

What's happened in 2008/2009 with the reported national accounts of Spain?

*The goal of the present report is to shed light on the discrepancies between the reported National Accounts data for the Spanish National Income, and other indicators. The conclusion is that Spanish GDP for 2008 and 2009 has been almost certainly manipulated. Indirect calculations of **GDP fall in this period show a fall of 17.3%** in the more favourable scenario, while the reported data is a fall of only 3.1%.*

1. Employment data.

The reported National Accounts of Spain showed a GDP growth of 0,9% in 2008 and a fall of 3,7% in 2009, thus delivering very reasonable figures compared with other developed economies. However, employment suffered a dismal performance.

	Δ GDP 2008-2009	Unemployment rate	Ratio (Δ Unemployment/ Δ GDP)
Spain	-3.1	+9.7	-3.12
Germany	-4.1	-0.9	+0.21
France	-2.4	+1.1	-0.45
Italy	-6.3	+1.7	-0.27
United Kingdom	-5.0	+2.3	-0.46
United States	-2.6	+4.7	-1.80
Japan	-6.3	+1.2	-0.19

As seen, there is a big discrepancy in the Spanish case, in which we should be seeing a much lesser increase in unemployment (following the reported GDP numbers), maybe around 1.5 points (versus the real 9.7 points increase). In all the considered countries the increase in unemployment has been much lesser.

We can compare with other countries that suffered a similar increase in unemployment rates as in Spain.

	Δ GDP 2008-2009	Unemployment rate	Ratio (Δ Unemployment/ Δ GDP)
Estonia	-18.3	+9.1	-0.49
Ireland	-10.0	+7.3	-0.73
Latvia	-21.4	+11.1	-0.51
Lithuania	-12.4	+9.4	-0.75

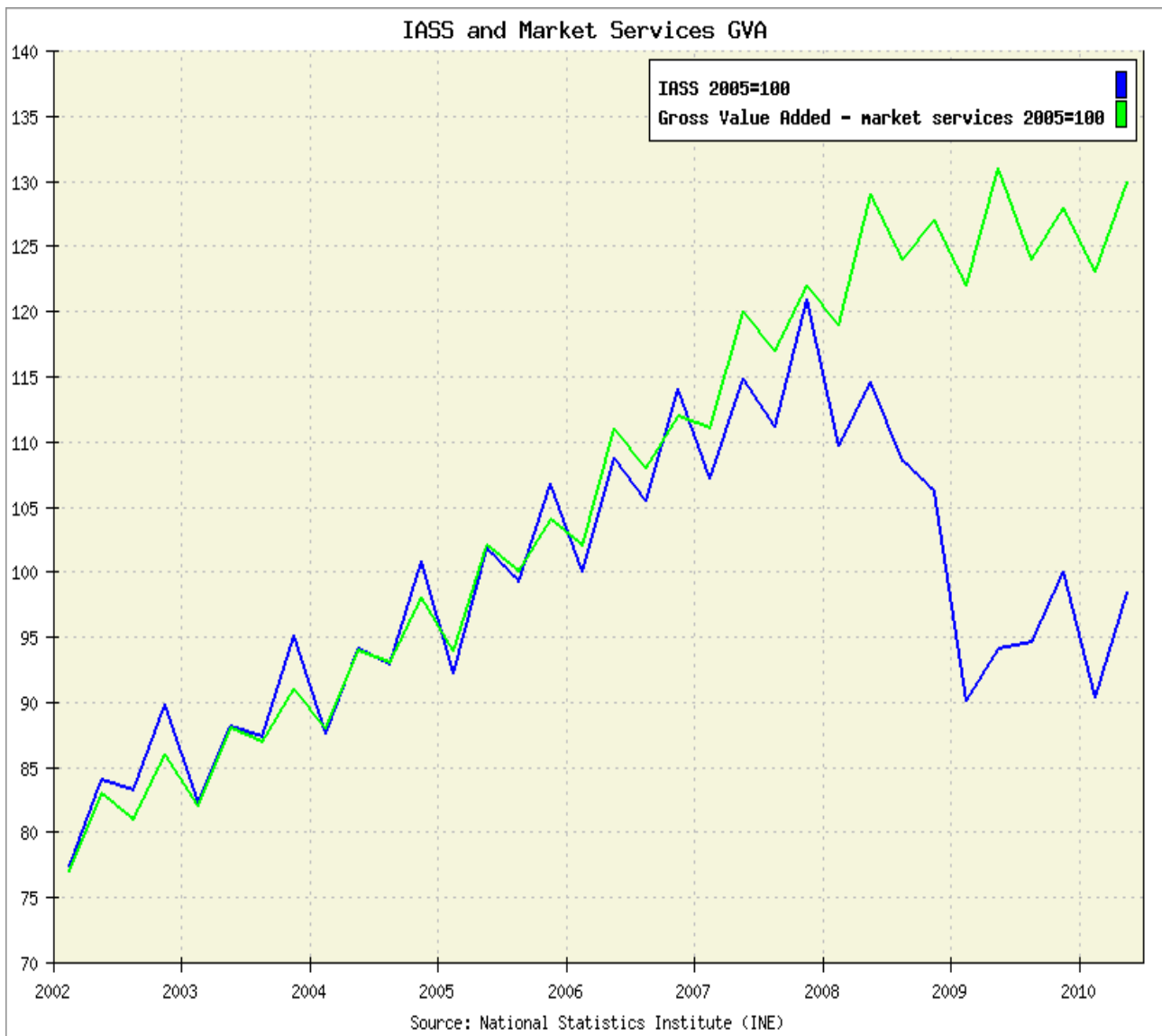
GDP fell by a bigger rate in these countries than in Spain, as can be seen.

What odd miracle has allowed Spain's GDP to fall at lesser rates ?

A way to test the reliability of the National Accounts (as reported by the National Statistics Institute, INE) is to confront them with sector indicators highly correlated with the GDP.

2. Service Sector.

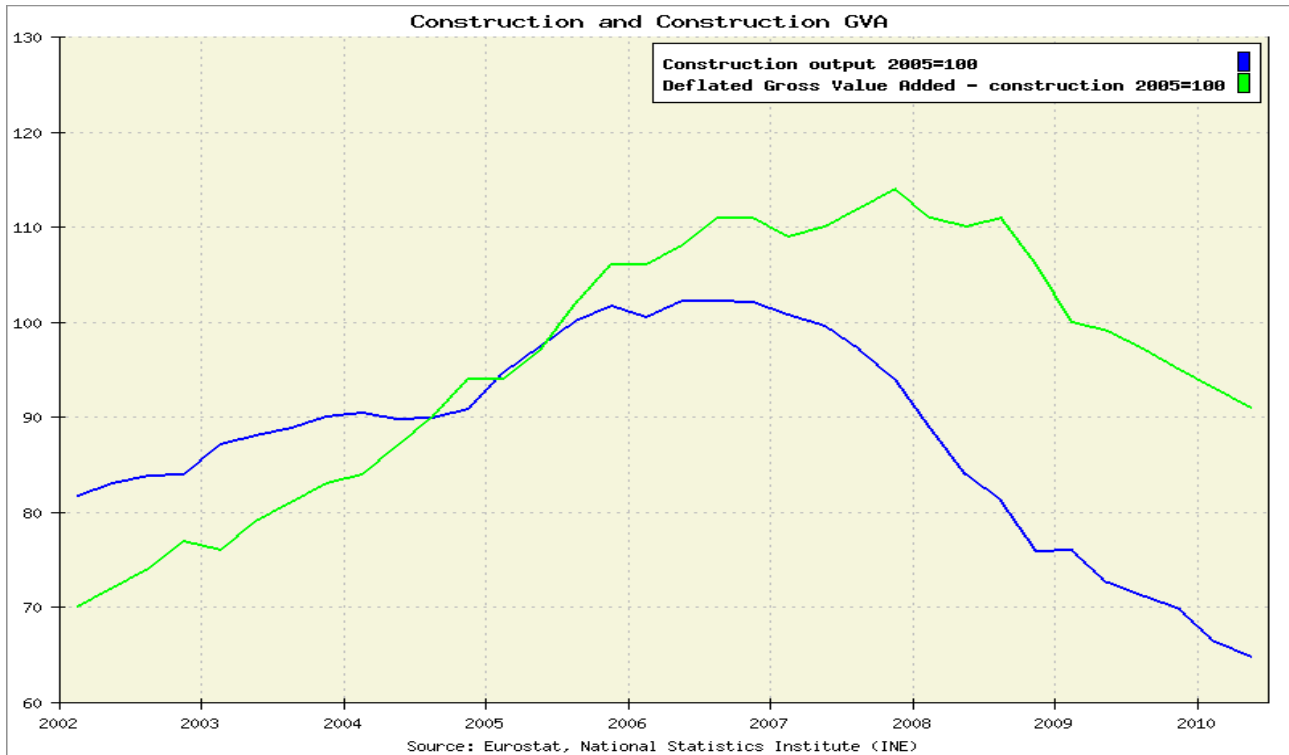
Let's start with the service sector, of which we have as indicator the [IASS](#) (Indicator of Activity in the Service Sector, as reported by the INE following Eurostat's methodology). Superposing the Market Services Gross Value Added (GVA) with the IASS we see that there's a very high correlation since the start of the series (2002) until the fourth quarter of 2007, when the curves start to diverge.



In France, the equivalent indicator to the IASS, *Évolution de la production des services marchands* (prepared following the same methodology), fell only by 1.2% in the two years, while the Market Services GVA (this is, excluding government, health, education and social services) remained stagnant. Thus, a not very relevant discrepancy between both series in France, while in Spain the observed fall in the IASS was a hefty 21%, at the same time, that enigmatically the Market Services GVA increased by 4.5%. We should realize that the GVA of Market Services are 50% of GDP.

3. CONSTRUCTION.

Lets make the same calculations with the [construction output](#) published by Eurostat. The curves don't fit as tightly in this case, due to the use as deflator for Construction GVA the same number as used for Real Estate Services, which led to a overvaluation of Construction GVA until 2007 (when construction prices stopped growing faster than in other sectors).



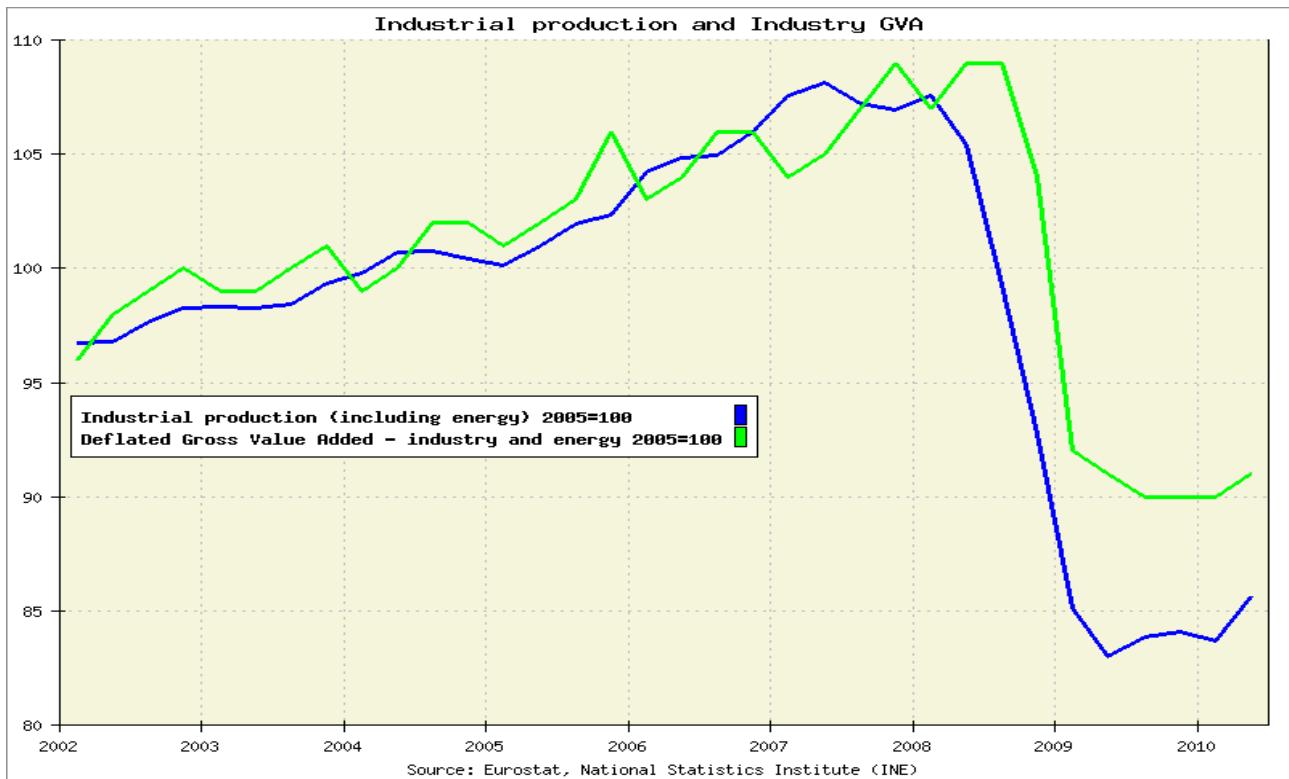
Returning to France, the construction index fell by [12.7%](#) in the two years, while Construction GVA deflated fell by 7%. In Spain the construction index collapsed by 29.4% in the same period, while Construction GVA only fell by 16.7%.

Maybe the divergence between both curves is due to the *Indice* measuring the volume of production [less the increase in stocks](#), while GDP measures the finished buildings at market prices, [irrespective if these buildings have been sold or not](#).

As is highly dubious that the stock of finished buildings could be sold at present prices, then only a fraction of the reported GDP could ever be “realized”.

4. Industry.

Lastly we arrive to the [IPI \(industrial production index\)](#), prepared by Eurostat. Correlation between this indicator and Industry GVA was very good until the start of the recession, when a greater fall in IPI than in Industry GVA (deflated by CPI), was observed, though discrepancies are much lesser in this case



Industry fell by 24.1% in the two years, as shown by the IPI, while Industry GVA (deflated) fell by 16.7%. In France industry suffered a fall of 16%, while Industry GVA (deflated) fell by 14.5%.

As seen, and in comparison to France, we see discrepancies of 5 points in manufacturing, 6 in construction, and nothing less than 24 points in marketable services.

To recapitulate, something odd is happening with Spain's National Accounts. Could it be a premeditated falsification? With what reason? And what could be the "real" level of GDP?

A reason for falsifying national accounts is, possibly, that if last year the real dimension of Spain's recession was to be known, then maybe the first country in need of an economic rescue would be Spain and not Greece because. And, who would lend to a sinking (at these rates) economy? Coincidentally, these figures would be politically indefensible.

5. Calculating the real GDP of Spain.

Let's then calculate the real rate of the fall in GDP since this alleged falsification took place.

Considering a deviation of 24% in market services, 5% in manufacturing and 6% in construction,. We'll use GDP of 4th quarter of 2009 versus 4th quarter of 2007.

	Official GVA (million €) 4 th quarter 2009	Corrected GVA (million €) 4 th quarter 2009	Estimated fall in GDP (%)
Market Services	136,827	103,989	
Industry (with energy)	37,195	35,335	
Construction	25,509	23,978	
Rest	70,638	70,638	
Total	274,495	233,940	-17.3

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Lithuania	-12.4	+9.4	-0.75
Spain (corrected)	-17.3	+9.7	-0.56

As can be seen, now Spain has a ratio of (loss of employment)/(fall in GDP) more like other countries that have suffered high increases in unemployment, (in fact around the average).

If this fake is confirmed, the repercussions would be enormous. Because the official discourse of the Spanish government about a supposed adjustment of the Spanish economy would be proved false.

- Productivity per employee instead of growing, would be falling at record rates.
- Unit labour costs would be increasing across all sectors.
- Company profits would have suffered a big drop.
- The Debt to GDP ratio would increase considerably.
- Public deficit for 2009 would have reached from 11.2% to 13.5% of GDP.

6. Using foreign trade data.

We can apply a Keynesian model by, using the data of foreign trade in goods and services, predict the fall in national income.

Calculating the Marginal Propensity to Import (MPM): the increase in income is found in the National Accounts, including the contribution of the external sector

	Δ National Income (billion €)	Δ Imports (billion €)	MPM
2005	84	25	0.30
2006	91	30	0.33
2007	75	23	0.31

6.1 Foreign trade of goods ([Ministry of Industry, Tourism and Trade](#)).

	4 th quarter 2007	4 th quarter 2009	Δ
Goods Exports (million €)	47,796	42,647	-5,149
Goods Imports (million €)	74,582	55,483	-19,099

As the MPM in Spain is around 0.32 (taking the proportion between the increase in national income and imports in recent years) we can calculate the fall in spending that originated this fall in the imports of goods. Data must be adjusted by the fall in the prices of oil and other commodities.

$$\Delta \text{Exports (commodities)} - \Delta \text{Imports (commodities)} = 2,714 \text{ million €}$$

So we have an adjusted fall of 16,385 million €

$$\Delta \text{Income} = \Delta \text{Imports} / \text{MPM} = -16,385 / 0.32 = -51,203$$

Adding the fall in external demand

$$-51,203 - 5,149 = -56,392 \text{ mill €}$$

6.2 Services ([Bank of Spain](#)).

Using the same MPM, given that the observed rate of growth is the same as in goods.

	4 th quarter 2007	4 th quarter 2009	Δ
Services Exports (million €)	23,123	20,836	-2,287
Services Imports (million €)	18,762	15,937	-2,825

$$\Delta \text{National Income due to services} = -2,825 / 0.32 = -8,828 \text{ million €}$$

And adding the fall in external demand

$$-8,828 - 2,287 = -11,115 \text{ mill €}$$

6.3. Final calculation

Δ National Income = Δ Demand of goods + Δ Demand of services = -56,392 - 11,115 = -67,507 million €, **which means a fall of GDP by 24.6% for the biennium 2008-2009.**

Making the same calculation with France, the results are completely compatible with the reported GDP data, since the Keynesian model would give us a fall in internal demand of 2.4%, (assuming a MPM of 0.3), and reported GDP fell by the same proportion (2.4%)

7. Conclusions.

As seen, this calculation gives us a drop in internal demand bigger than the same number reached with the previous method, 40,555 million €. The divergence could originate because the MPM, when in the middle of a collapsing internal demand, could fall significantly; on the other hand, the drop in GDP could have been underestimated with the other method due to the accumulation of stocks in the construction sector, or maybe both effects are at work here.

Anyhow, both methods are completely at odds with the fall in the national income reported in the National Accounts and **makes consistent the hypothesis of a vast manipulation of data.**