

Standards and Standardization in a Crisis

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The Economic Crisis

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- The immediate consequence is that the world economy and particularly the advanced economies slowed substantially in 2008, and have then gone into deep recession in 2009. The forecast is for a return to positive growth in 2010, but the USA and Europe will remain in difficulties.
- The \$ will continue to decline in importance as *the reserve currency*, initially to be joined by the Euro.

Gross General Government Debt as a percentage of GDP

	Average 1993-2002	2003	2007	2008	2009	2010	2014
USA	64.9%	61.2%	63.1%	70.5%	87.0%	97.5%	106.7%
Euro Area	68.6%	68.7%	65.8%	69.1%	78.9%	85.0%	91.4%
Japan	117.3%	167.2%	187.7%	196.3%	217.2%	227.4%	234.2%
UK	43.1%	38.5%	44.1%	51.9%	62.7%	72.7%	87.8%

Source IMF World Economic Outlook Projections, April 2009

As debt rises so from 2011 governments will have to cut back on spending & raise taxes, slowing down any recovery.

The situation for Japan is of deep concern.

The Demise of Unregulated Free Market Capitalism

- The crisis has undermined the belief in the efficiency of the unregulated free market system, the system espoused primarily by the US and UK governments and also by international organisations such as the World Bank and IMF.
- That belief has gone and gone for at least a generation. We now move on to the next model, the regulated market economy.

Countdown to the Crisis

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- The immediate source of the crisis lay with the expansion in the US sub prime mortgage market.
- Rising energy prices began to slow the US economy and as result people began to default on their mortgages. House prices began to fall and that meant that banks could not recover the full value of their loans
- These mortgages had been combined, often together with other financial instruments, e.g. loans to businesses and then sold in the form of: 'mortgage backed securities'.
- Because of this packaging and selling on to banks across the World, it was hard to evaluate the risk of specific securitization deals.
- Investors thus relied on assessment of creditworthiness provided by the credit rating agencies (CRAs) such as Moody's, Standard and Poor and Fitch. These both set the standard by which debt was evaluated and then used that standard to rate the debt. This was private sector standard setting and implementation by the same agency.

The Role of Technical Progress

- The crisis was also a consequence of the growth of universal banks which combine commercial banking and investment banking together.
- This was made possible in the USA by the Gramm-Leach-Bliley Act of 1999 which repealed the Glass-Steagall Act of 1933, a gap of some 66 years which just about fits in with the length of the Kondratieff cycle.
- Increased complexity of the banking system has also been a factor. Advances in IT have substantially increased the efficient scale of bank activity, i.e. banks have got bigger and the consequences of their failure more disastrous.

A Failure of Regulation & International Standard setting

- Banking was a regulated, arguably a highly regulated industry, and underpinning this regulation were a number of standards.
- The **Basel I Accord** which was adopted by the EU, required banks to hold capital equal to at least 8% of their risk-weighted assets. One drawback with this is that it assigned the same risk weighting to every asset, e.g. every corporate loan.
- But this regulation, limited as it was, led to 'regulatory arbitrage', i.e. bankers devoted resources to avoid costly regulation.
- Because of this, **Basel II** facilitated differential risk weighting by allowing banks to use internally generated risk figures. Where it was not appropriate to use internal models to do this, the credit rating agencies (CRAs) were used.
- Basel II is already out of date in a fast moving market, & particularly following the fall from grace of the CRAs.

In Search of a AAA: A Failure of Private sector standard setting

- The credit rating agencies (CRAs) provide an assessment of the likelihood that an interest-bearing security will default on its obligations, taking account of the likely recovery rate after default.
- Since 1970 ratings have increasingly been paid for by the issuers of the securities which were being rated. Clearly the system has an inbuilt problem in terms of the incentives of the CRAs to please their clients and give excessively high ratings.

The Implications for Standardisation:

Types of Standard

- Standards for minimal admissible attributes (e.g. safety levels and product quality).
- Standards for reference, i.e. definitional standards (e.g. currencies, weights, measures and dimensions of materials and products).
- Standards for interface compatibility (e.g. screw threads, codes and the physical design of interfaces).
- **Standards for Guidance: To provide guidance for firms (in general) on what they should be doing and also on how to do it, e.g. ISO9000 series.**

Public Standards Setting Organizations: Europe

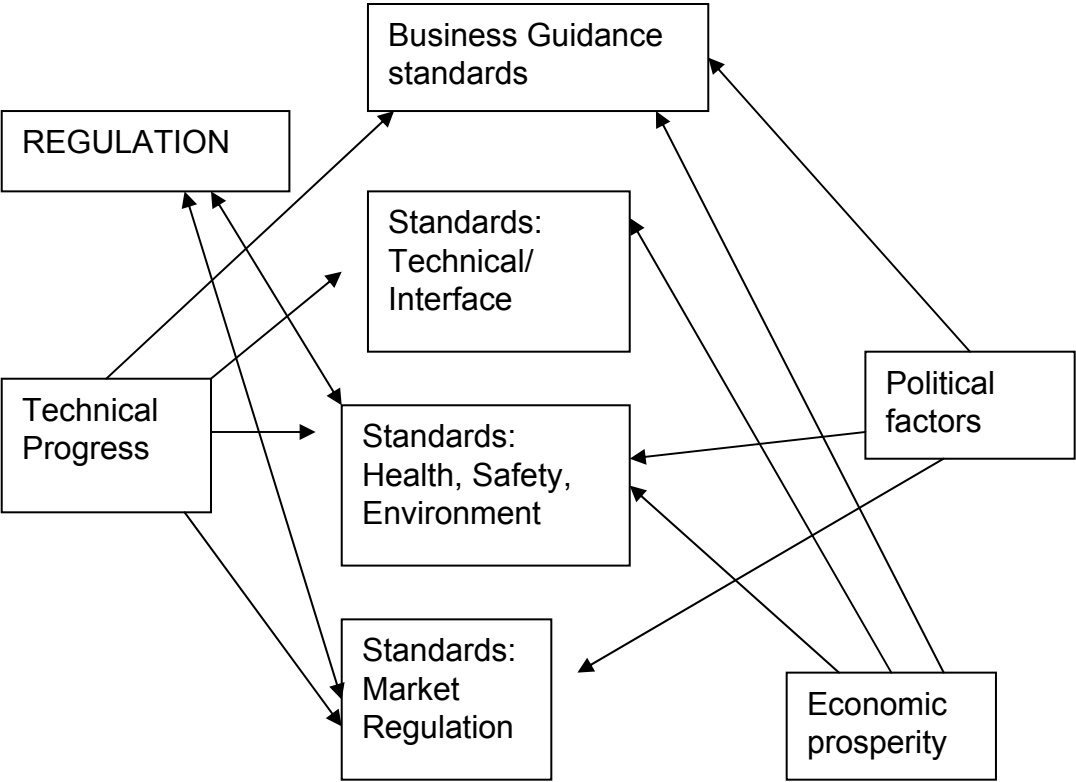
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- In Europe the emphasis is on formal standardization at the federal, rather than national level.
- The origin of current EU standardization policy lies within the establishment of the EU's internal market

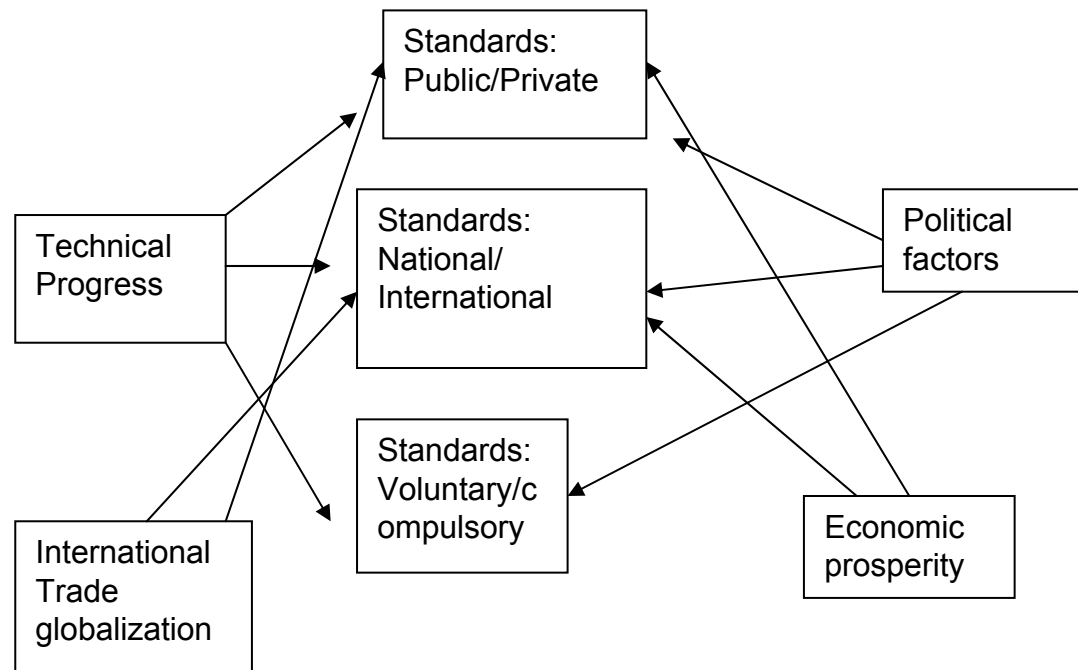
Private Standards Setting Organizations: The USA

- In the USA, at least, Government standard setting is seen as being in decline (Lemley, 2002, Marsden, 2001).
- There are many private SSOs which occupy the middle ground between de facto standardization and formal de jure standardization.
- But the USA is also the home of many of the World's most influential de facto standards.
- This relative emphasis between the USA and the EU reflects their degrees of relative faith in the free market as well as political needs.

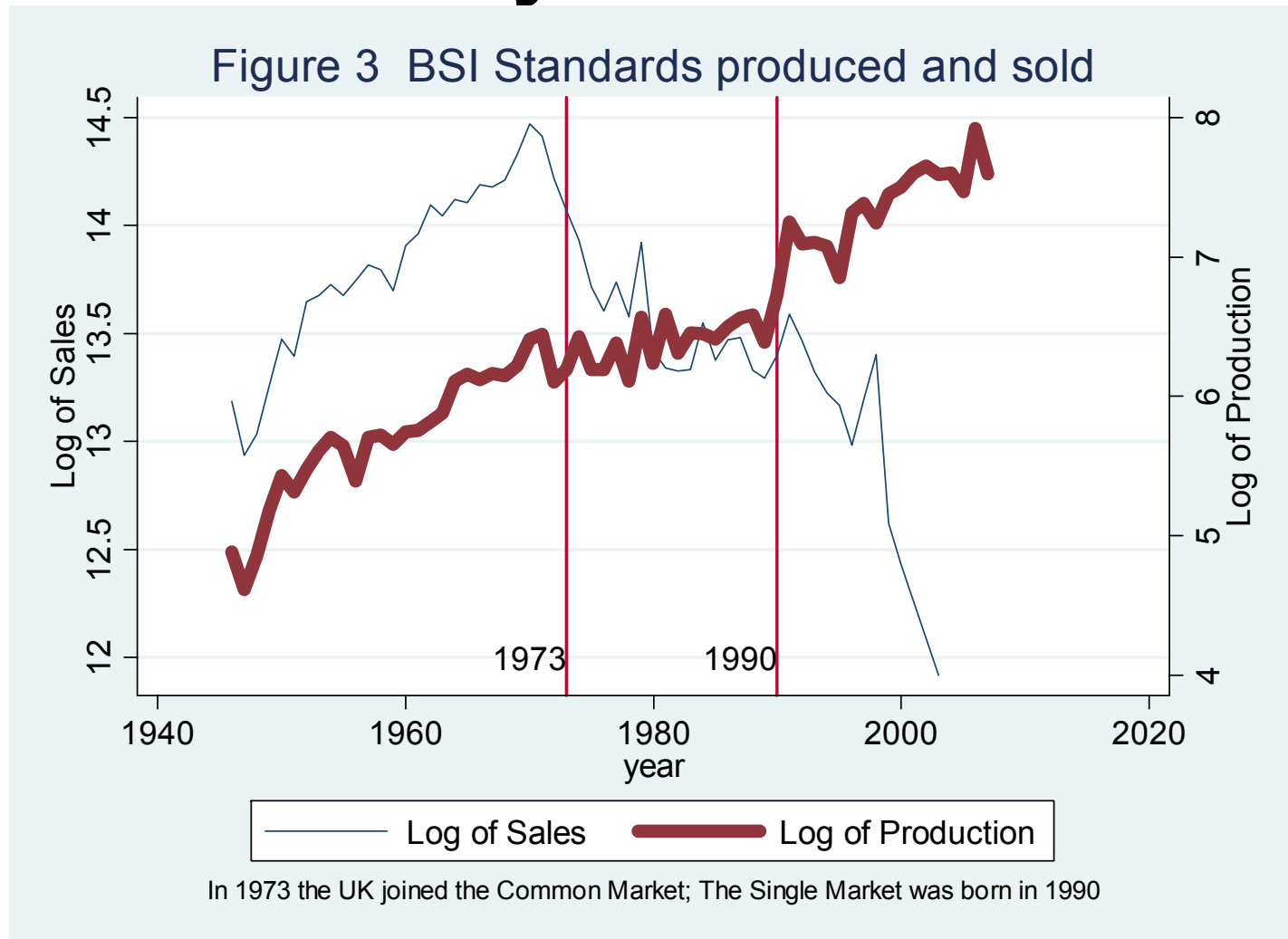
The Drivers of Standardization.



Drivers of Standardization



Standards and the Economic Cycle

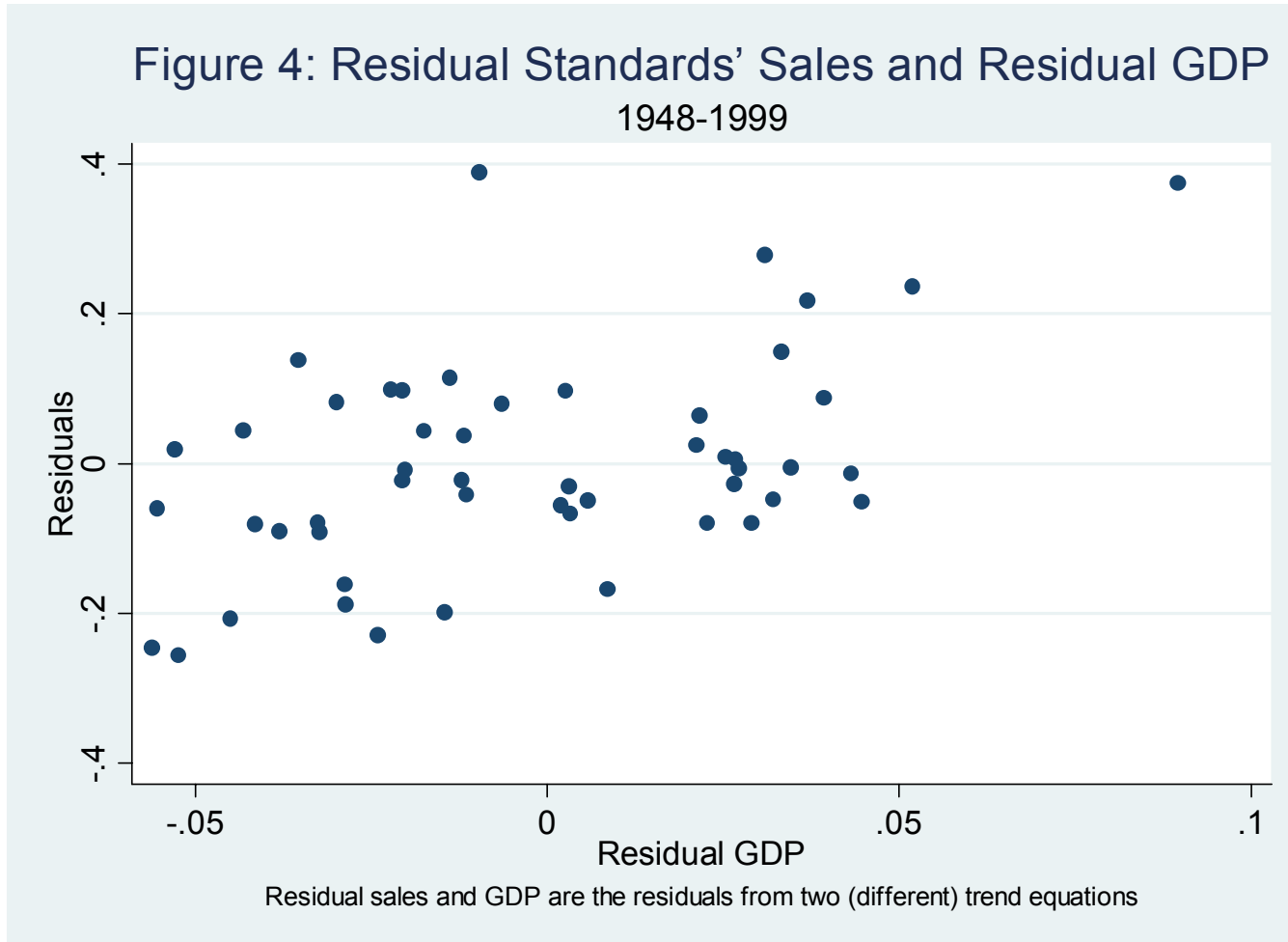


Analysis

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- We fitted a trend to GDP, sales of standards and standards production.
- There was no relationship between production and GDP but for sales and GDP:

Sales of standards decline when the economy goes into recession



Analysis

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- We now explore whether there could be a long term relationship between production and GDP by estimating an error correction model (ECM).

$$\Delta \text{Log}(SP_t) = -25,5^{**} + 0.66\Delta \text{Log}(GDP_t) - 0.950[\text{Log}(SP_{t-1}^{**}) - 2.58\text{Log}(GDP_{t-1}^{**}) + 0.033\text{TREND} - 0.48\text{SINGLE MARKET}^{**}]; \quad R^2 = 0.57$$

- where SP denotes standards production, Δ denotes the first difference, ^{**} significance at the 1% level, (insignificant variables are insignificant at the 5% level). The residuals from the long term relationship are stationary, indicating cointegration.
- The results suggest that although standards production does not respond to short term changes in GDP, there is a long term relationship. These are tentative results, but they are also plausible and suggest a long term drop in GDP will eventually reduce the flow of standards coming onto the market.

The Impact of the Crisis on Standards

- There will be downward pressure on people's demand for environmental standards, even health and safety standards. Not only has consumer income declined, but governments will become increasingly desperate to raise revenue and cut back on expenditure as we move into 2011 and beyond, i.e. beyond the initial fiscal stimulus.
- In the private sector, SSOs will see a reduction in revenues and this may lead to mergers.

In Financial Markets

- The crisis has undermined the belief in the efficiency of the unregulated free market system.
- In the short term there will be a strengthening of the financial regulatory system. But this needs standards to regulate,
- The standards relate to capital asset ratios and the grading of assets. Both have been found wanting. Public regulatory agencies cannot with confidence rely on the CRAs to grade assets.

.... and more generally

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- But this move to regulation is likely to be imitated in other areas such as health, safety and environmental protection. Regulation is back in fashion and regulation is based on standards.
- Just as the private sector cannot be trusted to act without regulation so private SSOs will carry less trust, less credibility. There will be a move to public standard setting bodies.

The International Dimension

- The crisis is an international crisis, the solution requires internationally co-ordinated actions.
- This may be difficult – but will emphasise international standard setting and regulation. In finance this should give a boost to international organisations such as the Bank of International Settlements and also perhaps the ISO.
- Yet following the World wide downturn there may be a move to protectionist measures. Standards form one of the easiest of protectionist measures to implement but this requires national, not international standards, designed to form a barrier to trade.

Schumpeter & Kondratief

- The Kondratief is approximately a 50 year cycle, the gap between the 1930s and now just fits this. Schumpeter explained this in part by innovation.
- At this point in the cycle there are few incentives to innovate. However, later as firms go bankrupt, factors of production, labour and capital, will be freed up for new usages. It is at such time that firms will be looking for new innovations, new products to introduce.

Schumpeter & Kondratief

- Yet Schumpeter and Kondratieff's analyses would suggest that it will not be before we see a major innovation of the order of the railroad or electricity that we will see a major burst in innovations. In the 1970s we had the microchip, secondary innovations followed, the PC, laptop, mobile phone, the Internet and the Web.
- These generated the long boom in the Western developed countries from the 1990s onwards and possibly too a boom in standardization as many new products with new technologies appeared. What is the next innovation of the first magnitude?

A Changing World Order

- Finally the crisis will probably accelerate a trend which has been apparent for some years. A drift of economic and indeed political power to the East. Power has shifted east, possibly to the EU and Russia, more certainly to the Gulf states and China and India.
- The Gulf states are based on oil, they are unlikely to be major manufacturing centres nor centres of product innovation. This is less so for the Asian countries. They are becoming major players in the World economy and over the next two decades their impact on standards and standardization will increase. Whether this will be in co-operation with ISO, the EU and each other or whether they will pursue more separate paths remains to be seen.

IEC: New Proposals by Proposers

	2008	2007	2006	2002	1999
Germany	16	27	26	13	11
Japan	25	23	26	11	18
US	15	18	20	29	19
UK	5	3	4	11	8
France	12	3	4	13	4
Swiss	1	0	6	0	0
Other EU	10	15	10	15	14
Korea	11	7	3	2	0
China	26	4	2	1	0
Other	44	10	0	5	1
EU	43	48	44	52	37
Total of above	121	100	101	95	74
% EU	35.5	48.0	43.6	54.7	50.0
% US	12.4	18.0	19.8	30.5	25.7
% Japan	20.7	23.0	25.7	11.6	24.3
China + Korea	30.6	11.0	5.0	3.2	0.0
O/A TOTAL	165	183.00	159.00	na	na