and on *gross* value added because these are easier to predict and because are the gross value that matter to measure the aggregate expenditure and the level of employment.[15]

II.5. The Ruggles were in complete accord with the US practices, as they had eventually prevailed during the war time (Gilbert and Jaszi 1944 and 1950).[16] Politicians and bureaucrats were gradually

[14] Chapters 13 to 17 in Ruggles and Ruggles (1956) are entirely devoted to standard (naive) Keynesian macroeconomic analysis of income and full employment equilibrium and related standard economic policy suggestions.

[15] No wonder that in chapters 4 and 5 in Ruggles and Ruggles (1956), where the "production statement" for the economy and the system of national income accounts are given and in the Appendix containing "specific calculation", net income at factor costs (NDPF) is dismissed. It should be noted, however, that this 'Keynesian' procedure, then common, *was not* entirely supported by the Keynes of the *General Theory* (1936). Indeed here (ch. 3, p. 29) he puts much emphasis on the concept of national income net of "users costs", i.e. consumption of capital in production. This is so because the investment component of the aggregate demand is determined by the "income of the entrepreneur as being the excess of the value of his finished output sold during the period over his prime costs" (ch. 6, p. 53). And prime cost is "the sum of the factor cost F and the user cost U". It is true that Keynes' user costs are less than depreciation costs, because these also include the "supplementary costs" occurring "on account of [...] wastages by obsolescence or the mere passage of time". Again, in the case of the effective determinants of demand, Keynes takes entrepreneurs incomes net of user costs while assessing the *amount* of effective demand gross of them (Keynes 1940, p. 68).

[16] In an Appendix to chapter 5 the Ruggles compare US official accounts based on GNP at market prices with the UN National accounting system, where after the GNP accounts there are national income accounts in terms of NDPF. But they rapidly dismiss this concept, relying on a curious argument set forth by the bureaucrats of the US Department of Commerce: i.e. that while businessmen normally also include in depreciations obsolescence due to technological progress this is wrong: progress "should have the effect of reducing not of increasing the amount of capital consumption".

induced to pump national product for reasons of prestige and power of various kind. Indeed, the Ruggles candidly inform us that the US statistics on the national product adopting gross rather than net investment were issued by the Department of Commerce "shortly after Pearl Harbor" (Ruggles and Ruggles 1956, p. 114). At that time, clearly it appeared necessary to exibit the maximum figures on American economic power for propaganda reasons.

For similar reasons GNP at market price *inclusive of all public expenditure on goods and services plus indirect taxes* crowded out national product at factors costs, *net of intermediate government goods and/or of indirect taxes.* The battle here was more difficult and took longer partly because Keynes (1940) was a substantial obstacle here. But the victory was complete. Let us see how it took place.

II.6. Pigou (1932) – on the income side of the accounts, seeking to reconcile it with the values on the products side – added to the incomes obtained from goods and services the indirect taxes (excises and customs) shifted to the consumers for the part which could be forward shifted, thus leading to a change in price level[17] which would bring down the real income. The real value of the goods produced in the market – he argued – would remain as before the tax since the percentage increase of the price due to the tax would be compensated for exactly by the percentage increase in the deflation index.[18] But Pigou, as noted, excluded from the national income all public free goods and services not having a market counterpart. On the contrary

[17] The point was particularly relevant in his context since he was considering special and not general indirect taxes, which at the time were not known in the UK.

[18] We offer here an interpretation of Pigou's view with the following formulation.

$$NNY = YH + YB + FI^{*}\,(YGSM + YGNIM) = C + NIH + NIB + GSM + GNIM \qquad (1)$$

where NNY = net national income; $YH + YB$ = net receipts (before direct taxes) of the households (H) for their factors plus incomes retained by business (B), both obtained for final products supplied on the market to households and firms; FI^{*} = indirect taxes shifted forward in higher prices; $YGSM + YGNIM$ = incomes (before direct taxes) obtained by H or B through government services (first addendum) and government net investments (second addendum) having a market counterpart (defence, police, justice, roads, etc. are excluded); $C + NIH$ = consumption and net investments (in housing) by the households; NIB = net capital investment by business; $GSM + GNIM$ = supplies of current final public services and net investments with a market counterpart by the Government for households.

a stream of thought originating in the German 19th century school of 'Staatssozialismus' and 'Kathedersozialismus' considered it obvious to include any public expenditure on goods and services (and even social transfers) in the national product, because individuals and private firms are not the sole subjects of final economic activity: the state, the local authorities and all other 'legal public entities' must be added to the list being true persons with their *own wants*. Therefore one had to distinguish between the net product of the nation (*rein Volksertrag*) and net income of the nation (*rein Volkseinkommen*), the former including the products of all persons (inclusive of public bodies), the latter only that part which goes to the private ones.[19]

II.7. In America a line similar, even if not identical, to that of Pigou was adopted. Looking to the product side of the national accounting, Kutznes would have included in the national product all receipts of individuals and business (as retained profits) obtained from their productive activities net of direct and indirect taxes plus final services rendered by the Government assumed as equivalent to direct taxes paid by individuals. Business taxes, whether direct (let us call them FDB) or indirect (FI) should be considered as costs relating to intermediate goods supplied by the Government and should be deducted, without adding to the value of final products the value of these services.

For Simon Kutznets (1933 and 1951) the correct way to valuate Government's product was as follows:

> "[...] the flow of services to individuals from the economy is a flow of economic goods produced and secured under condition of internal peace, external safety and legal protection of specific rights, and cannot include these very conditions as services. There is little sense in talking of

[19] See the exposition by Mithoff and Schonberg (1898) in the monograph (in German) on "the socio-economic distribution" in the *Handbuch der Volkswirtschaft* edited by G. Schonberg, which is strongly influenced by Rodbertus (1884) *Das Kapital*; and R.E. Wagner (1892) *Grundlegung der politischen Ökonomie*. These authors were the two main exponents of 'Staatssozialismus' and of the following 'Kathedersozialismus'. According to Rodbertus the distribution of revenue to the factors of production does not end with the individuals since a part of the revenue collectively produced is not enjoyed by them individually but by their *legal communions* which are final consumers, being *autonomous collective entities.*

protection of life and limb as an economic service to individuals – it is a precondition of such services not a service in itself".[20]

The first procedure adopted, as also for evaluation of Government sector, by the National Bureau of Economic Research (NBER) and the Department of Commerce, basically followed the Kutznets methodology seen above. However, transfers to business were added under the assumption that they are shifted forward in lower market prices. Business taxes and indirected taxes were excluded from the private product. With the assumption that the *final* services of Government should be included, on the product side, only if endowed with a plausible counterpart on the income side of the accounts, individual income taxes were included in the income side, not as a component of individual product at factor costs (whose correct valuation was believed to be that net of taxes) but as the fiscal price of final public expenditure *to individuals.*

However in the late '30s a more comprehensive procedure was adopted by the US officials: that of considering as the true value of the product of individuals their receipts *before the individual income tax.* Thus final current public expenditure now had to be added to the product of the private sector, together with Government's capital expenditure not financed by budgetary deficit.[21]

Shortly after transfers to individuals by Government were also added to this total.

Meanwhile Colm (1937) had proposed the German methodology of including in the national product all final public expenditure inclusive of capital expenditure *plus all non direct taxes.*[22] He admitted that

> "two practical solutions seem possible either to exclude these taxes and thereby get an underestimate, if the increase in prices resulting from

[20] In our simbols of note 15:

$$NNY = (YH - FDM) + (YB - FDB) + YGSM + YGNI \qquad (2)$$

where *YGSM* and *YGNI* differ from Pigou's *YGSM* and *YGNIM* because the discriminating criterion is not whether they do have a market counterpart but whether they benefit the households. Capital expenditure of Government of any kind (*YGNI*), however, had to be included in the final output because measured the "changes in the internal stocks of capital under domestic auspices".

[21] Using our symbols the national income became:

$$NNY = YH + (YB - FDB + TB) + YGSM + YGNI^* \qquad (3)$$

where *TB* are the transfers to business and *YGNI** is the income earned by business and government employees in capital public goods not financed through budgetary deficit.

[22] Looking on the 'goods and services' side of the accounts the German concept of net national product was as follows (Colm 1950):

$$NY = CH + NIH + NIB + CG + IG + YGS \qquad (4)$$

> these taxes is eliminated by a price index; or add the taxes to the real income and so get in overestimate, if a part of these taxes already existed in the base year to which the price index refers or if such taxes exist also in the countries the price level of which is used as a basis for international comparison".

He favoured the second solution, arguing that

> "all nominal figures are understood to represent a certain quantity of commodities and services. If we hear that national income in the United States in 1929 was 83 billion dollars, we think of the purchasing power of the dollar in that year even if no index is applied. And the purchasing power of the dollar is understood as the quantity of commodities and services that could be bought on the market in that year with a certain number of dollars".

In other words he adopted this view, admitting that it was nominalistic and supporting it with a circular reasoning. It seems clear that national accountants were inflating national products in a sort of competition among nations to show the greatest economic power.

II.8. Actually the Australian economist Clark, under the intellectual influence of Keynes' *General Theory* to measure the entire economic potential of the UK, produced in 1937 for the UK a measure of national product inclusive of *indirect taxes* but also of all *gross* investments and *maintenance costs* of existing capital (Clark 1937a, 1937b and 1938). Actually, Keynes (1940) only partly legitimated this formulation in assessing the *war potential* of the country.[23] He (see Part II) criticized the inclusion of indirect taxes, because they gave a false impression of the size of the amount of physical resources produced. Keynesians, clearly, in this (as in other cases) were more 'inflationary' than Keynes himself.

But should the US national account lag behind the Germans and the British? Thus 'after Pearl Harbor' the US Department of Commerce, with the expertise of Gilbert and other younger economists, introduced the notion of gross product inclusive of indirect taxes to

where *NY* is the national income net of depreciations of the business sector, *CG* and *IG* include both the purchases of current goods and of capital goods from the private sector by the Government and *YGS* the payments of wages and pensions to public employees, involved in consumption and respectively in capital supplies of any kind.

[23] Keynes (1940) while approving the inclusion of depreciations to measure the entire investments potential, criticized the inclusion in it of the costs of *maintenance* of capital because one needed to have the capital working.

replace the national income net of depreciations and indirect taxes. The rationale for this change was partly given by Gilbert and Jaszy (1944), explicitly in reference to the war economy

> "what the war potential was of the American economy? [...] whether America would run into an inflationay situation and, if so, to what extent" ... "When in connection with the war program, for instance, it had to be determined what volume of resources could be freed for war production by diminishing private capital formation, it was gross capital formation that was relevant".

All government purchases should be included on the demand side of GNP to assess whether the full employment of resources was rounded or not. Similarly, expenditure on current transfers and pensions and wages related to the war effort.

> "Briefly stated, gross national product and income statistics are just such a statement of the various goods and services being produced, of the incomes generated and of their disposal among various users, as is essential in analysing economic problems of this type".

Why are indirect taxes part of the war potential? They should be included in the true gross product viewed on the supply side with the new, curious argument that the Government perceiving these taxes could be considered as a percipient of a share of the product at *factor cost*.

> "*The Government itself, in other words, may be said to be the recipient of a distributive share of the income paid out by business* [italics added]. Clearly the amount it receives in this fashion must be added to the national income if a total is to be built up which measures the value at *market prices* of all final outputs".

According to this theory national product at market price is nothing but another version – and the genuine one – of national product at factors costs! Obviously, adding indirect taxes, the product appeared bigger and the more so, in dollars, the more indirect taxes were increased, and this was considered a good thing in war time.

II.9. Simon Kutznets (1951) in the postwar period forcefully criticized the new practice of including *both* indirect taxes and non-final public goods in national product. Actually, he did include indirect taxation but insisted in excluding non final public expenditure. Scholars like Edey and Peacock (1954) argued along similar lines. Meanwhile, however, Colm (1950) had adopted the all-inclusive

view as in the case of the public expenditure to avoid a bias against some sectors of public spending as not relevant to form GDP. Only transfer payments should be excluded from national product: actually he was worried by the 'prejudice' that defense public expenditure and non fiscal educational expenditure or public works used by producers might be considered a social waste.[24]

In order to justify the new all inclusive notion of GNP, the Ruggles (1949 and 1956) used the spurious argument that "the voters are willing to give up an amount of taxes equal to what they consider to be the value of Government services": which obviously does not answer to the question whether including intermediate public goods is or is not double counting. Against the valuation of private product at factor costs they maintained that "factor costs is not really an independent method of valuation", but rather "an adjustment of market values to show the portion there of that the factors receive". However, we must note that on the supply side, factor payments are the only available measure of the *value* of production.

Keynesian macroeconomics – as we have seen – was offering a better support than the value theory with its emphasis on aggregate demand and the employment level. All Government expenditure and any gross investment is a component of aggregate demand and generates a multiplier. And employees in the public sector matter as much as any others to asses the level of labour employment. It is true that in order to ascertain whether there is or not equilibrium between the aggregate demand and the available supply, one may consider either incomes at factor costs and products at prices net of indirect taxes as Keynes (1940) himself did or incomes gross of these taxes and products at market prices. But the latter way was simpler for planners and increased GDP in the international comparison.

II.10. Forte and Buchanan (1961) objected to GDP as being an illogical macroeconomic mixture of two different homogeneous market evaluations: that on the *supply* side, where national income is assessed at *factor* prices received by households and firms whether

[24] Colm (1950) writes: "If the legislative authorities decide to grant a budgetary appropriation for the performance of a service, then this activity has been stamped as part of social product. This applies to a defense program as well as to a road construction program or the extension of educational services. The exclusion of defense expenditures could be justified only if the purpose is not the measurement of all the work done by and for a social group (social product) but only of work that is done for the direct benefit of individuals and is reflected in their standard of living".

working for the private or for the public economy; and that on the *demand* side, where national income is assessed by the final purchasers on the market of products. Either one of these view points may be adopted to comply with true economic values as assessed by the subjects who produce and consume them: the former a rough indicator of the product that the members of the country are able to produce and do produce, at that employment level, with these factor prices; the latter as a global indicator of the goods and services actually sold and valued on the *products* market whether as final goods of the households and firms or as intermediate Government goods to be employed subsequently in its 'non market' transactions. Indirect taxes cannot be included, taking the former approach while factor prices paid by the Government should be excluded with the second, to have genuine, consistent *market* evaluations of either factors or products. This criticism remained unanswered.

II.11. In the late '40s, after GNP (then GDP) had been adopted by the major winners of the second world war – i.e. the US and the UK – all the other nations followed.

Thus the gross product of the private sector at market price plus Government at factor costs – adopted in a war economy accounting and as tool of economic policy – also became the dominant criterion to measure national incomes in peace time.

This inflated notion of national product could not but to be acclaimed by the public bureaucracies: given the Niskanen's assumption that their aim is chiefly to maximize Government output, for them it was perfectly rational to maximize the official value of national product. If national product grows bigger Government may also grow bigger without appearing out of proportion. The two maximizations seem to be functionally interconnected.

On the other hand, the international competition in prestige noted above makes it almost impossible for a single country to change from the GDP to national product net of depreciations and indirect taxes, i.e. net product at factor prices. This last measure of national economic conditions, thus, had to be dropped.

As when one toothpaste producer begins to put its product in an inflated box to give a magnified impression of its content, the others are forced to follow, so that the main result is a generalized adoption of wasteful containers; all countries 'must' now officially use GDP to compare one with the other while net domestic product at factor costs, which still has to be calculated to obtain sensible sub-aggregates, is set aside.

But unlike consumers who know from experience that the big boxes contain little of toothpaste, public opinion retains the illusion that GDP gives the right measure of the aggregate income of the country since it relies on the measurements made by the 'experts'. How could common people ascertain the real height of the mountain in their own country except by relying on what 'experts' have established and is therefore recorded in the official books?

Part III

III.1. If GDP is an artifact in national accounting, the more so is it in the measurement of tax burden. No tradition and no economic analysis support this reference. The oldest approach (and the simplest from the accounting point of view) to measure fiscal burdens was to take the ratio of fiscal payments to the market value of the final *commodities* available to the tax payers for consumption and net investment. To this aggregate were gradually added those *services* which could be considered 'final' and 'economic', i.e. obtained through a market transaction, such as those of the doctors and artists.[25] Intermediate services (such as those of architects) and services without exchange value such as domestic services performed by members of the same household and money transfers without a counterpart in supply of goods or services as alimonies, church voluntary contributions, gifts, lottery prizes, contributions to philantrophic associations and the like, were excluded from national income or product to measure fiscal burdens.

A second approach, which rapidly became popular in the first decades of this century, was in terms of incomes rather than goods and services: relating the amount of taxes to the sum of net revenues received by households and firms of any kind, whether from private bodies or from the Government, inclusive of interests on public debt and of public pensions, before the taxes levied on them.[26]

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[25] The French economist Leroy Beaulieu (1876), who wrote in the last century, may be taken as a typical exponent of the original approach, while Marshall (1920) heralds its refinement.

[26] This has been the method followed by the French economist Colson (1918, 1931) and by a host of Italian public finance scholars since Nitti (1903). See for instance Ricca Salerno (1943), Vinci (1945 and 1950) and de Vergottini (1950). It was systematically adopted in the quasi-official annual statistics of Italian economic life, by Mortara published yearly in the '20s and '30s (see Mortara 1924, 1925, 1932, 1934) and by a group of statisticians working under Gini guidance (Pietra and Ferrari, in Gini 1925 and Tivaroni in Gini 1925).

But, obviously, in this way tax burdens were not related to the product obtained by the members of the country, which appears to be the true economic basis of the ability to pay. Thus, a third approach was developed by Bowley (1922) and Stamp (1920, 1934) – and soon accepted in the US – in terms of *national primary income*: i.e., receipts before taxes obtained by households and firms *as factors of production*, whether acting on the market or working for the Government, thus excluding all transfers paid by the Government. As can be seen, national primary income is nothing more or less than what we now know as national value added.

Some economist would also take into account the hypothetical amount considered necessary to satisfy the minimum needs of life to assess the fiscal burden from the point of view of the ability to pay (Seligman 1925, Mortara 1924, 1925, 1932 and 1934, Gini 1925, Boldrini 1925, Shirras 1925, Griziotti 1940).[27]

III.2. A fourth approach, in terms of net product, was also initiated (more at the theoretical than at the empirical level) by De Viti De Marco (1928 and 1934) and then developed by Borgatta (1929 and 1934) and D'Albergo (1952). With this approach the fiscal burden is the ratio of taxes to *net* incomes received by the various private factors of production whether producing for the private market or for the Government, where *net* means *after taxes*. In this conception – from the accounting point of view – it did not matter whether the Government employed its revenues productively or wasted them in the judgement of the tax payers. In fact, if the revenues were employed productively from the individual point of view, the given amount of taxes would have appeared less burdensome to the tax payers since it would have increased their factor's receipts. But from the pure national accounting point of view any public expenditure would always flow to and disappear in the net private factors incomes so that the *magnitude* of the fiscal burden would always be given by the ratio of taxes to the incomes of private factors netted of costs to produce them, which appear as incomes of other individual producers (to be netted of the costs to produce

[27] A further refinement was to consider the distribution of income, since the average income might not give evidence of the share of income really available to pay taxes, in the different income classes. Boldrini (1925), De Vergottini (1950), Griziotti (1952) consider the benefits of public spending but also the distortions created by taxation, but only at a theoretical level.

them). The limitation to private choice caused by taxes would be given by that ratio, which measures "the sacrifice of individual satisfaction to the pursuance of collective ends" (Ricca Salerno 1943).[28]

Implicit in this reasoning was the view that all public goods and services are 'intermediate' services generating producers rents and never final goods.[29]

III.3. This approach appears unconvincing. The share of Government costs or value added in aggregate value added cannot be measured excluding from this aggregate a fraction of it. The fact that this fraction of value added may be too big as a measure of the benefit of the public spending does not imply that it is not taken from that product (value added), i.e. from the primary income.

And this is true even from a strictly nominal point of view. Indeed, most consumption taxes do not burden the sellers, i.e. the suppliers who obtain primary incomes, namely produce value added, but the purchasers diminishing their purchasing power, i.e. their net incomes. This is the case of the value added tax and of the excises which, by law, are shifted to the consumers and evidenced on the purchasers' invoices separately from the prices. There is no formal difference between the deduction of this consumption tax from the gross expenditure of households and of a licence tax on their cars or a wealth tax on their gross income. In both cases, one can say that the tax is deducted from the gross incomes received by the households as factors of production. Another (minor) part of the indirect taxes is paid by business without *legally* adding it to the sale prices. However, shifted forward as they may be, they do enter into the prices paid by

[28] Holz (1924), after having argued that to measure fiscal burdens one should also consider the effects of public expenditure on firms and households, concludes that in most cases this burden does not exist since the benefits of Government are bigger than the costs of taxes; therefore national fiscal burdens cannot be measured or compared. This organismic view overlooks the fact that – in any case – public (collective) choices crowd out and replace private choices. See on this point Ricca Salerno (1943).

[29] One might argue that – under perfect competition – values of the factors of production provided freely and uniformly by the Government do not enter into the market value of the private product, being forward shifted in lower prices, as they benefit equally both marginal and supramarginal private factors (an extreme assumption) (Forte and Buchanan 1961).

On the other hand, one might argue that public expenditure such as in the area of health is a final consumption since the private counterpart, in national accounting, is classified in this way. The problem of omissions and duplications seems insoluble (Forte and Buchanan 1961).

the purchasers and behave like the consumer taxes which are legally imputed to the purchasers very much like the social security contributions nominally due by the employers which, although possibly shifted into higher prices, are not included in the tax wedge between value added at factor cost and value added at market price.

III.4. To realize that adding indirect taxes to net product, i.e. to the national value added, would amount to a double counting, let us take a simple example. Suppose that the Government of country A, where 20% of NPF was levied through income taxes, decides to halt their rates, recovering the yield lost through a corresponding increase in indirect taxes, which raises the price level by 8%. While real value added (*ceteris paribus*) remains the same, GDP at market prices grows by 8%. Obviously, the purchasing power of the employees is reduced by 8% by the indirect tax increase, but their incomes net of taxes increase, on average, by a percentage which compensates for that loss. In real terms, the value added perceived by them remains the same. But since GDP has increased by 8%, if the fiscal burden is measured in terms of GDP, before this change in tax structure it appears lower. If before the change it was, let us say, 40%, it now shrinks to 37,03%![30] This is not a mere speculative argument, as Table 6 shows, particularly for countries like Italy, Spain and the UK.

III.5. Let us now turn to the practice of measuring tax burdens in terms of *gross* rather than *net* product. Keynes explicitly advocated this notion to measure the aggregate resources which the country can dispose of, *living on capital*. But living on capital is only possible in the short run. There is no possibility to pay in the expenditure for depreciation. There is no excuse for considering consumption of capital as a part of true income except for mere fiscal illusion.

III.6. The same sort of argument applies against the more recent idea of measuring fiscal burdens in terms of available (or disposable)

[30] Keynes (1940) criticizing the concept of national product at market prices adopted by Clark (1937) as "highly misleading" writes: "Mr Clark's procedure is open to the objection that *gross national output* can change merely as a result of a change in the character of taxation. If, for example, local rates were to be replaced, in this country, by a local income tax, Mr Clark's estimate of our gross national output would decline by about 200 million [...]. Thus there is a misleading suggestion that taxes, provided they are indirect, are part of our national physical resources".

TABLE 6

INDIRECT TAXES AND FISCAL BURDEN AS % OF GDP

	Direct taxes			Indirect taxes			Social insurance contribution			Aggregate fiscal burden		
	1975	1993	Variation	1975	1993	Variation	1975	1993	Variation	1975	1993	Variation
Italy	6.5	18.6	12.1	7.7	11.5	3.8	12	13.7	1.7	26.2	43.8	17.6
France	8.9	11.6	2.7	13	12.7	–0.3	15	19.6	4.6	36.9	43.9	7
Germany	13.8	13	–0.8	10	10.9	0.9	12.2	15.1	2.9	36	39	3
Spain	5.5	12.3	6.8	4.7	9.4	4.7	9.3	13.4	4.1	19.5	35.1	15.6
UK	20.3	15.7	–4.6	9	11.9	2.9	6.2	6	–0.2	35.5	33.6	–1.9
OECD	14.1	16.4	2.3	10.4	12.3	1.9	9.2	12	2.8	33.7	40.6	6.9
EU 15	14.2	16.5	2.3	11.2	13.3	2.1	9.5	12.4	2.9	34.9	42.1	7.2

Source: OECD data.

incomes (let us call it NAI), rather than primary incomes i.e. value added. Obviously, through transfer available incomes grow bigger. But the country does not become richer! There cannot be more income available to the citizens through a subsequent redistribution of primary income whether made by the Government or by individuals.

This is another chapter in the story of fiscal illusion.

Pensions and unemployment subsidies increasing available incomes paid through social security contributions reduce the incomes of the wage earners and increase that of the retired persons without generating any additional product. Value added gross of direct taxes and pay roll contributions on incomes already include their value. Social transfers not paid through social security contributions are paid either through taxes which reduce by the same amount the available incomes of households and business or through public debt, which is – rationally – nothing but a tax burden on future generations, i.e. on present net wealth.

One may argue that when public debt is employed to finance investments, this burden may be counterbalanced by their benefits.

Let us suppose, then, that Governments' deficit is entirely devoted to financing investment expenditure in a situation of full employment. Here a sum of payments to factors of production, i.e. of primary incomes of the same amount, constitutes the counterpart of the value of the (public) capital expenditure, under the assumption of external balance equilibrium. Thus, the expenditure paid through public debt is part of the value added on which the tax burden has to be measured. The (future) interest on this debt, in a rational assessment, constitutes the counterpart of the benefits of the flow of utilities deriving from that investment which, in fact, are not accounted for in national value added. But, rationally, the debt burden should be deducted from the present net wealth and, consequently, from net national incomes.

Nor can we argue that distinction must be made between the (quasi) full employment situation and that in which there is an aggregate demand increase. Here, indeed, we may have – only *prima facie* – an increase of NAI bigger than that in the national value added, since to the purchasing power received by the beneficiaries of the public transfers we must add the additional product of the multiplier increasing the value added. The bigger NAI generates a corresponding increase in value added.

The fact that because of asymmetric information, uncertainty and lack of telescopic sight in the future, the losses due to future debt are not accounted for, specifically, in the present business accounts or in the household (rough) estimates, does not mean that it would be sound national accounting to overlook them, and to call 'true income' to be added to the primary income something which merely rests on fiscal illusions.

III.7. Much the same applies to the deficit of exports over imports unless caused by such factors as remittances of workers abroad, transfers by supranational Governments, revenues from foreign assets. In these cases only, it is correct to add to the figure of national value added, i.e. primary incomes, the above deficit in order to get the 'true' national income. Rather than national value added we should, ideally, consider any value added of the residents whether obtained domestically or abroad plus their transfers from abroad minus their obligations to foreigners. But normally, by and large, for industrialized countries, the surplus of available national income on income produced in the nation by the residents is matched by losses in their wealth, net of foreign debt, so that is only apparent.

III.8. Thus, net domestic value added remains the best proxy to what individuals of a given country get and may employ either for their private choices or for the (compulsory) public ones.

To rely on bigger NAI figures to measure tax burdens implies above all assuming that through redistributions and deficits one may create and dispose of more economic means than those produced: so that this kind of measurement is nothing but an unethical chapter in fiscal illusions.

A great tax illusion is generated – as we have seen – as for the measurement of aggregate fiscal burdens on domestic product gross of consumption of capital and of indirect taxes. Through this last, particularly subtle fiscal illusion – as noted – indeed it may even happen that an increase in the fiscal receipts in real terms, with net value added constant in real terms, appears as a reduction in the fiscal burden, generating a bias in favour of the countries who prefer indirect to direct taxation (and to pay roll social security contributions) in terms of tax benevolence!

TABLE 7

% CHANGES IN NPF AND GDP (1960-1993)

	1960	1993	Growth %
NPF (in billion lire)	17,278	1,204,072	68.69
GDP (in billion lire)	21,632	1,550,150	70.66

The illusion has a dynamic relevance too, since as Table 7 shows, in the 33 years between 1960 and 1993 the difference between GDP and NPF, in countries like Italy, increased from 25,2 to 28,7%, i.e. by 13,9%; and the increase in tax burden, measured in terms of GDP rather than NPF, was deflated by a corresponding increased percentage.

TABLE 8

DEFINITION OF NATIONAL INCOME OR PRODUCT
EARLY MICROECONOMIC APPROACH

Demand (Income side)	*Product* (Supply side)
Pigou (1920)	**Kutznets (1934a)**
Net aggregate of commodities, material and immaterial, including free public services only if they have a market counterpart (defence and general Government and any intermediate public supply excluded). Depreciations excluded.	All commodities produced and direct services rendered minus consumption of capital stock: Government intermediate goods and services and indirect public services and depreciations excluded.

'ORGANIC STATE' AND MACROECONOMIC APPROACH (SUPPLY SIDE)

The country as an organic whole	*The macro potential of the country*
Colm (1937)	**Clark (1937a and 1937b)**
Every product whether private or of the Government plus indirect taxes net of capital consumption.	All products inclusive of investments plus maintenance costs of capital goods.
	Keynes (1940)
	All products inclusive of gross investment minus indirect taxes.

BUREAUCRATIC AND 'KEYNESIAN' ORTHODOXY

Gilbert and Jaszy (1944)	**Ruggles (1949) and Ruggles and Ruggles (1956)**
All payments to factors inclusive of indirect taxes since they are the factor prices paid by business to the Government	All taxes should be included because "the voters are willing to give up an amount of taxes equal to what they consider the value of the Government".

GDP is the right measure to assess the macro aggregate equilibrium since investments for replacement add to aggregate demand as the others.

TABLE 9

PUBLIC CHOICE (*ANTE LITTERAM*) INDIVIDUALISTIC POINT OF VIEW OF NATIONAL INCOME OR PRODUCT
(Forte and Buchanan 1961)

On the product side

Net incomes received by the factors or production measure their economic productive efforts on the supply side of the economic process.

On the demand side

National product sold on the market measures – at the last transaction stage – the value of the economic goods available to the country with an even current balance of payment, from the point of view of the consumers and investors whether public or private.

The first excludes indirect taxes and depreciations.

The second excludes the 'value added' of the Government and depreciations.

Available income

With balanced budget and current external accounts it must be equal to national income at factor's costs. If there is a deficit in the Government or with foreign countries, the excess of available income is simply an 'illusion'.

TABLE 10

MEASURE OF TAX BURDEN

Income side (Demand)	*Product side* (Supply)
Leroy Beaulieu (1876) Ratio of fiscal revenues to the market value of final consumption and investment goods available on the market.	**Gini (1925)** Ratio of taxes to all net revenues received by private individuals before taxes inclusive of interest on public debt and pensions as measure of private welfare.
Marshall (1920) Ratio of taxes to private income consisting of market goods and final public goods with a market counterpart.	**Bowley and Stamp (1927), Seligman (1925)** Sum of all revenues received as primary income, i.e. as prices for factors of production.
	De Viti De Marco (1928) Ratio of taxes to *net* incomes received by private factors of production where *net* means after taxes which are the cost of Government as a factor of production.

BUREAUCRATIC AND KEYNESIAN ORTHODOXY

Ratio of fiscal revenues to anything produced in the nation gross of taxes and depreciations, representing the capacity of the country as a macro-entity to pay.

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