

---

# ‘The Great Depression’ *versus* ‘The Great Recession’. Financial crashes and industrial slumps<sup>1</sup>

● ANTONIO PAREJO

Universidad de Málaga

● CARLES SUDRIÀ

Universitat de Barcelona

## Introduction

The terms included in the title («Great Depression» and «Great Recession») are being widely used to refer to the two most serious economic crises in contemporary world history, those initiated in 1929 and 2007<sup>2</sup>. We do not pretend in this article participate on the current debate about their causes or ways out. As the second part of the title indicates, our focus is related to industrial sector performance during both periods. Industry is not usually considered among the possible culprits of these economic downturns. Although players may have been different, the speculative and financial origins of the deep recessions that capitalist economies suffered after 1929 and 2007 are not in doubt. The attention given here to the industrial sector is justified by the very title of this journal and by our own interest in the subject, along with that of many of its readers. In any case, regardless of the causes of both crises and the channels of transmission from the financial economy to the «real» or «productive» economy, it is clear that in both cases industrial activity was to some extent affected by a situ-

1. What follows is an open text. The authors intend to update it periodically by adding new data for the current situation (available, on completion of this article, up to July 2011). These extensions would be posted on the website of the *Revista de Historia Industrial* ([www.ub.edu/rhi/](http://www.ub.edu/rhi/)).

2. As far as we know, only Carmen Reinhart and Kenneth Rogoff have suggested an alternative term to the «Great Recession» – the «Second Great Contraction» – which not only directly links current economic events to those of the 1930s (the «First Great Contraction», of course) but also implies that today’s financial and economic crisis should be considered in a different way (and as something much more serious than a recession). Reinhart & Rogoff (2009).

ation originated in different and distant areas (economically and geographically). At least that is what has happened in the most developed economies accordingly to indicators such as industrial production indices (IPIs), rates of investment, demand behaviour, business sector density or employment levels.

Of these variables, this article will focus on the first: the course followed by IPIs in both situations (the Great Depression and the Great Recession). As we note in more detail later on, this is not an original exercise – although we hope that it will be useful enough to reach a valid conclusion about the role played by the industrial sector (especially the manufacturing subsector) in this type of crisis<sup>3</sup>. The comparison will be made at world level and for selected countries, including the most industrialized and some of the so-called 'emerging'. Spanish case has been also included in this comparison.

### **Preliminary considerations**

Our comparative and industrialist approach requires contextualization. Prior to begin the analysis, we have to consider the differences between the two periods in three relevant aspects: prevailing technological paradigms, weight of the industrial sector on the economy, and world distribution of manufacturing activities.

Regarding to technological paradigms, the interwar period coincided with the culmination of the Second Industrial Revolution, i.e. when the breakdown innovations on manufacturing and energy that had sprung up in the final decades of the 19th century were reaching maturity: new chemical and metallurgical technologies, electricity, automobiles, etc. The difference with regard to today's situation is significant for a number of reasons. Firstly, the current technological paradigm (the so-called Third Industrial Revolution) is at a more incipient stage in 2007 than the Second was in 1929. Despite the recent growth of the technology and human capital intensive branches, the leading industries of the second paradigm still contribute the most to the total industrial added value and to worldwide manufacturing trade<sup>4</sup>. An even more ex-

3. The last few years have been published several studies comparing the 1929 crisis and that of 2007/2008. These range from those which cast doubts on the viability of this type of analysis – see Schlenkhoff (2010), for example – to those which, accepting the academic legitimacy of such an approach, focus on specific aspects, like fiscal and monetary policies, the fate of financial intermediaries or the ways of the spread of the crisis. Most of them focus on the main economic indicators (e.g. the evolution of GDP or exports and imports). Some of the most useful of these comparative approaches are those by Aiginger (2010), Almunia et al. (2010), Crafts & Fearon (2010), Gros & Alcidi (2009), Grossman & Meissner (2010), Mitchener & Mason (2010), Romer (2009) and Temin (2010).

4. There are large differences on industry structure between emerging and advanced economies. In the former, the most technologically complex sectors contribute with rates of over 25% of the added value, while in the latter the figure is fewer than 10%. Manufacturing in

treme and worrying phenomenon is affecting energy. At most capitalist economies, energy consumption is still dominated by fossil fuels (coal and especially oil). The necessary commitment to cheap, clean energy based on renewable resources is no more than a pledge for the future. Right now in both developed and emerging economies, renewable energy (in particular wind and solar energy) accounts for barely 10% of final energy consumption<sup>5</sup>.

Secondly we have to look at the weight of the industrial sector within the economy, a weight that is today significantly different than eight decades ago. Summarizing briefly, in the 1920s the capitalist economies were advancing towards the status of industrialized economies –with the secondary sector leading total added value and employment – a situation they reached after the Second World War but which was already close on the eve of the Great Depression. Nowadays, however, all the advanced countries are tertiary economies (in sociological terms, post-industrial societies) in which the service sector absorbs most working resources and contributes the highest percentages to GDP.

Figure 1 shows how between 1967 (with the second technological revolution in full swing) and 2007 (on the eve of the Great Recession and with the third revolution at their beginnings), the secondary sector's contribution to world GDP fell by over ten points, dropping from a little over 38% to just under 28%. If we extend the period further into the past, we find a starting point at the end of 19th century fairly similar to the situation at the beginning of the 21st in terms of both industrial contribution to GDP and to employment. In the United States, Japan and Western Europe the two variables fluctuate – then and now – around the 25% mark (about three points below the world average as shown in Figure 1), although with one important difference: the first phase was at the upwards slope of an inverted U, and the second at its downwards slope. The industry's highest weight in terms of GDP and employment (between 40% and 45%) were reached by the most advanced countries between 1950 and 1970<sup>6</sup>.

Briefly, the economies which in the course of the 19th century experienced the first and second industrial revolutions are today in the way to deindustrialization. Although most of them still occupy the top positions in the

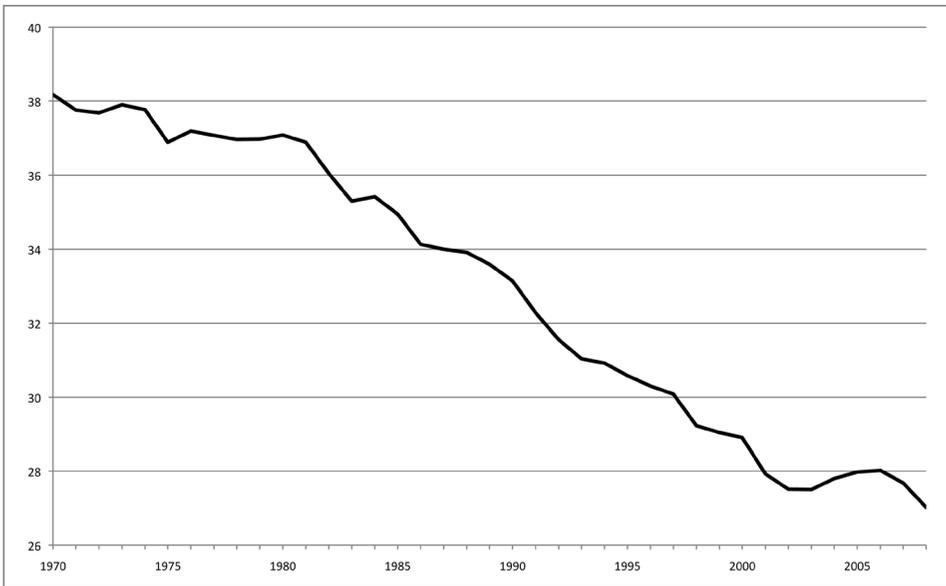
---

the richer countries is still dominated by activities of low and medium technological complexity, while new industrialized ones give priority to the more advanced technologies. As regards world trade, in 2007 the value of manufactured products within total exports had already reached 69.8%. Chemical products, cars, equipment and transport material, iron and steel goods and textiles – all manufacturing branches corresponding to the first and second industrial revolutions – accounted for over three-quarters of this figure. See CPB. Economic Policy Analysis. *World Trade Monitor*, December 2010.

5. This has just reached 13% in Spain as we write. Renewable energies are already the main source of electricity generation.

6. See Parejo, Sudrià & Tirado (2010).

**FIGURE 1** • Contribution of the industrial sector to world GDP 1967-2007 (%)



Source: World Bank.

world in terms of per capita income, the changes undergone by their productive economy in the last decades can only be described as radical. The agricultural sector has ended up becoming virtually residual (with barely 5% of employment and added value). The secondary sector, which is what concerns us in this article, although still maintains a relatively significant contribution to workforce and GDP in all advanced economies, had reduced too its levels in the last three or four decades. Services have benefited from both reductions.

Nevertheless, we have to be careful with terminology. «Deindustrialization» in particular is an extraordinarily ambiguous term: industrial historians tend to use it to describe terminal processes, usually of a regional or local character, that finally led to a situation of generalized economic crisis. However, this correspondence between industrial decay and economic contraction has lost its previous validity, at least referred to countries as a whole<sup>7</sup>. This is

7. The view would be different if we use industrial districts or local production systems as units of analysis. In this case the typology may vary greatly, although generally speaking those areas that have remained bound to the second technological paradigm are finding it very difficult to grow or even survive (Detroit being a case in point), while those which evolved towards the third technological paradigm or originated it are coming through the Great Recession with better results (Silicon Valley would be an example still within the United States). As far as Spain is concerned, another example may illustrate the situation more clearly. The companies located in the Parque Tecnológico in Andalusia (all of them attached to the third tech-

the case for the rich countries in the period considered in the previous figure, where deindustrialization has come about through the transfer of workforce and added value to other sectors (particularly the tertiary sector), but without this phenomenon implying a lost in terms of income or welfare.

This transition towards a service-based economy has come about alongside the gradual disappearance of the frontiers between sectors. Right now it is difficult to know where extractive or agricultural activities end and manufacturing activities begin, and then at what point services replace manufacture. This is just one good reason among others for rethinking the utility of the analytical tools proposed by Colin Clark, with three independent large-scale production sectors. It may well have been suitable for studying the first and second technological revolutions, but it is not suitable for analyzing the third.

A third and final distinctive feature remains to be considered. It is just as important as the previous two: the world distribution of the industrial product. The Great Depression came about after a period which saw the unstoppable rise of the United States towards the industrial leadership of the world. Around 1930 approximately 42% of the world's entire industrial product was generated there, placing the United States well above Britain (9.4%), Germany (11.6%) and France (6.5%). The United States boom contributed to rise the concentration of industrial activity towards an exceedingly high level on the eve of the 1930s. At that time the four countries mentioned above accounted for almost 70% of the entire world industrial product, a percentage that went up by another ten points if we add other European countries now integrated in the European Union.

The indisputable western (US-European) dominance of the 1920s has given way to a much more balanced situation at the start of the third millennium. Table 1 shows the world distribution of the industrial product in 2007. Although the leading role of the countries of the First and Second Industrial Revolutions is still important (about 42% is accounted for by Western Europe-United States), the former hegemony is beginning to appear less secure due to the emergence of Asian countries, among which China's prominence is becoming more and more relevant. Obviously the previous distribution also states the extreme industrial weakness of the rest of the world, especially Africa and central Asia, the only exceptions being Australia and New Zealand in Oceania along with a few Latin American countries such as Brazil and to a less extent Chile, Argentina and Mexico.

---

nological paradigm) are the only ones that have managed to create jobs (at an annual rate of over 1,000 contracts) in a province – Malaga – where the consequences of the crisis on employment have been the worst of Spain (in mid-2011 the unemployment rate was over 30%). For a recent analysis see Catalan, Miranda & Ramón, eds. (2011).

**TABLE 1** - *World distribution of industrial product (%) at the start of the Great Recession*

European Union	20.2
East and Central Europe	5.0
United States	21.7
Latin America	6.4
Japan	11.6
China	9.2
Rest of Asia	17.0
Africa and Middle East	6.5
Rest of the World	2.4
<b>World</b>	<b>100.0</b>

Source: International Yearbook of Industrial Statistics 2007.

**TABLE 2** - *World distribution of manufacturing exports (by continent) in 1928 and 2007*

	1928	2007
Europe	47.0	38.8
America	30.6	29.6
Asia	15.5	25.0
Africa	4.0	2.5
Oceania	2.9	4.1

Source: see text.

The world distribution of industrial product shown in Table 1 can be rounded off with a mention of a related variable: foreign trade. Specifically, Table 2 compares the distribution of manufacturing exports by continent in the periods immediately preceding the start of the Great Depression (1928) and the Great Recession (2007).

Comparing the figures in Table 2 with those of location of the industrial activities not really significant differences can be found, especially if we take into account the fact that behind each continental group there is a small number of countries: the big three European industrial economies account for most of «Europe» and the United States for almost 25% of «America» at both dates. As in industrial added value, the dominance of the North American-Western European axis remains in place as far as exports are concerned. The loss of just over eleven points (from 77.6% to 66.2%) after eight decades, basically in favor of the Chinese economy, being significant, does not justify

the conclusion that the export model led by the most advanced economies since the end of the 19th century has been overthrown<sup>8</sup>.

### Financial crises and industrial slumps

To begin this comparative study of the biggest industrial crises of the last hundred years it is worth to recall the leading role played by cycles in the evolution of contemporary capitalism. As we know, western economic history of the last two centuries includes not only periods of expansion but also others marked by deep contractions in productive activity. These medium and long-term cycles were already described in the second half of the 19th century and the first decades of the 20th by scholars like Juglar, Kitchin, or Kondratieff. Since then, the study of economic cycles has generated a wide-ranging literature with a number of theoretical models concerned with their role in economic growth that coexist, not always comfortably<sup>9</sup>. These approaches tend to disappear from the historiographic literature for decades only to return from time to time, almost always during periods of recession or depression such as today's. Since 1873 at least, the most serious crises involving the secondary sector – these in which the destruction of the business and the loss of jobs reached the greatest proportions – have shown a similar aetiology and development<sup>10</sup>. As mentioned earlier, the typical process usually includes a financial and/or speculative crisis originated in a particular country, with each cyclical episode starting in one of the biggest western economies: in chronological order, Great Britain, Germany and the United States. The crisis then spreads in an irregular way both geographically and by sector (i.e. to other capitalist economies and other productive activities), without the course followed or the repercussions necessarily having to be similar in each country or sector.

The contagion, at least since the end of the 19th century, can be explained by the gradual integration of national and international markets which initially brought about the transport revolution, and had an immediate effect on the mobility of production factors, work and capital. This mobility, already detected in the first globalization (from the 1870s) and reinforced during the second (from the last decade of the 20th century onwards), has had a definite

8. The data come from the World Trade Organization website: [www.omc.org](http://www.omc.org) ([www.wto.org](http://www.wto.org)).

9. A recent summary of the role of economic cycles according to various economic theories can be found in Korotayev & Tsirel, (2010). See also classic studies such as Schumpeter (1939), Kuznets (1966) and Maddison (1991).

10. A detailed analysis of the financial crises of capitalism (most involving an industrial dimension of some importance) can be found in a number of recently published books: Oliver & Aldcroft (2007), Reinhart & Rogoff (2009) and Marichal (2010). In a book which today is a classic, Kindleberger (1978) also dealt with these crises from a historical perspective.

effect in those branches of manufacturing most closely linked to foreign markets or intensive in the use of technology and human capital.

Generally speaking, the sequence we have just summarized is similar to that described by the literature devoted to the contraction periods we are interested in: the 1929 crisis and the financial crisis of 2007. This last event, however, has also generated a kind of bibliography almost absent from previous downturns: the comparison between a process already finished and exhaustively analyzed by economists and economic historians (the crash of 1929 and the subsequent Great Depression) and the current crisis, still ongoing and with an uncertain prognosis<sup>11</sup>.

These comparative exercises have shown the similarities between both periods of depression, and at the same time have served to test whether the arguments used to understand the first crisis may be useful for a better knowledge of the second, in the hope to find a possible way out from the current situation. From this point of view, it is significant – especially for our field – that two of the leading experts on the Great Depression (Ben Bernanke and Christina Romer) have held posts of political and economic responsibility in the country where both downturns originated<sup>12</sup>. This has all contributed decisively not only to the generally welcome proliferation of this type of comparison but also, and much more important, to the fact that some of the many errors committed in the 1930s with regard to monetary and trade policy have been avoided. The lessons of the consequences of a too tight monetary policy (related to the adherence to the Gold Standard) and of a global increase on tariffs have been learned<sup>13</sup>.

There are two points that studies comparing the crises beginning in 1929 and 2007 have confirmed<sup>14</sup>. The first refers to the different severity of both downturns. If we use the same calendar as that adopted by this article (June 1929/July 1933; June 2007/July 2011), the behaviour of the big aggregates was

11. In spite of have been widely studied, the debate on the origins, evolution, and end of the Great Depression continue as vivid as always. Some of the most recent and brilliant contributions can be found in Bernanke (2004), Eggertsson (2008) and (2009), Ohanian (2009) and Wolf (2010). All these studies include extensive bibliographies for a subject that continues to attract the interest of many specialists. In addition, some of the classic books on the Great Depression, such those by Kindleberger (1985), Temin (1989) and Galbraith (2008), are still very useful.

12. The former as Chairman of the Federal Reserve System, replacing Alan Greenspan; the latter as head of President Obama's council of economic advisors until she resigned in August 2010.

13. As well as the articles listed in footnote 9, recent contributions on both aspects can be found in Eichengreen (2010), Fishback (2010), Mathy & Meissner (2011) and Wolf (2008). The various time scales and speeds involved in overcoming the crisis along with its causes are dealt specifically by Badger (1989), Steindl (2007) and Hatton & Thomas (2010). The crisis in Europe is analysed by Feinstein, Temin & Toniolo (1997) and Clavin (2000) among others.

14. See the articles cited in footnote 3.

**TABLE 3** - *Macroeconomic variables in the Great Depression (1929-1933) and the Great Recession (2007-2011)*

	Great Depression	Great Recession
1. United States. GDP change (%)	-26.5	-5.61
2. United States. Money supply change (%)	-17	+12.5
3. United States. Bank failures (number and % of total banks)	9,096 (50%)	57 (0.6%)
4. World international trade. Change (%)	-65	+5.1
5. Advanced economies. Prices change (%)	-25	+0.5
6. Advanced economies. Average unemployment rate (%)	25.4	8.5

Source: see text.

much more negative in the first episode than in the current one. We only have to look at the indicators shown in Table 3 to see that the Great Depression involved far more negative figures than those presented over the last four years by the Great Recession. Although in both cases most of the data refers to the United States (the origin of both crises), these figures are similar to those of most other advanced economies in the world.

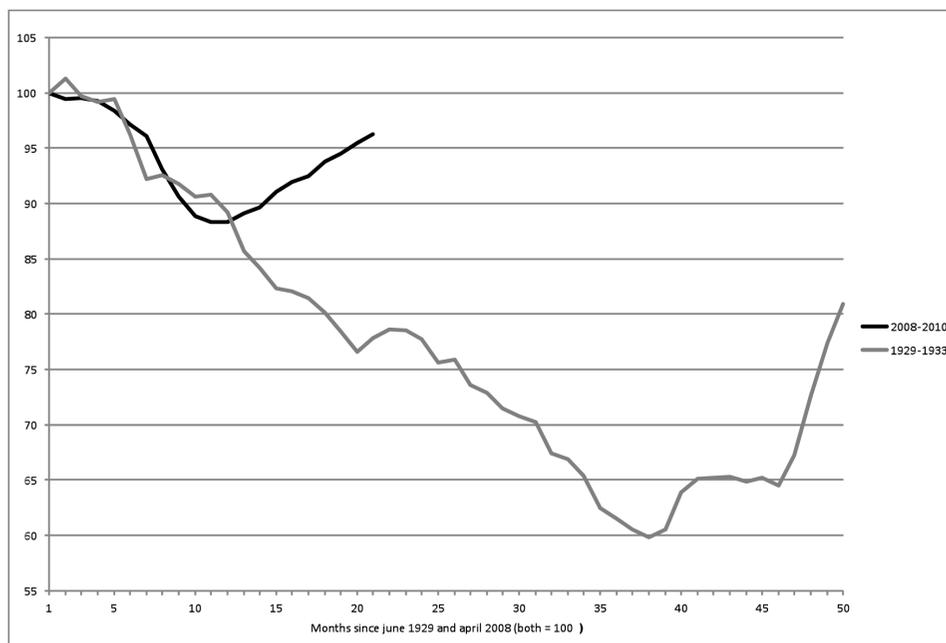
A second consideration also derives from figures included in the table above. Here we have two episodes which, apart from taking place in very different social and economic frameworks, present a number of different if not opposing characteristics. To mention only a few, there is the deflationary nature of the Great Depression, the extraordinary contraction of world trade which took place in the 1930s (possibly the variable that contrasts most with the current situation) and of course the unemployment situation, which was not only much higher then – leaving aside the untypical case of Spain – but also had a much more devastating effect on societies that had no social protection mechanisms.

### **The dynamics of industrial contraction**

After those preliminary remarks, we are ready to present our work. Of the various comparative projects that have appeared over the last four years, the most interesting to readers of the *Revista de Historia Industrial* and the closest to the approach we propose here is the one begun in 2008 by Barry Eichengreen and Kevin O'Rourke with the evocative Dickensian title of «A Tale of Two Depressions»<sup>15</sup>. Their goal was to present a comparative analysis

15. [www.voxeu.org](http://www.voxeu.org).

**FIGURE 2** • *Monthly indices for world industrial production according to Barry Eichengreen and Kevin O'Rourke, June 1929-July 1933 and April 2008-February 2010*



Source: see text.

of different macroeconomic variables (GDP, world trade) including the behaviour of industrial production during the months following June 1929 and April 2008, dates which the authors consider seminal to the onset of both downturns. To analyze this behaviour, Eichengreen and O'Rourke used monthly industrial production indices for the world total along with specific figures for the most industrialized countries. For the first crisis the analysis spanned for fifty months, to July 1933; for the second, if we use identical time scale, the last month considered should have been May 2012. Eichengreen and O'Rourke made several actualizations of their data but the last one was presented over a year and a half ago, which means that their analysis on the current crises stops on February 2010.

Our main goal is to extend the exercise begun in «*A Tale...*», in two ways: expanding the database until the last available figures and introducing some additional variables that Eichengreen and O'Rourke did not considered. The aim is to provide a more balanced picture than that obtained from observing the movements of the IPI in the short term. More precisely our exercise contains three novelties with respect to «*A Tale...*»:

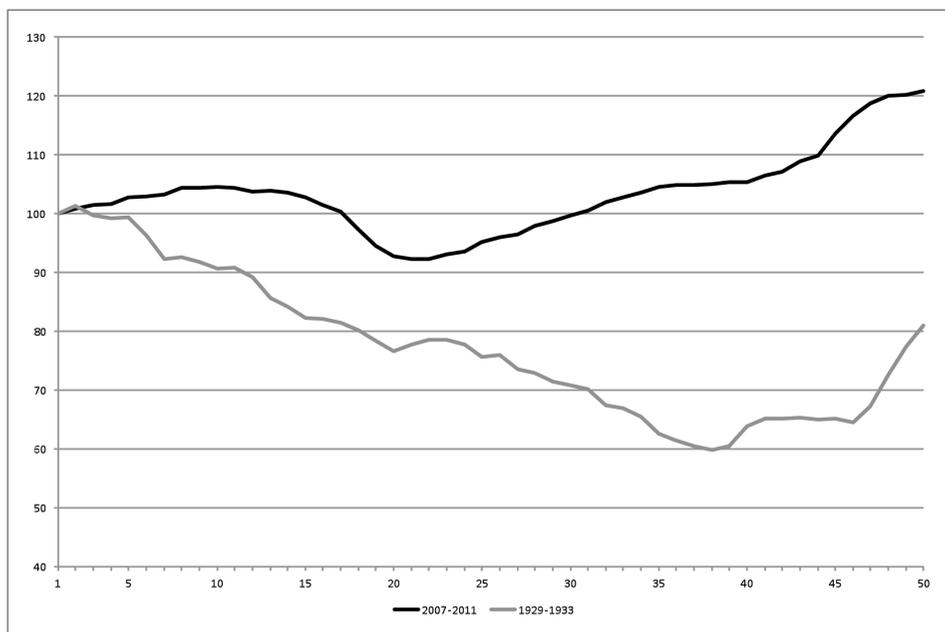
- a) The short-term analysis is maintained at fifty months, which does not affect the chronology used for the first crisis and the Great Depression (from June 1929 to July 1933 inclusive) but does affect the used for the current one. As already mentioned, the analysis in «A Tale...» cuts off in February 2010, having reached only the twentieth month out of the theoretical fifty. To partially avoid this problem, we bring backwards the start of the monthly series corresponding to the 21st century, moving it from April 2008 to June 2007, a date closer to that now considered to be the onset of the US speculative/financial crisis<sup>16</sup>. Bringing backwards the series constructed by Eichengreen and O'Rourke also means that the fiftieth observation now coincides with the latest available estimation at the time of writing (July 2011).
- b) Along with the short term perspective, we introduce a medium-term analysis capable of providing a framework for both crises on a wider time scale. For the first episode we take from the end of the First World War (1920) to the beginning of the Second (1940); and for the second one, from the middle of the last decade of the 20th century to the early years of the second decade of the 21st (1995-2013), which of course means that we have had to use the latest available forecasts for industrial product growth for the next two and a half years. Knowing the variability of the IPIs, we believe that to add this wider perspective is worth, even though it has meant dealing simultaneously with highly aggregated (monthly but for the world as a whole) and disaggregated (annual and by country) data. We hope that the short and medium time perspectives (fifty months and twenty years) will enrich each other.
- c) Finally, whereas in «A Tale...» the accent was on the worldwide performance of the industrial production index, here we are also dealing with regions and countries<sup>17</sup>.

The result of adjusting Eichengreen and O'Rourke's series is shown in Figure 3. This is the most aggregated of the possible estimations: the evolution of the world industrial production index for fifty months starting from June 1929 and June 2007. The graph highlights the differences between the two downturns for industrial activity. As far as the secondary sector is concerned, the Great Depression was much more serious than the Great Recession has been so far. Note

16. Although there is no definitive consensus among experts as to the onset of the financial crisis, most of them put its origins at mid-2007, an intermediate date between February, when the Federal Reserve first warned of the problems involved with subprime mortgages, and December, when the United States technically entered into recession.

17. «A Tale...» did in fact include data of the IPIs of the major industrialized economies, but the last estimation published was that of September 2009.

**FIGURE 3** • *Monthly world industrial production indices, June 1929 to July 1933 and June 2007 to July 2011 (June 1929 and June 2007=100) (months 1 to 50)*



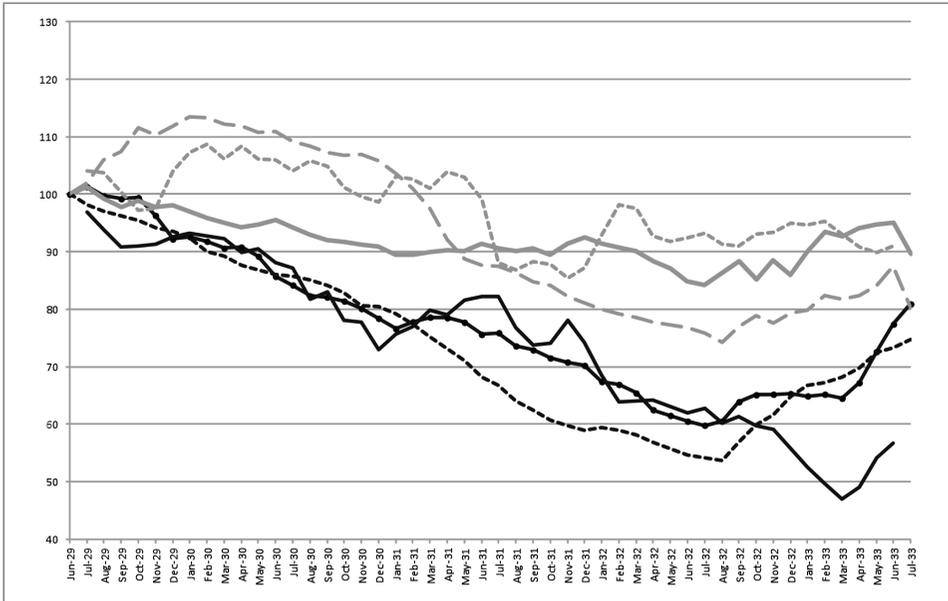
Source: see text.

that in the fifty months considered between 1929 and 1933, not only was the starting figure not regained (the IPI for the summer of the second year cited barely reached 80), but it even fell by as far as 40% in the final months of 1932, something that has not happened in the months that have gone by between June 2007 and July 2011. Indeed the world IPI continued to grow until October 2008 (although at a moderate rate) and then fell below the starting figure throughout the following year. But in December 2009 it had again regained the starting point, increasing vigorously until at least the spring of 2011, to become much less dynamic afterwards, according to last available data.

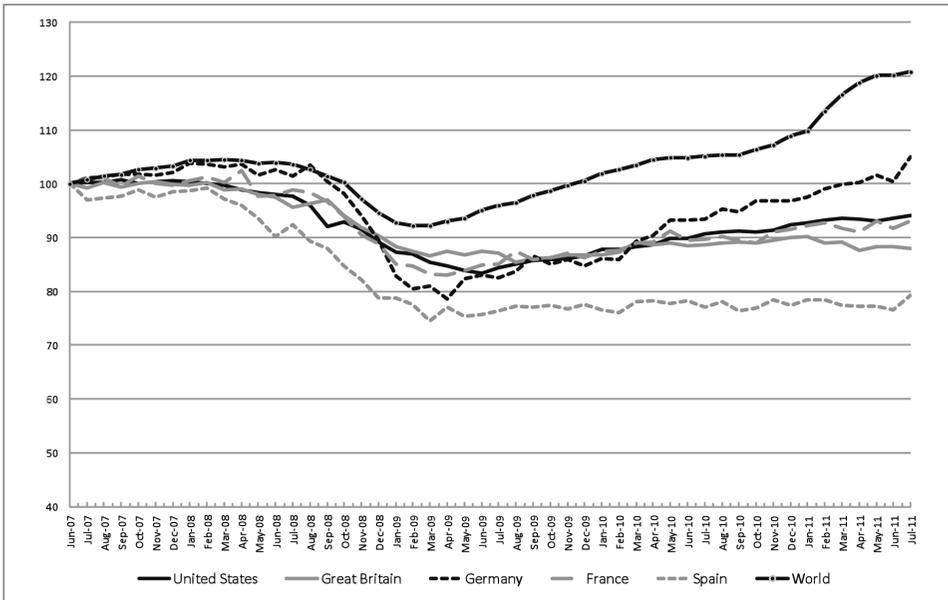
At this point we should remind several remarks already noted, especially differences on the weight of the industrial sector within the economy and on spatial concentration of the manufacturing activities between one situation and the other. Only by taking these factors into account can be accurately approached this highly aggregated data. The fall and subsequent recovery of the 1930s was closely linked to the fate of the most industrialized and richest countries in the world, headed by the United States, while in the recent years both the milder contraction and the strong subsequent recovery is directly related with the course followed by the so-called emerging economies, identified as the group formed by the four BRIC countries (Brazil, Russia, India and

**FIGURE 4** ▪ *Monthly industrial production indices (June 1929 and June 2007 = 100)*

*a) June 1929-June 1933*



*b) June 2007-July 2011*



Source: see text.

China), those Asian countries whose development began earlier (South Korea, Singapore and Taiwan), a few Latin American and African countries such as Argentina, Chile, and South Africa.

This is why, when we move from world total to data by country, the view of both crises becomes more precise. We have already noted the extremely high level of concentration of manufacturing activity in the early decades of the 20th century. Now Figure 4a shows the pathway followed by the four countries mentioned earlier (the United States, Great Britain, Germany and France), which at that time accounted for around 70% of the world's industrial product.

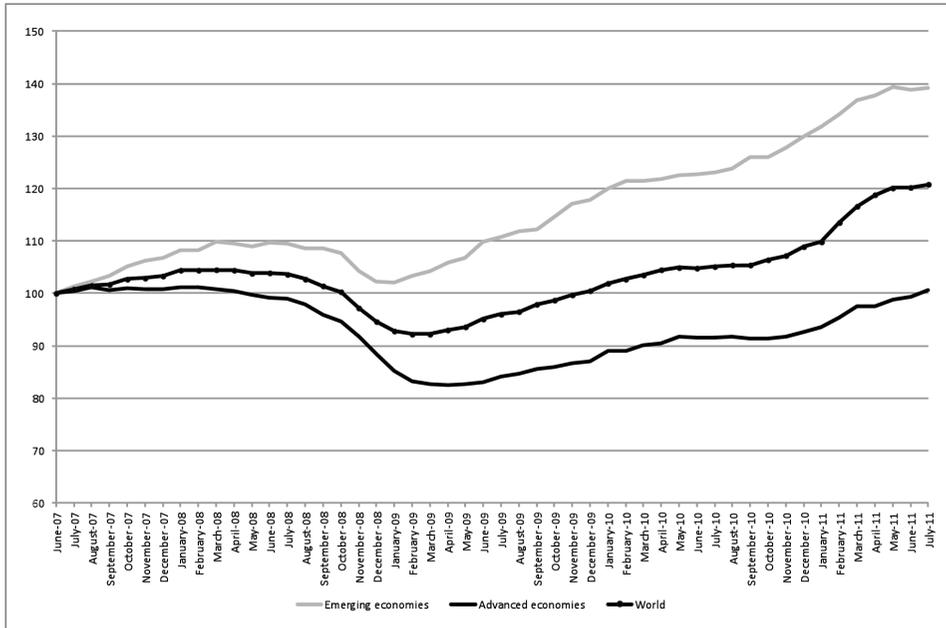
If we remember that the United States alone accounted for 42% of worldwide industrial added value, we should not be surprised by the similarity between the series for the US and that for the world. However, it may be surprising to see the variety of situations brought about by the crisis in the secondary sector of the most industrialized countries of Europe. In this respect three features stand out and, despite being well known, worth to be highlighted: the low impact of the crisis on British industry, the big difference between Germany and France on the onset date of the recession (that same summer of 1929 for Germany and the autumn of 1930 for France); and the strength of the German recovery from the end of 1932 onwards.

The Spanish case allows us to enrich our discussion. During the years following the crash, Spanish industry – which then accounted for barely 1% of world production – withstood the effects of the crisis until the summer of 1931, when it began to fall at very moderate rate. Hence the Spanish monthly IPI for these fifty months showed an annual rate of growth (-1.18), quite better than the world average (-5.44).

So, what is happening in the current crisis? The disaggregation of the world index into two big regional units – advanced economies (the thirty OECD countries) and emerging economies (the BRICs) – allows to explain the unusual nature of the IPIs' most recent course. The main point is the different behaviour which the emerging economies are exhibiting compared to the old industrialized countries (Figure 5). As can be observed, in the latter countries industrial contraction begun in 2008 and was at first even more intense than that experienced after June 1929. Fortunately, it stopped before worsen further, but only when it had already reached almost 20% in these countries. Recovery has also been weaker than in the emerging economies: at July 2011 highest income countries have still not returned to the levels of industrial production previous to the beginning of the contraction.

This first approach can be made more specific if we move from regional blocks to individual countries. Panel b) in Figure 4 shows the evolution of the IPIs between June 2007 and July 2011 of the same industrialized economies studied for the 1930s. Having both groups of series in the same figure and on

**FIGURE 5 • Monthly industrial production indices, June 2007 to July 2011**  
(June 2007=100)



Source: [www.oecd.org/www.oecd.org](http://www.oecd.org/www.oecd.org)

the same scale allows us to compare the evolution of each country in either periods or that of various countries in every period. It can be seen that there are some quite significant differences; we could almost be talking about opposing behaviours. First we should highlight that dispersion among advanced countries was much more intense in the 1930s than in the current crisis, no doubt as a result of the greater degree of international economic integration and the existence today of a greater coordination of country specific economic policies.

Looking now at individual countries data, we see that in the 1930s there were three countries that initially evolved above the world average (France, Spain and Great Britain) and another two (the United States and Germany) that did remain close to it. In the process that began in June 2007, Germany was also initially the most affected country (alongside with Spain), with a stronger contraction than the world and the other advanced countries until early 2009. In fact, we can say that, despite than the crisis blew up first in US and somewhat in Britain, the magnitude of the industrial downturn during its most acute stage (April 2008-April 2009) was significantly greater in the countries of continental Europe: a cumulative 20% as opposed to 15% in the Unit-

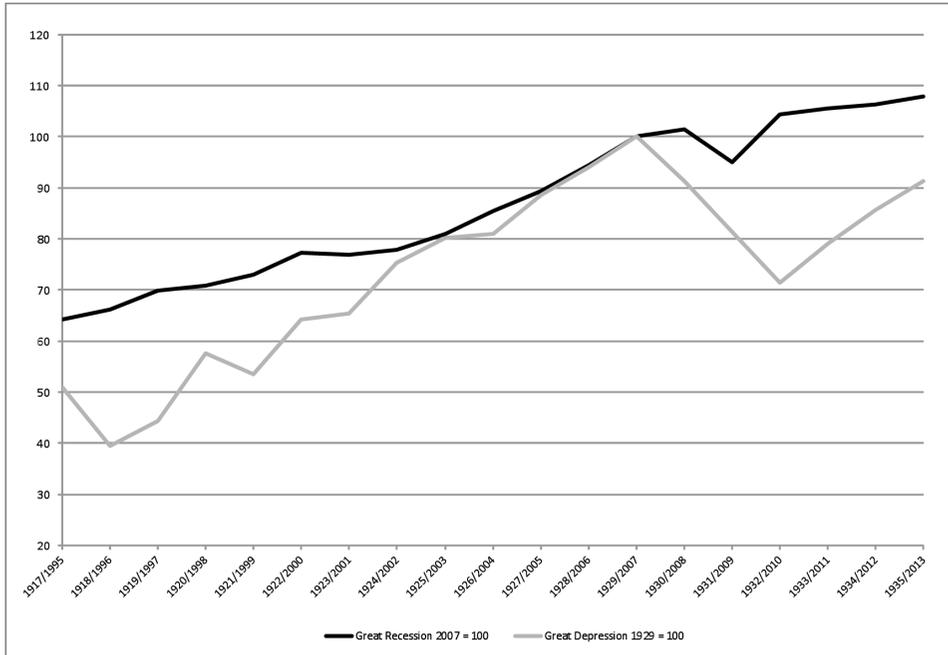
ed States and Great Britain. The recovery also has some unusual features. The most striking is again the greater intensity of the improvement in Germany. Like in the 1930s, after being one of the European countries most affected by the contraction, it is also the one with the most intense recovery, up to the point that, according the last available data, it has recovered the initial level of industrial production, something the other countries analysed have yet to reach. In this context the case of Spain takes on an unusual dimension. Quite unlike what happened in the first crisis, the initial impact of the current contraction on Spanish industry has been similar to that reported for the most advanced countries – a loss of approximately 20%. What is unusual in this case is the recovery, which is simply non-existent in Spain. While our French and German partners have recouped between 10 and 15 percentage points of the losses on their industrial production, Spain's has remained virtually stagnant. This is something that threatens to eliminate the effects of the celebrated convergence process of the last two decades.

### **The two crises in perspective**

We move now from short to medium term analysis, with the aim to weigh up more accurately the depth of both industrial crises in their respective historical context. As so far, we will use the IPI as the main variable, but in this case the yearly rate. The coverage will include two almost complete decades in each case: 1917-1935 for the Great Depression and 1995-2013 for the Great Recession. Just as in the previous section, we will first present the most aggregated data to move then to analyse regional blocks and countries. We have set base in the two years (1929 and 2007) which saw the start of both contractions. In the case of the Great Depression the period considered starts while the First World War was still in progress and finishes in 1935, while for the current contraction it begins in 1995 and must necessarily include two years (2012 and 2013) for which at present we have only highly unreliable forecasts.

Figure 6 shows the evolution of world IPI in the two periods mentioned above. Again it is clear that the crisis of the 1930s was deeper than the current one. What this approach adds to our view, is that both crisis came about after a phase of sustained growth in the industrial product, more intense and with bigger fluctuations in the 1920s than in the decades that preceded the current crisis. The greater instability of the first phase must be related with the conflicting political and social atmosphere that remained after the First World War. Nevertheless, it is still significant that the industrial expansion associated with the spread of the second technological revolution was much more intense than that set in motion by the third. The above cited differences on the

**FIGURE 6** • Annual industrial production indices 1917-1935 and 1995-2013 (1929 and 2007=100)



Source: see text

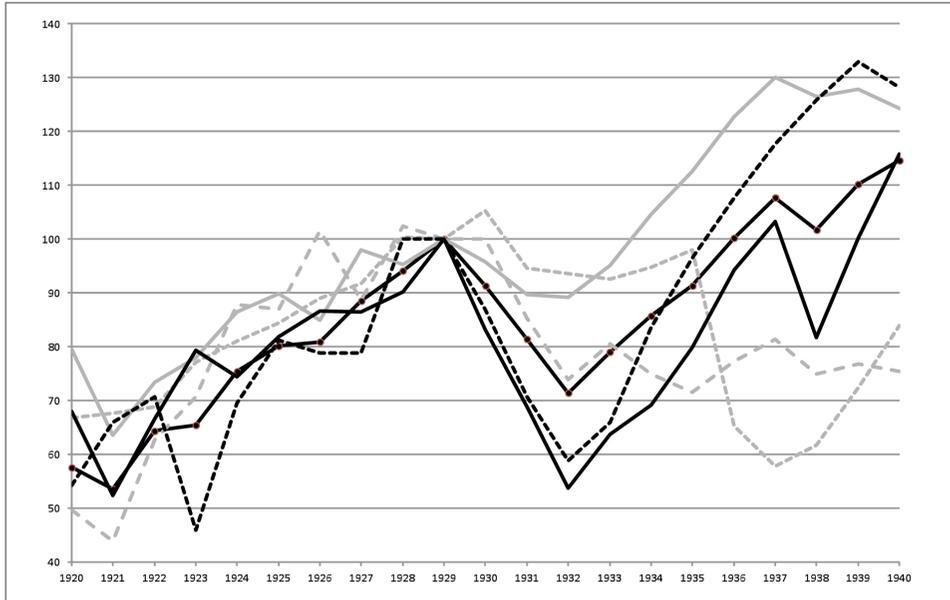
stage of development of each revolution when the respective crises erupted, could explain this diverse evolution.

However, we should again recall that the two indices involve very different degrees of industry concentration and of its weight on the economy. In other words the identification of rich countries with industrialized countries and the preponderance of the manufacturing sector in the economy have definitely become weakened between one phase and the other.

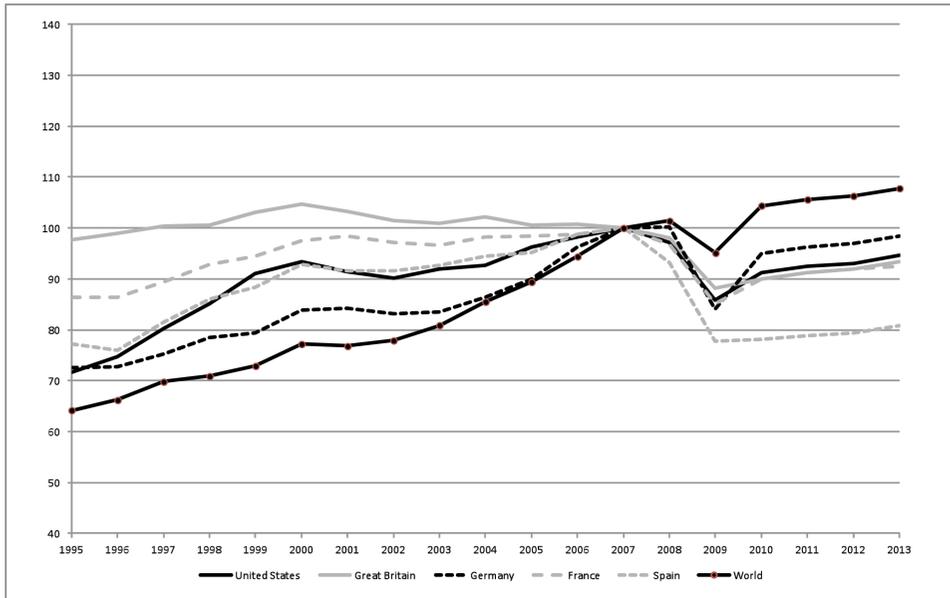
Figure 7 compares the IPIs of the most developed countries (and Spain) for both phases. If we look at the first, the most striking feature we can observe is the ample difference among the growth paths followed by the countries. Growth rates for the decade preceding the 1929 crash, range from the very high of France (7.26%) and Germany (6.33%), to the moderate of the United States (3.94%) and Great Britain (2.32%). Spain, being then a much less industrialized country, achieved a remarkable 5%. It should not be forgotten, however, that the impact of the war was different in each country. Germany, for example, did not recover its pre-conflict level of industrial production until 1924 and underwent extremely irregular growth throughout the 1920s.

**FIGURE 7** - Annual industrial production indices for the four most industrialized countries and Spain (1920-1940) 1929=100.

a) 1920-1940



b) 1995-2013



Source: see text

The fall of industrial production after 1929 was general, and lasted until 1933. From that year until the outbreak of the Second World War evolution was very different for each of the countries studied. While industrial production in Germany grew at an extraordinarily high rate (9.5% annually) between Hitler's ascent to power and the start of the war, in the United States the recovery was interrupted by the recession of 1937/38 to restart again more strongly thereafter<sup>18</sup>. Between 1933, when Roosevelt was installed, and 1940, the overall annual growth rate reached the 8%. France and Great Britain, on their part, reversed the policies they followed before the crash of 1929. France decided to remain tied to the gold standard, and suffered an almost total stagnation of its industrial production (with the annual rate barely reaching 0.02% between 1932 and 1938), while Great Britain achieved sustained growth, exceeding 4.45% annual between 1932 and 1938<sup>19</sup>.

As these were industrialized economies, the evolution of the IPIs was very similar to other main indices (the rates for economic growth and employment, for instance) in the interwar period. We can verify this relationship looking at the industry unemployment rates for the same period (Figure 8). As we can see, industrial employment underwent somewhat sharper fluctuations than production, which would confirm that employment is always the first victim of any economic contraction. Broadly speaking, however, the United States along with Great Britain, France and Germany created or destroyed employment at a similar rate to which their industrial product grew or diminished.

The comparison shows also that Spanish industry followed the same path than the world average and the most industrialized economies until the end of the 1920s. As we already know, during the years following the crash Spain performed quite better than the average, a relatively satisfactory evolution that was cut short by the outbreak of the Civil War. The conflict and the autarkic economic policy embraced by the francoist regime afterwards postponed the recovery for more than a decade. Spain's industrial production index would not recover its 1929 level until 1950<sup>20</sup>.

Let us move now to the current downturn. Figure 7b shows the evolution of the industrial production for the countries already considered from 1995 to 2013. Annual data confirms that the current crisis has had less impact in the industrial sector than that of the 1930s, and also that both of them came about

18. About Hitler's industrial policy, see Hardarch (1984), James (1989) and Overy (1994). On the U.S. depression of 1937/38, see Badger (1989) and Chapter 6 of Steindl (2004).

19. During the 1920s France had better macroeconomic indicators than Great Britain, a situation that would change noticeably in the following decade. The comparative economic courses of both countries in the interwar period can be followed in Feinstein, Temin & Toniolo (1997) and Clavin (2000).

20. The most recent approach on the Spanish industry ups and downs in this period can be found in Sudrià, Parejo & Tirado (2010).

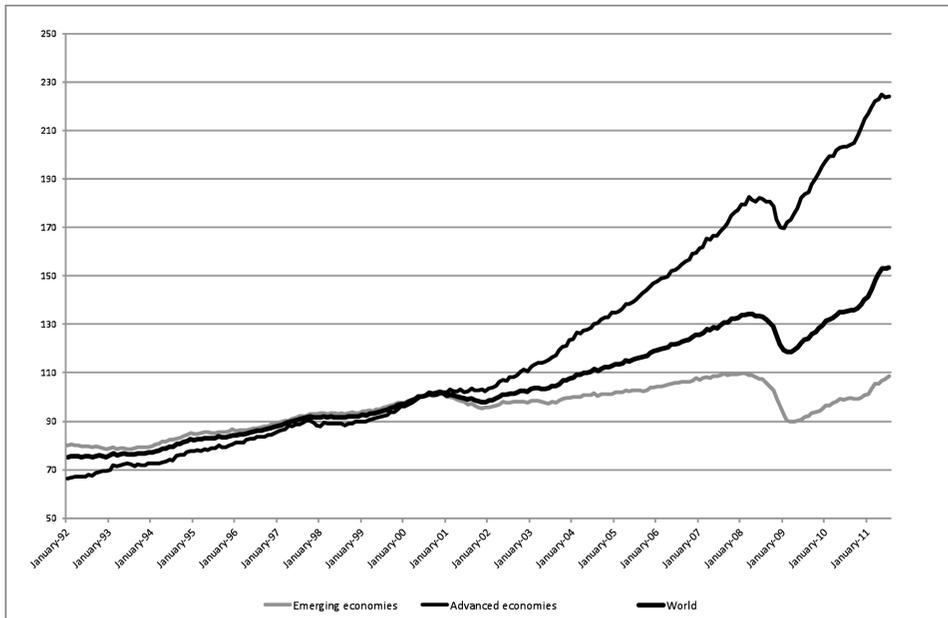
**FIGURE 8 • Industrial unemployment in the four most industrialized countries (% of total workforce) 1920-1940**



Source: Eichengreen & Hatton (1988).

after stages of global growth. Nevertheless this assertion needs to be qualified. As we have already seen, during the latest crises, the most advanced countries had experienced a less intense growth and a much deeper contraction than the world average. Only with regard to the United States and Germany can it be said that there was a previous period of industrial expansion. Neither Great Britain nor France showed significant rates of industrial growth, and Spain to only a small extent. The impact of the contraction has been generalized and considerable, but the perspective is still too short to assess the medium-term effects.

To finish up, Figure 9 shows the monthly data for a similar period (1992-2011) but for three groups of countries: the world as a whole, the advanced economies and the emerging economies. This last graph recalls us that until 2000 – the year of the dot.com crisis – the growth rate of the three IPIs was very similar, just slightly higher than the world average in the most industrialized countries and slightly less in the emerging countries. From that year on the evolution has been completely different. The distances between both groups of countries have constantly grown, but on this occasion in favour of the emerging economies. Between 2000 and 2011, industrial product growth for the latter has approached 7.5% as opposed to only 0.5% for the advanced economies.

**FIGURE 9** • *Monthly industrial production indices 1992-2011 (2000=100)*

Source: see text.

## Conclusions

The comparative exercise carried out in this article was directed to check the behaviour of the most synthetic and aggregated indicator available for the manufacturing sector (the IPI) during the two most critical situations on contemporary capitalism history. The main aim was to update the data compiled by Barry Eichengreen and Kevin O'Rourke in a serie of contributions available on the voxEU website ([www.voxeu.org](http://www.voxeu.org)). Their comparative analysis of the monthly industrial production indices over the fifty months following June 1929 and April 2008 was interrupted in February 2010. It is extended here to cover another year and has been adjusted by bringing backwards the starting date of the second downturn analysed (from April 2008 to June 2007).

The results obtained generally confirm what was noted by Eichengreen and O'Rourke and are similar to those reached by other authors who have dealt with variables relating to industrial activity for the dates analysed. As far as the triggering factors are concerned, we wanted to highlight in our work two elements which we think should be incorporated into the debate: the actual evolution of the industrial sector (especially the manufacturing subsector) in the years preceding each crisis and the stage of development of the prevailing tech-

nological paradigm when the productive contraction came about. Neither should we forget the transformations the world economy underwent between the Great Depression of the 1930s and the Great Recession of first decade of the 21st century. Of these transformations, there are at least two fundamental ones that we need to take into account when weighing up the results of our comparative exercise: a) the transition from an industrialized economy to a service-based one, and b) the changes in economic leadership (industrial in this case) at world level. In both cases it should be stressed that significant if not radical changes have come about. About the deindustrialization process, it is worthy to note that, although the decrease in the contribution to GDP and employment is undeniable, within the framework of the third technological revolution, activities considered as tertiary in official classifications should strictly speaking be included in the secondary sector<sup>21</sup>. As regards territorial location, the emergence of different economies in Asia and Latin America (China and Brazil above all others) has not prevented the United States, the European Union and Japan from continuing, at the beginning of the third millennium, to maintain their leadership as the world's great industrial powers, a position that only Chinese expansion seems capable of upsetting in the short term.

We also believe that the comparative analysis should not exclude a study of the influence that one crisis may have had on the other. The main connecting line in this case would certainly be economic policy. There is wide consensus that the experience of the Great Depression, and the studies and debates around it, have turned out to be useful, if only for preventing the same serious mistakes that were made in the 1930s from being made in the fight against the Great Recession. We refer especially to monetary policy (we should not forget the deflationary nature of the Great Depression and the role played then by monetary orthodoxy), trade policy (we need to remember that between 1929 and 1932 protectionist policies contributed decisively to collapse of world trade), and employment policy (in the most industrialized countries unemployment then stood at about 25%, with peaks of 35% and 40% in the United States and Germany, whereas now it is around 8.5%).

Finally we would like to mention the singularity of the evolution of Spanish industry during these critical periods. Conversely to the other advanced countries, Spain has been more adversely affected by the current crisis than it was for the Great Depression. This singularity not only affects industrial production, but also investment, domestic consumption, and especially employment. Unemployment is now much higher in Spain than in other countries with similar levels of income and industrialization. As is well known, the unemployment rate in Spain in early 2010 was twice that of the eurozone: 19% as opposed to 9%, and continues to worsen.

21. This question is dealt in detail by Parejo (2010) for the Spanish case.

*Note on sources*

The IPIs used in this article come from the following statistical sources. For the period 1920-1940: Wall (1936), Miron & Romer (1989), Mitchell (2007), Anuario Estadístico (Yearbook of Statistics) de España (1934) and Carreras (2005). For the period 1991-2011, data have been gathered from the websites of Eurostat, INE, Thomson Reuters DataStream, the International Yearbooks of Industrial Statistics and VoxEu.

**REFERENCES**

- AINGINGER, K. (2010), «The Great Recession vs. the Great Depression: Stylized Facts on Siblings That Were Given Different Foster Parents», *Economics e-journal*, vol. 4, 18, 43 pp.
- ALMUNIA, M.; BENETRIX, A., EICHENGREEN, B., O'ROURKE, K.; RUA, G. (2010), «From Great Depression to Great Credit Crisis: similarities, differences and lessons», *Economic Policy*, 25, 62, pp. 219-265.
- BADGER, A.J. (1989), *The New Deal: The Depression Years, 1933-1940*. London, Macmillan
- BERNANKE, B. (2004), *Essays on the Great Depression*, Princeton, NJ, Princeton University Press.
- BORDO, M.D.; LANE, J.L. (2010), «The Banking Panics in the United States in the 1930s: Some Lessons for Today», *Oxford Review of Economic Policy*, 26, 3, pp. 486-509.
- CARRERAS, A. (2005), «La industria», A. Carreras y X. Tafunell, coords. *Estadísticas Históricas de España. Siglos XIX-XX*, vol. 1, pp. 357-456.
- CATALAN, J.; MIRANDA, J.A.; RAMÓN, R., eds. (2011), *Distritos y clusters en la Europa del Sur*. Madrid, Lid Editorial.
- CLAVIN, P. (2000), *The Great Depression in Europe, 1929-1939*. Londres, MacMillan.
- CRAFTS, N.; FEARON, P. (2010), «Lesson from the 1930s Great Depression», *Oxford Review of Economic Policy*, 26, 3, pp. 285-317.
- EGGERTSSON, G. (2008), «Great Expectations and the End of the Depression», *American Economic Review*, 98, 4, pp. 1.476-1.516.
- (2009), *Was the New Deal contractionary?*, Federal Reserve Bank of New York
- EICHENGREEN, B. (2010), «The Slide to Proteccionism in the Great Depression: Who Succumbed and Why». Working Paper Economic Department Dartmouth College
- EICHENGREEN, B.; O'ROURKE, K. (2009), *A tale of two depressions*. www.voxeu.org.
- FEINSTEIN, C.; TEMIN, P. y TONIOLO, G. (1997), *The European economy between the wars*. Oxford, Oxford University Press.

- FISHBACK, P. (2010), «US Monetary and Fiscal Policy in the 1930s», *Oxford Review of Economic Policy*, 26, 3, pp. 385-413.
- GALBRAITH, J.K. (2008), *El crash de 1929*. Barcelona, Ariel.
- GROS, D. y ALCIDI, C. (2009), «What lessons from the 1930s?», CEPS Working Document, 312.
- GROSSMAN, R.S.; MEISSNER, C.M. (2010), «International aspects of the Great Depression and the crisis of 2007: similarities, differences and lessons», *Oxford Review of Economic Policy*, 26, 3, pp. 318-338.
- HANNA, L.; TEMIN, P. (2010), «Long-term Supply-side Implications of the Great Depression», *Oxford Review of Economic Policy*, 26, 3, pp. 561-580.
- HARDARCH, G. (1984), «Banking and Industry in Germany in the Interwar Period, 1919-1939», *Journal of European Economic History*, 13, pp. 201-234.
- HATTON, T.J.; THOMAS, M. (2010), «Labour Markets in the Interwar Period and Economic Recovery in the UK and USA», *Oxford Review of Economic Policy*, 26, 3, pp. 463-485.
- JAMES, H. (1989), *The German Slump: Politics and Economics, 1924-1936*. Oxford, Oxford University Press.
- (2001), *The End of Globalization. Lessons from the Great Depression*. Londres, Harvard University Press (hay traducción española, Madrid, Turner, 2004).
- KINDLENBERGER, C. (1978), *Manias, Panics and Crashes: A History of Financial Crises*. New York, Basic Books.
- (1985), *La crisis económica, 1929-1939*. Barcelona, Crítica.
- KOROTAYEV, A.; TSIREL, S. V., (2010), «System Analysis and Mathematical Modeling of the World Dynamics: Kondratieff Waves, Kuznets Swings, Juglar and Kitchin Cycles in Global Economic Development, and the 2008–2009 Economic Crisis» *Structure and Dynamics*, 4(1), pp. 5-59.
- KUZNETS, S. (1966), *Modern Economic Growth: Rate, Structure, and Spread*. New Haven, Yale University Press.
- MADDISON, A. (1991), *Historia del desarrollo capitalista. Sus fuerzas dinámicas. Una visión comparada a largo plazo*. Barcelona, Ariel.
- MARICHAL, C. (2010), *Nueva historia de las grandes crisis financieras. Una perspectiva global, 1873-2008*. Barcelona, Debate.
- MATHY, G.P.; MEISSNER, C.M. (2011), «Trade, Exchange Rate Regimes and Output Co-Movement: Evidence from the Great Depression», NBER Working Papers 16925, National Bureau of Economic Research
- MIRON, J.A.; ROMER, C.D. (1989), «A New Monthly Index of Industrial Production, 1884-1940», NBER Working Paper 3.172.
- MITCHELL, B.R.M. (2007), *International Historical Statistics 1750-2005*, 3 vols. Palgrave Macmillan
- MITCHENER, K.J.; MASON, J. (2010), «Blood and treasure: exiting the Great Depression and lessons for today», *Oxford Review of Economic Policy*, 26, 3, pp. 510-539.

- OHANIAN, L.E. (2009), «What –or Who – Started the Great Depression», *Journal of Economic Theory*, 144, pp. 2.310-2.335.
- OLIVER, M.J.; ALDCROFT, D.H. (2007), *Economic Disasters of the Twentieth Century*, Cheltenham, UK/Northampton, USA.
- OVERY, R. (1994), *War and Economy in the Third Reich*, Oxford University Press.
- PAREJO, A. (2010), «La industria española entre la segunda y la tercera revolución tecnológica. Un análisis territorial desde 1960 a comienzos del siglo XXI», en C. Sudrià, A. Parejo y D. Tirado: *La distribución territorial de la actividad industrial en España: una visión a largo plazo*, Centre d’Economia Industrial, Barcelona, pp. 59-122.
- REINHART, C.; ROGOFF, K.S. (2009), *This Time is different: Eight Centuries of Financial Folly*. Princeton, Princeton University Press.
- ROMER, C. (2009), «Lessons from the Great Depression for Economic Recovery 2009», paper presented in the Brookings Institution, Washington, D.C.
- SCHLENKHOFF, G. (2010), «Can Great Depression Theories explain the Great Recession?» MPRA, paper n° 19781.
- SCHUMPETER, J. (1939), *Business Cycles*. New York, McGraw-Hill.
- SHOMALI, H.; GIBLIN, G.R. (2010), «The Great Depression and the 2007-2009 Recession: The First Two Years Compared», *International Research Journal of Finance and Economics*, 59, pp. 15-22.
- STEINDL, F.G. (2004), *Understanding Economic Recovery in the 1930s. Endogenous Propagation in the Great Depression*. University of Michigan Press.
- (2007), «What Ended the Great Depression? It Was Not World War II», *The Independent Review*, 112, 2, pp. 179-197.
- SUDRIÀ, C.; PAREJO, A.; TIRADO, D. (2010), *La distribución territorial de la actividad industrial en España: una visión a largo plazo*. Barcelona, Centre d’Economia Industrial.
- TEMIN, P. (1989), *Lessons from the Great Depression*, MIT, Massachusetts (hay traducción española, Madrid, Alianza Editorial, 1995).
- (2010), «The Great Recession and the Great Depression», NBER working paper, n.º 15.645.
- WALL, N.J. (1936), *Monthly Index of World Industrial Production, 1920-1935*. US Department of Agriculture, Washington D.C.
- WOLF, N. (2008), «Scylla and Charybdis. Explaining Europe’s exit from gold, January 1928-December, 1936», *Explorations in Economic History*, 45, pp.383-401.
- (2010), «Europe’s Great Depression: The Failure to Coordinate Economic Policies after the First World War», *Oxford Review of Economic Policy*, 26, 3, pp. 339-369.



## ***«The Great Depression» versus «The Great Recession». Financial crashes and industrial slumps***

### ABSTRACT

This article analyzes and compares the performance of the industrial sector during the «Great Depression» of the 1930s and the «Great Recession» that began in 2007 using the best available synthetic indicator, the Index of Industrial Production. The main objective is to update and extend the exercise presented by Barry Eichengreen and Kevin O'Rourke in 2009 and 2010 in the *voxEU* website. In addition to extending the analysis of the «Great Recession» with the latest monthly figures available for the world as a whole, we have introduced regional and country level analysis, and also a broader view using annual data for periods of around twenty years. The results generally confirm what was observed by Eichengreen and O'Rourke and other authors who have dealt with industrial activity. However, our approach emphasizes two elements that we believe should be incorporated into the debate: the actual development of the industrial sector (especially the manufacturing subsector) in the years preceding each crisis and the stage of development of the prevailing technological paradigm when the productive contraction occurred.

KEY WORDS: Comparative Economic History, Industrial Activity, Great Depression, Great Recession. JEL Codes: N-10, E-23, N-60.



## ***La «Gran Depresión» versus la «Gran Recesión». Cracs financieros y crisis industriales***

### RESUMEN

Este artículo analiza y compara la evolución del sector industrial durante la «Gran Depresión» de la década de 1930 y la «Gran Recesión» que comenzó en 2007, utilizando el mejor indicador sintético disponible, el Índice de la Producción Industrial. El objetivo principal es actualizar y ampliar el ejercicio presentado por Barry Eichengreen y Kevin O'Rourke en 2009 y 2010 en el sitio web *voxEU*. Además de ampliar el análisis de la «Gran Recesión» con los últimos datos mensuales disponibles a nivel mundial, hemos estudiado la evolución por países y hemos incorporado una perspectiva más amplia utilizando datos anuales para periodos de alrededor de veinte años. Los resultados confirman, en general, lo observado por Eichengreen y O'Rourke y por otros autores que se han ocupado de la evolución de la actividad industrial en estos años. Sin embargo, nuestro enfoque nos permite hacer hincapié en dos elementos que creemos que deberían ser incorporados al debate: el desarrollo real del sector industrial (especialmente del subsector manufacturero) en los años que precedieron a cada crisis y el estadio de desarrollo en el que se encontraba el paradigma tecnológico vigente al iniciarse la contracción.

PALABRAS CLAVE: Historia económica comparativa, Actividad industrial, Gran Depresion, Gran Recesión. Códigos JEL: N-10, E-23, N-60.