

GROSS DOMESTIC POWER:  
A HISTORY OF GDP AS NUMERICAL RHETORIC

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ABSTRACT

Histories of Gross Domestic Product (GDP) – both critical and favorable – have become somewhat of a cottage industry since the global financial crisis of 2008. Following the Stiglitz Commission, numerous general-audience books have appeared, describing the rise of GDP, analyzing its limitations, and offering reforms or alternatives. These histories, however, suffer from three key problems. First, nearly all begin in the 1930s, following the Great Depression and the lead-up to World War II. Very little if anything is said of the 250 preceding years, a period implicitly thought of as a pre-history of GDP. Second, and as a result of this limited chronological lens, GDP is considered to be a statistical measure, the shortcomings and merits of which are presented as technical and ascribed to the narrow objectives facing its 20<sup>th</sup> century architects. Third, the proposed reforms are meant to improve on GDP's statistical limitations (e.g. using dashboards, accounting for unpaid care-work or environmental costs etc.). These three problems are related, and this paper presents an alternative history of national accounting, considering geo-political and political-economy contexts going back to the 17<sup>th</sup> century. This longer and broader view reveals the exercise of estimating national income or wealth as a form of *numerical rhetoric*. Rather than a statistical measure, GDP is an indicator of power (for countries, classes and industries) as well as an instrument for advocating specific policies. Therefore, any critique must go beyond technical issues and fixes, and look at the political context and consequences of various historical versions of GDP, and any possible democratic reform of it.

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## 1. AN EPISTEMOLOGICAL CRISIS

The global financial crisis (GFC) of 2008 has been acknowledged, at least in some circles, not only as an economic crisis but also as a crisis of economic theory and policy. Contrary to the myth of “no one saw this coming”, it is now well documented that many economists – mostly heterodox and all using accounting rather than equilibrium models of the economy – warned of the impending burst of the bubble (Bezemer 2010). The failure of the rest of the profession to acknowledge the importance of the financial sector to the real economy and the dangers of increasing leverage help explain support for policies of financial deregulation across the political spectrum, which in retrospect sowed the seeds of the crisis.

Less widely acknowledged is the GFC’s exposure of a *crisis of knowledge*, in particular a lack of understanding of how the economy is measured. This epistemic failure has been picked up outside of the academic economics profession, in many general-audience books following the Stiglitz commission of 2008 (the report of which also became a book).<sup>1</sup> Along with these popular critiques of Gross Domestic Product (GDP) as a narrow, growth-centered aggregate, many alternative measures of economic, social and environmental well-being and progress have sprouted in the past decade.

The various critiques and alternatives set forth in these books and indicators differ greatly in detail, normative emphasis, focus and recommendations. Nonetheless, they all share three main features. First, the history of GDP in these accounts is traced back only to the 1930s, with any estimates of national income before that decade either completely ignored or very briefly touched upon as a mere pre-history of the ‘modern’ version. Second, and as a direct result of not studying the historical and political context of national income estimates from the 17<sup>th</sup> to the 19<sup>th</sup> centuries, recent critiques consider GDP to be a *statistical* measure, flawed but nonetheless designed to objectively measure economic activity such as total production and income. Third, and naturally following from the second feature, the proposed remedies for GDP’s shortcomings are likewise statistical patches, whether replacing GDP with a happiness index, supplementing it with a dashboard of various indicators, or adjusting it to include unpaid care-work and the costs of environmental degradation. In all these cases, the belief is that, if one only applies the recommended cure, the patient would heal

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<sup>1</sup> These include, in chronological order, STIGLITZ *et al.* (2010), FLEURBAEY and BLANCHET (2013), COYLE (2015), PHILIPSEN (2015), LEPENIES (2016), MASOOD (2016), FIORAMONTI (2017) and PILLING (2018).

and be able to fulfill its original destiny, i.e. to measure the *true* wealth (or income) of nations.

This approach suffers from several problems. First, it has failed to dethrone GDP due to its disconnect from theoretical economics, partly due to the fact that economists have long ago outsourced the measurement of macroeconomic aggregates to government statisticians (Fenoaltea 2019). It also represents an instance of the Whig interpretation of history, where every subsequent period is seen to improve upon the past in a procession of continuous progress. Finally, and perhaps worst of all, it reinforces economists' belief that their discipline is purely scientific, having no intersection at all with political forces or processes. GDP is not questioned by academic economists who consider it to be *datum ex machina*.

In order to mount a more effective attack on the epistemological foundations of mainstream economics, we need to know how we got here. This involves going further back in history (to the 17<sup>th</sup> rather than early 20<sup>th</sup> century), understanding early efforts to measure the economy in their own geo-political and politico-economic context (rather than imposing our own technocratic view of measurement on them), and thus discovering what *purpose* the pioneers of national income measurement had in mind when carrying on their inquiries (rather than assuming it to be what we are taught it is today). Then perhaps we would understand GDP's grip on economists and policy-makers alike, despite everything that is apparently wrong with it.

## 2. EXPLICIT POLITICS, IMPLICIT MODELS

The first clue to the disconnect between economic theory and economic measurement is the fact that the latter preceded the former by about a hundred years. Long before Quesnay and Smith embarked upon understanding the wealth of nations, Petty and Boisguilbert set out to quantify it. But what was the reason this happened in 17<sup>th</sup> century England and France rather than 1930s UK and US? The common story about the birth of GDP in the latter era involves the twin evils of the Great Depression (and the dramatic increase in unemployment it created) and World War II, both of which made governments very eager to learn how much employment they could create as well as how much military hardware they could produce without suffocating the civilian economy.

The actual historical appearance of national income estimates in the 17<sup>th</sup> century is usually attributed to the scientific aspirations of that era (Stone 1986, Vanoli 2005), but what is often neglected is a unique geo-political event at that time – the Peace of Westphalia and the birth of the

modern system of nation-states. As Arrighi (1994) observes, England and France led the global competition for dominance from the Peace of Westphalia in 1648 to the end of the 18<sup>th</sup> century. The work of William Petty, Gregory King, Pierre de Boisguilbert, and Vauban sheds light on this connection, as these thinkers, while holding various official positions in their governments, attempted as individuals to use their estimates to argue for various national policies, just as the nation-state was overtaking both empires and city-states as the main unit of power. One of their objectives was to demonstrate the relative power of their nations, which were at the time engaged in military, economic and diplomatic competition (with each other and with Holland). Another was to *convince* their audience of the merits of certain policies. This aim, rather than objective measurement, is what made such efforts a form of *rhetoric*, using McCloskey's (1983) definition, albeit a numerical kind of rhetoric.

Petty thus estimated the national income of England in 1665 to compare its strength to France and Holland, as well as urge reform of its tax system, suggesting to make it regular and proportional to income. He also used his estimates to argue that some taxes can actually *increase* the nation's wealth, and that utilizing all unemployed workers could raise national income by two million pounds per year (Studenski 1958). British prime minister William Pitt likewise used his 1798 estimate of British income to argue for a general income tax, *omitting* labor income from his estimate since he wanted to exempt it from taxation. Benjamin Bell responded the following year with his own national income estimate showing the inadequacy of Pitt's proposed tax and used his numbers to argue for the repeal of the Corn Laws (*ibid.*).

The French were even more explicit in their use of national income estimates as a political weapon. Boisguillebert used his 1697 estimate to argue that Louis XIV's policies were destroying the French economy, proposing instead to repeal all taxes except the poll tax and the royal *taille*, which would be applied without exemptions and at a low rate. He eventually lost his official position as lieutenant-governor and exiled, no doubt due to works with titles such as *La France ruinée sous le règne de Louis XIV*. The same fate fell to another Frenchman who used national income estimates to criticize the regressive tax system in France, Marshal Vauban. The Westphalian impetus to estimating national income was lacking, however, in Germany and Italy, as these were not unified political entities until the 1870s, which was, not surprisingly, exactly when national income estimates appeared in these countries.

Thus, from the middle of the 17<sup>th</sup> century until after World War I, national income estimates were carried out by individuals, and included explicit political views and recommendations for which the figures were a

tool. Furthermore, the very decisions of what to include, how to construct the aggregates, and how to present them involved choices that were similar to those involved in creating an economic model, only doing so *implicitly*, using numbers and identities (but no behavioral equations as in purely theoretical models).

According to most GDP histories, this began to change with the 1920s and 1930s, when more and more governments took on the role of estimating national income. In addition to the obvious institutional shift (away from individuals free to express their political views and argue for or against certain policies and towards seemingly objective public authorities), government statisticians focused on the technical methods of estimation while, on the surface, the interpretation of the data and its use for making decisions became the domain of policy-makers. One could thus be forgiven for assuming, like Studenski (1958), that from this point onwards national income accounting became an objective exercise attempting to *measure* the economy rather than arguing for ways to shape it. This, however, would amount to mistaking a shift in form for a change in substance.

One of the very first elements to be added to national income estimates in this period was government expenditure. This did not happen at once, and some ascribe it to Keynes' *General Theory* (1936) and its now familiar model of aggregate expenditure. However, numerous government estimates appeared before 1936, beginning in 1921 with the NBER estimate in the US, followed by the USSR in 1926, Germany and the UK in 1932 and the Netherlands in 1933. The inclusion of government expenditure in the aggregates, which eventually took on the name Gross National Product (GNP), was not a mere technicality. It showed the enormous power of public expenditure in peacetime (especially in a slump) as well as in wartime. In fact, it was in his 1940 book – *How to Pay for the War* – that Keynes followed in the footsteps of Petty, King and Pitt and estimated the UK's national income *in order to convince* the British government and public of the need to defer civilian consumption during the war.

### 3. IMPLICIT POLITICS, SPURIOUS OBJECTIVITY

A major change which occurred when governments took on the task of national accounting was the ascendance of the value-added (net output) approach to estimating GNP. Before the 20<sup>th</sup> century, estimates were of income and expenditure rather than output. Some were reported by industry, but were nonetheless based on incomes in these sectors rather than any measures of physical production. The latter was done by deducting intermediate inputs from final output to arrive at value-added (for

example deducting the cost of wheat from the price of bread to arrive at the baker's net output) and was reflected in the word 'Product' in GNP and later GDP.

While this seems like a technical detail, the rise of the value-added approach to estimating GDP (in addition to the older income and expenditure methods) introduced a new but far less visible degree of freedom in the calculation, which allowed those who designed it to determine the location of the *production boundary*. Anything falling within that boundary, say making and selling cars, was included in GDP and thus deemed productive. Anything outside of it, like unpaid care work at home, was excluded. As we shall see below, this power to choose the boundary allowed governments (and later international organizations) to stealthily continue the previously explicit practice of using national income estimates as numerical rhetoric (in fact Pitt's estimate, as we noted above, already did this by leaving labor income outside of what we would now call the production boundary). Instead of directly advocating certain policies, this could now be done in a seemingly technical manner, which nonetheless still has clear policy and political implications, all the more powerful since they are not consciously seen as rhetoric.

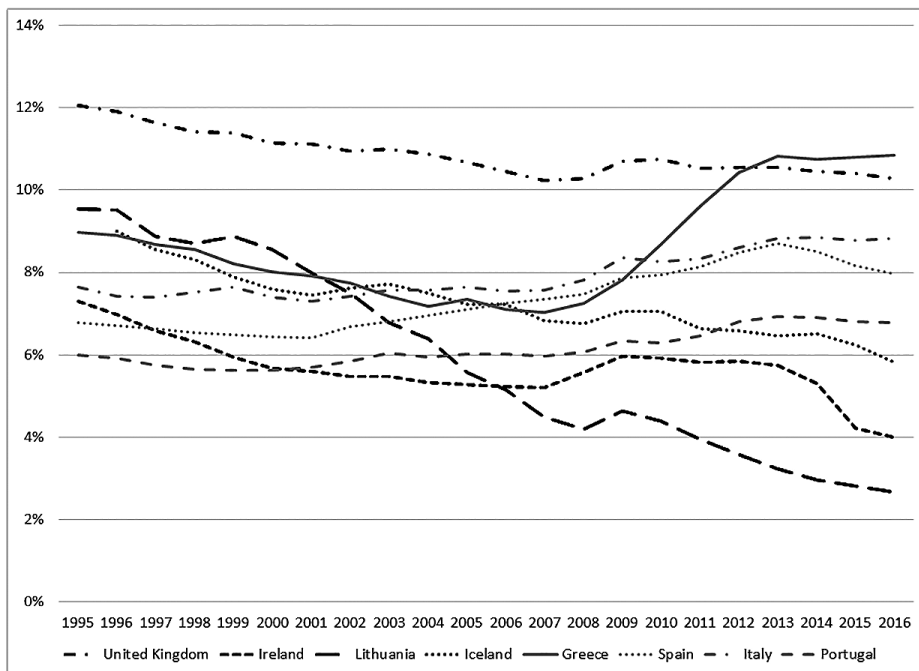
Another rhetorical device included in GNP and GDP from the 1930s onwards was also one of the greatest fantasies of national accounting to this day. In addition to including various forms of rent (from land, housing, and natural resources) in GDP, governments invented (*imputed*, in the jargon) a completely fictitious source of income for owner-occupied housing. That is, people who own their own apartment or house are imagined to be producing housing services for themselves, and even though no transaction takes place (thus violating the SNA's own principle of including only market-based production), are thought to be paying themselves the equivalent of rent.<sup>2</sup>

The inclusion of such imaginary income is not just a technical decision. It has crucial political implications as it makes not just rent but *homeownership* seem like a productive activity. It also glorifies real-estate bubbles, as the calculation takes into account the *value* of the property, giving countries incentives to pursue policies supporting real-estate booms and ever-rising dwelling costs. It thus makes GDP, to paraphrase McCloskey, into *bourgeois statistics*. Figure 1 shows both the cross-country variation among OECD countries as well as differing trends across time.

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<sup>2</sup> One could argue that the house is a capital good producing services, but other durable or common-use goods – such as home appliances or public squares (FENOALTEA 2019) – are excluded from GDP, making owner-occupied housing a special case.

Figure 1. OOH as % of GDP (in 2009 USD).



Source: OECD Stat, <https://data.oecd.org/hha/housing.htm> (accessed May 2018).

As the figure shows, while owner-occupied housing (OOH) as a share of GDP increased for the Southern European countries – Portugal, Italy, Greece, Spain (the original PIGS) in this period – it fell for the UK, Ireland, Lithuania, and Iceland. Although this increase was driven by these countries' respective housing bubbles (also visible in Ireland for parts of the period), the inclusion of OOH has inflated the GDP growth of these countries. This is precisely why imputing value-added from incomes differs from measuring it directly. In the latter case, both gross output and intermediate inputs are deflated using a price index (to account for inflation), and real value-added equals real gross output less real intermediate inputs. The deflation ensures that while the price of a car increases, for example, real value-added accounts for only the *quantity* of cars produced. When value-added is imputed based on income, by contrast, the formula degenerates to deflating gross revenues and deflating costs, then deducting the latter from the former. There is no accounting for a quantity here, despite adjusting for inflation, since there was no direct measure of 'output' to begin with. Thus,

quantity and price are inseparable for imputed services, since net income is a monetary concept by definition. As Mazzucato (2018:94) points out, “a house price bubble...will show up as an acceleration of GDP growth”.

Furthermore, data on OOH in developing countries is extremely scarce, thus boosting the apparent gap between poor and rich countries. However, one example can serve to illustrate the contrast between the contribution of owner-occupied housing in developing and developed economies. In 2012, actual rentals accounted for only 2.8% of Costa Rica’s total household consumption, while imputed rentals (OOH) accounted for 9.9%. In the US, by contrast, actual rentals in 2012 accounted for 4% of total household expenditure, but the imputed rentals constituted 12.3%. As a percentage of GDP, the imputed rentals amounted to 6.5% in Costa Rica vs. 8.3% in the US. The fact that the imputed rentals are much bigger than actually measured rentals cuts across countries. In the EU and US the proportion in 2016 was roughly 3 to 1. Germany is on the low end with 1.3, as well as Netherlands with 2.0, compared to 12.7 for Hungary and 15.4 for Slovenia.

Two decades after national governments took on the initiative and responsibility for designing and estimating GNP, they entrusted this task to the United Nations, the international organization created after World War II in 1945, and the successor (in terms of economic and statistical analysis) of the League of Nations. The UN’s first international standard on national accounting, the 1953 *System of National Accounts*, set the general guidelines for member countries on how to estimate GNP and other aggregates.

While this made GNP look even more apolitical and objective, in the background it was used as a political tool in the Cold War. First and foremost, the use of the British/American measure (as codified in the 1947 Stone report) was used as a condition (along with trade liberalization) for European countries to receive Marshall Plan aid from the U.S. government. This was no mere technicality, since adopting GDP in post-war Europe also dictated how economic growth was perceived and what policies would be best placed to increase GDP. As Barry (2018:3) notes, “GDP enabled and empowered a small group of transatlantic experts to systematize and homogenize how ‘the economy’ was understood and offered a single metric by which policy-makers, academics, politicians and populations could judge the health or performance of national economies and compare economies.”

This early form of conditionality ensured that western European countries would have incentives from their GDP figures (long after the Marshall Plan ended) to follow specific policies (trade liberalization, investment in real-estate and financial assets) favored by the Anglo-Saxon variety of capitalism. On the other side of the iron curtain, the USSR had its own system of national accounting – the Material Product System (MPS) – another example of ‘policy-based evidence’ rather than evidence-based policy. Ironi-



cally, this system was not based on the Marxian distinction between economic activities which produced surplus value and those which did not, but rather on the narrow production concept going back to none other than Adam Smith. This concept included only material goods and excluded all services (Studenski 1958). Naturally countries in the eastern bloc adopted the MPS and followed it until the collapse of the Soviet Union in the early 1990s. Comparisons of GDP and MPS were of major political concern in the competition between East and West, similar to the arms race and space race, and belie the notion of national accounting as a universal and objective exercise in economic measurement.

At the height of the Cold War, in 1968, the western System of National Accounts (SNA) was revised, and of the several changed introduced, one stands out. As Christophers (2011) points out, SNA 68 *made finance productive*, in that it changed the status of banks' financial intermediation profits. Before that point, banks' net interest income (the interest received on loans less that paid on deposits) was considered an intermediate input and was deducted from GDP. After 1968, it became final expenditure of households (though still a cost to firms) and was *added* to GDP. This was the ultimate 'revenge of the rentier', so to speak, and was not motivated by any economic theoretical framework. Rather, it came about due to pressure from western countries' banking sectors, since under SNA 1953 banks often showed a negative value-added (their costs often exceeded their fee-based income, though much of their business was in interest-based transactions, Christophers 2011). This statistical sleight of hand once again gave a numerical advantage to countries with private and large banking systems, and within the western bloc provided a strong *incentive* for financial deregulation, since now more finance (especially for mortgages) meant higher GDP.

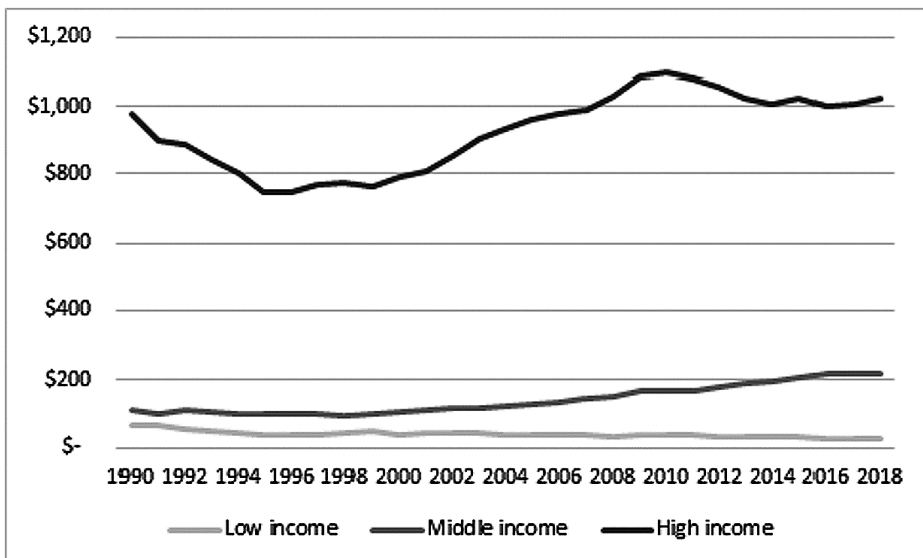
#### 4. DEREGULATING GDP

As we saw above, the mantle of estimating national income passed from individuals – who explicitly expressed their political views with their estimates – to national governments and then to the U.N. in 1945. A third and final shift occurred right after the end of the Cold War, when the institutional responsibility for the System of National Accounts was no longer just a mandate of the UN, but also in the hands of the World Bank, International Monetary Fund (IMF), the Organization of Economic Cooperation and Development (OECD), and the European Union (EU) – the five members of the inter-secretariat working group on national accounts (ISWGNA). This shifted power from an organization representing all countries in the world to institutions dominated by rich countries and banks.

With the collapse of the Soviet Union and the desire to convert its previous republics to newly capitalist economies, economic shock therapy was supplemented by their adoption of the western SNA, which was revised by the ISWGNA in 1993 after 25 years without a change. The changes made in the 1993 revision of the SNA reflect in the statistical realm what was perceived in the political economy realm as ‘the end of history’ and the triumph of western capitalism as the only game in town. As mentioned above, the advent of the value-added approach to GDP in the early 20<sup>th</sup> century created the ‘production boundary’ which determined what was included in GDP and what was left out. Aside from financial intermediation – which crossed the production boundary in 1968 – no major changes to the production boundary occurred between 1953 and 1993. But the latter revision, occurring a mere two years after the end of the Cold War, amounted to a *deregulation* of GDP. Not unlike the Berlin Wall, the production boundary was weakened and nearly destroyed, and many activities previously outside of it were now considered as additions to GDP.

One major change from the 1968 to the 1993 SNA was the treatment of military expenditure. Before 1993, only the construction of housing for military personnel counted as investment and therefore included in the

Figure 2. Military Expenditure by Income Group (2011 PPP\$).



Source: Authors' calculations based on World Bank, World Development Indicators database, series MS.MIL.XPND.GD.ZS (accessed June 2018).

production boundary and GDP. After 1993, all military expenditures on products which *potentially* have civilian uses were included in GDP, e.g. airfields, roads and docks. By the 2008 revision of the SNA, however, the boundary was weakened even further, as now even expenditures on weapons systems (which have no civilian uses) were included as investment in GDP. This change has given high- and middle-income countries' GDP a boost compared to low-income countries.

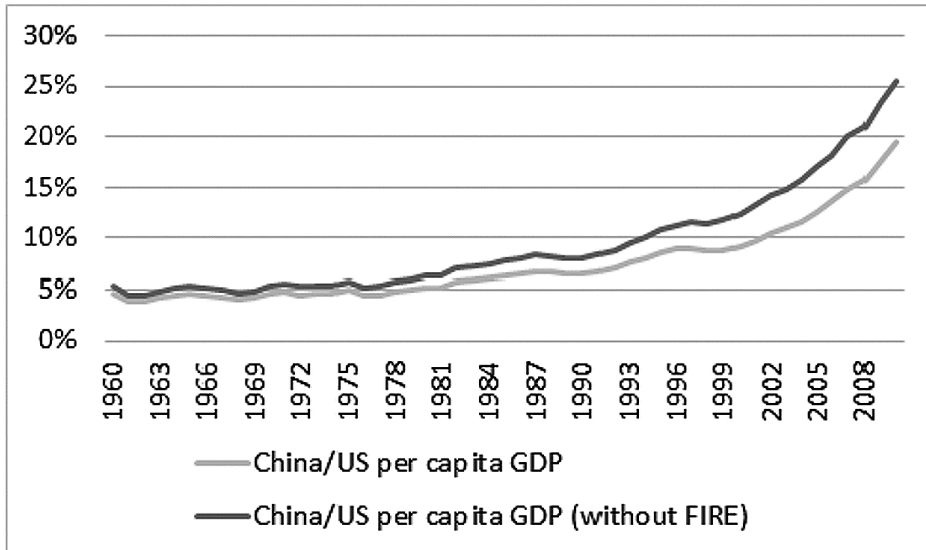
Another area where countries of the North have an advantage over the South is the production of intellectual property (IP). This broad category includes research and development (R&D), computer software, databases, literary and artistic originals, as well as entertainment products such as movies. Many of these activities, especially R&D, were considered inputs to the production process before 2008, and thus not added to GDP (they were treated as intermediate consumption, in the jargon). After 2008, R&D was made into a productive activity in a stroke of the pen, once again widening the (otherwise shrinking) lead of rich over developing countries and compounding the political asymmetry of international IP regulations.

Beyond moving military expenditures and R&D spending across the production boundary, SNA 2008 also pushed banks' interest income further. Before 2008 only banks' profits from the intermediation of *deposited* funds counted in the calculation of their 'value-added'. After 2008, even profits on lending the banks' own equity was deemed productive, thus dropping the pretense of financial intermediation as the reason for considering banks productive in the first place.

Combined with the enormous rise in non-interest based income (from financial fees, which were included in GDP from the start), the financialization of many western economies has boosted their GDP in far greater proportion than those countries following the earlier model of industrialization. In a way, SNA 1993 and 2008 allowed rich countries to 'kick away the ladder' by pushing the statistical goal-post to suit their new-found strengths. No major country has actually developed relying on the finance, insurance and real-estate (FIRE) sectors, its military or R&D spending, but this is exactly what the new versions of GDP allow countries to think, and thus provide incentives for trying to leap-frog industrialization by opening up to foreign capital flowing into national banks or real-estate.

The post-Cold-War GDP also presents finance-heavy countries as growing faster than those following a more traditional path of industrialization. Thus, in the figure below, China's per capita GDP – which was 5% of the US's in 1960, only reaches 19% by 2010, whereas without the FIRE sector Chinese per capita income surpasses 26% of the US.

Figure 3. Impact of FIRE imputation on per capita GDP convergence between China and the US.



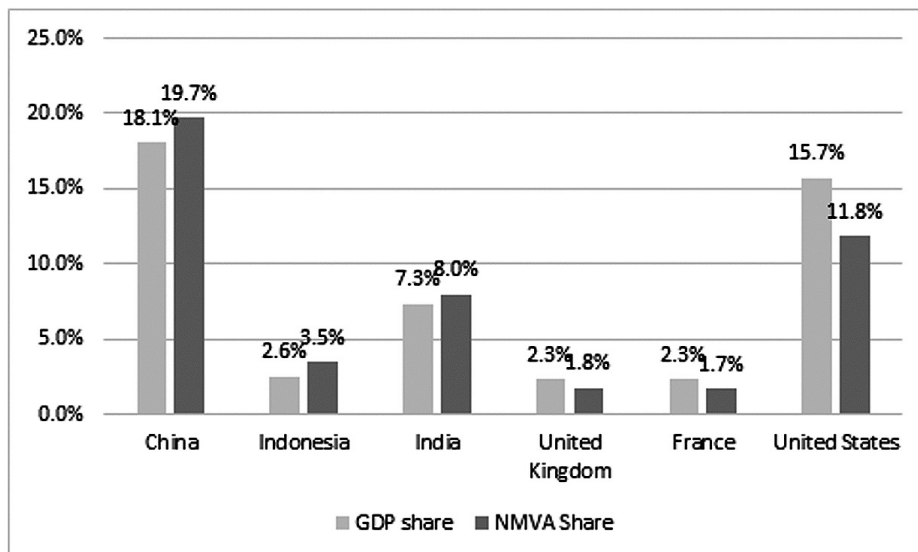
Source: United Nations, Main Aggregates and Detailed Tables (MADT) database, Table 201, [http://data.un.org/Data.aspx?d=SNA&f=group\\_code%3a201](http://data.un.org/Data.aspx?d=SNA&f=group_code%3a201) (accessed June 2018).

## 5. GDP AS A PUBLIC GOOD

Common wisdom among critics of GDP is that it is not doing its job very well, since it does not reflect true well-being, does not account for unpaid work (at the home or elsewhere) and ignores the environmental costs of production. This view is based on the assumption that GDP's purpose is indeed to measure well-being or at least the costs and benefits of economic activity.

If, on the other hand, GDP (following in the footsteps of earlier, and politically more explicit estimates of national accounting) is a numerical form of rhetoric for powerful countries and industries and the policies they favor, it is doing its job exceedingly well. It boosts the status of countries dominating finance, military production and intellectual property by inflating their perceived 'output'. Since a country's proportion of global GDP is also a determinant of voting shares in international organizations, it has a further impact on countries' status and power. As Assa and Kvangraven (2018) show, rich countries' shares of World GDP are higher than they would be without many of the imputations discussed

Figure 4. Alternative Shares of Global Economy, GDP vs. NMVA.



Source: Authors' calculations based on GDP shares from the United Nations Main Aggregates Database (<https://unstats.un.org/unsd/snaama/dnlList.asp>) and GDP in \$PPP from the World Bank.

above, proxied by Basu and Foley's (2013) Narrow-Measured Value-Added (NMVA):<sup>3</sup>

Apart from promoting certain countries or industries, GDP has a strong distributional rhetoric as well. As Assa (2018) shows, the single decision on where the FIRE sector is placed – within the production boundary, outside of it, or as an intermediate input (and thus deducted from GDP) – changes both the relative class structure and perceived engine of growth in an economy. If FIRE activities are considered productive, the wage share in the US economy is 55% and the profit share is 38%, but if FIRE is an input (like R&D used to be before the SNA 2008), wages are 74.1% and profits just 20% (the share of taxes is roughly around 6% in both cases).<sup>4</sup>

<sup>3</sup> NMVA includes only industries for which output can be directly measured, thus excluding all sectors for which value-added is imputed based on net incomes. NMVA thus includes agriculture; mining; utilities; construction; manufacturing; wholesale trade; retail trade; transportation and warehousing; information services; administrative and waste management; art, entertainment, accommodation and food services.

<sup>4</sup> This is due to the fact that the FIRE sector is very profit-heavy, and thus its treatment as

Likewise, consumers are at the top of the pecking order, accounting for 67% of US GDP, followed by investment at 17% and public expenditure at 20%. However, treating FIRE as an input rather than output results in government accounting for 32% of total expenditure, investment just 25%, and consumption 51%. These are not mere rounding errors and help fuel narratives about who really are the job-creators in the economy (and therefore deserve tax cuts).

So, if GDP is a numerical tool of political rhetoric rather than a true statistical measure, what does that imply about the way forward? Some have suggested abandoning GDP all together. Keynes (1936) advocated the use of only two units in macro measurement – total employment and money wages. He considered any attempt to measure total output across years to be equivalent to (and as pointless as) saying that “Queen Victoria was a better queen but not a happier woman than Queen Elizabeth”, though he later joined the ranks of those trying to quantify aggregate output (Keynes 1940). More recent proponents of by-passing GDP suggest adopting alternative summary measures such as UNDP’s Human Development Index (HDI) or the OECD’s Better Life Index. The problem with this approach is that no other single measure has displaced GDP, since their very existence as broader normative indicators legitimizes the false perception of GDP as a narrow but objective measure of economic activity. Furthermore, and perhaps more importantly, such alternative summary indicators reinforce the false perception that what is left outside GDP is not in the economic sphere, a logic that is used in (wrongly) arguing, for example, that environmental protection harms economic growth.

Not seeing GDP as a political instrument, the reforms recommended by other critics also miss the mark since they merely tinker with details – adding unpaid care work, deducting environmental costs etc. Instead, the first step forward should be more transparency about GDP’s political origins as well as its continuing (though less visible) non-objectivity. Similar to the Surgeon General’s warning on packets of cigarettes in the U.S., any publication of GDP figures (as well as discussions of it in academic textbooks and technical manuals) could be accompanied by a caveat such as this:

GDP is not a statistical measure. Rather, it is an implicit model of the economy relying on many assumptions and including several imputations based on these assumptions. Any change in the underlying model, in particular with regards to where the production boundary lies, would change the resulting numbers.

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productive, non-productive or intermediate input affects the distribution of profits vs. wages in the entire economy.

This would open the door to having several competing versions of GDP, just as is the case with theoretical models. Shaikh and Tonak (1996) proposed a Marxian GDP, and Assa (2017) put-forth a post-Keynesian, stock-flow consistent (and debt-adjusted) GDP. The debate between heterodox and mainstream economists would thus extend to the implicit model of GDP, with all its political economy coming to the surface.

This option would probably not be popular with policy-makers and financial analysts, as they prefer and need a single summary measure for both trend-analysis and inter-country comparisons. GDP growth is often used for the former purpose, while per capita GDP (in constant prices and PPPs) is often used for the second. We thus come to the conclusion that, given GDP's nature as a politically-contingent indicator, the only credible way to make it other than what it is would not be for another expert or committee to modify it in this or that direction. Just like the national budget, the national tax rate and national government expenditures, national accounting – of which GDP is but the most famous aggregate – would need public oversight under a transparent and democratic process. This would also imply educating the public (and not just economists) about the production boundary, the various imputations and other issues discussed in this paper, and then for political parties to outline various options.

Furthermore, for international comparability, a problem would arise if each country had a different flavor of GDP. Debating various national versions in international fora would subject the discussion to the same power asymmetries already existing in the ISWGNA and other arenas. This, however, is putting the cart before the horse. The key idea is that, to change a tool of political rhetoric, a political process rather than a technocratic one is needed.

## REFERENCES

- ARRIGHI G. 1994, *The Long Twentieth Century: Money, Power, and the Origins of Our Times*, London: Verso.
- ASSA J. 2017, "Leveraged Growth: Endogenous Money and Speculative Credit in a Stock-flow Consistent Measure of Output", New School for Social Research, Department of Economics, *Working Paper*, 27.
- 2018, "Finance, Social Value, and the Rhetoric of GDP", *Finance and Society*, 4 (2): 144-158.
- ASSA J. and KVANGRAVEN I.H. 2018, "Imputing away the Ladder: Implications of Changes in National Accounting Standards for Assessing Inter-country Inequalities", *ESRC GPID Research Network Working Paper* 14.
- BARRY J. 2018, "A Genealogy of Economic Growth as Ideology and Cold War Core State Imperative", *New Political Economy*, doi: 10.1080/13563467.2018.1526268.

- BASU D. and FOLEY D.K. 2013, "Dynamics of Output and Employment in the US Economy", *Cambridge Journal of Economics*, 37 (5): 1077-1106.
- BEZEMER D.J. 2010, "Understanding Financial Crisis Through Accounting Models", *Accounting, Organizations and Society*, 35 (7): 676-688.
- CHRISTOPHERS B. 2011, "Making Finance Productive", *Economy and Society*, 40 (1): 112-140.
- COYLE D. 2015, *GDP: A Brief but Affectionate History*, Revised and Expanded Edition, Princeton: Princeton University Press.
- FENOALTEA S. 2019, "Spleen: the Failures of the Cliometric School", this issue.
- FIORAMONTI L. 2017, *The World after GDP: Politics, Business and Society in the Post Growth Era*, New York, NY: John Wiley and Sons.
- FLEURBAEY M. and BLANCHET D. 2013, *Beyond GDP: Measuring Welfare and Assessing Sustainability*, Oxford: Oxford University Press.
- KEYNES J.M. 2018 [1936], *The General Theory of Employment, Interest, and Money*, Cham: Springer.
- 1940, *How to Pay for the War: A Radical Plan for the Chancellor of the Exchequer*, Harcourt: Brace.
- LEPENIES P. 2016, *The Power of a Single Number: A Political History of GDP*, New York: Columbia University Press.
- MASOOD E. 2016, *The Great Invention: The Story of GDP and the Making and Unmaking of the Modern World*, New York: Pegasus Books.
- MAZZUCATO M. 2018, *The Value of Everything: Making and Taking in the Global Economy*, Hachette UK.
- MCCLOSKEY D.N. 1983, "The Rhetoric of Economics", *Journal of Economic Literature*, 21 (2): 481-517.
- PHILIPSEN D. 2015, *The Little Big Number: How GDP Came to Rule the World and What to Do about It*, Princeton, N.J.: Princeton University Press.
- PILLING D. 2018, *The Growth Delusion: Wealth, Poverty, and the Well-being of Nations*, New York: Tim Duggan Books.
- SHAIKH A.M. and TONAK E.A. 1996, *Measuring the Wealth of Nations: The Political Economy of National Accounts*, Cambridge: Cambridge University Press.
- STIGLITZ J.E., SEN A. and FITOUSSI J.P. 2010, *Mismeasuring Our Lives: Why GDP Doesn't Add Up*, New York: The New Press.
- STONE R. 1986, Nobel Memorial Lecture 1984: The Accounts of Society, *Journal of Applied Econometrics*, 1 (1): 5-28.
- STUDENSKI P. 1958, *The Income of Nations: Theory, Measurement, and Analysis: Past and Present; A Study in Applied Economics and Statistics*, vol. 1, New York: New York University Press.
- VANOLI A. 2005, *A History of National Accounting*, Amsterdam: IOS Press.