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**Working Paper**

## The Great Recession vs. the Great Depression. Stylised Facts on Siblings that Were Given Different Foster Parents

WIFO Working Papers, No. 354

**Provided in Cooperation with:**

Austrian Institute of Economic Research (WIFO), Vienna

*Suggested Citation:* Aiginger, Karl (2009) : The Great Recession vs. the Great Depression. Stylised Facts on Siblings that Were Given Different Foster Parents, WIFO Working Papers, No. 354, Austrian Institute of Economic Research (WIFO), Vienna

This Version is available at:

<https://hdl.handle.net/10419/128894>

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## **Abstract**

This paper compares the depth of the Recent Crisis and the Great Depression. We use a new data set to compare the drop in activity in the industrialized countries for seven activity indicators. This is done under the assumption that the Recent Crisis levelled off in mid 2009 for production and will do so for unemployment in 2010. Our data indicate that the Recent Crisis indeed had the potential to be another Great Depression, as shown by the speed and simultaneity of the decline in the first nine months. However, if we assume that a large second dip can be avoided, the drop in all indicators overall will have been smaller than during the Great Depression. This holds true specifically for GDP, employment and prices, and least for manufacturing output. The difference in the depth in the crises concurs with differences in policy reaction. This time monetary policy and fiscal policy were applied courageously, speedily and partly internationally coordinated. During the Great Depression for several years fiscal policy tried to stabilize budgets instead of aggregate demand, and either monetary policy was not applied or was rather ineffective insofar as deflation turned lower nominal interest rates into higher real rates. Only future research will be able to prove the exact impact of economic policy, but the current tentative conclusion is that economic policy prevented the Recent Crisis from developing into a second Great Depression. This is also a partial vindication for economists. The majority of them might not have been able to predict the crisis, but it shows that the science did learn its lesson from the Great Depression and was able to give decent policy advice to at least limit the depth of the Recent Crisis.

JEL classification: E20, E30, E32, E44, E60, G18, G28

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# The Great Recession vs. the Great Depression: stylised facts on siblings that were given different foster parents

## 1. Introduction

The aim of this paper is to investigate whether the drop in economic activity in the Recent Crisis<sup>1</sup> has been as large as in the Great Depression of the nineteen thirties. To do this we make use of a new set of data on activity indicators and on policy variables for ten industrialized countries. To make the task tractable we assume that the crisis levelled off in mid 2009 as far as production (GDP) is concerned. This assumption indeed represents the consensus of forecasters and international institutions at present. This consensus also maintains that unemployment will continue to increase in 2010 and therefore we include predicted unemployment for 2010 when we compare employment effects between the Great Depression and the Recent Crisis.

The data show that the drop in activity has definitely been smaller in the Recent Crisis. The crisis had however the potential to become as severe as the Great Depression. This supposition finds its roots in the very speed and simultaneity with which manufacturing and exports declined between the summer 2008 and spring 2009. In the Recent Crisis economic policy reacted expeditiously, prudently, comprehensively and to a surprising extent coordinated at an international level. It is true that there were structural features which served to mitigate the depth of the Recent Crisis such as the lower share of manufacturing and the higher share of services and the public sector in comparison with the Great Depression. However, the increasing globalization of production, trade and financial markets today could actually have led to a cumulative downward spiral difficult to stop through national policies.

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\* This paper was discussed at conferences and workshops at OECD, Forum of Macroeconomic Policy (FMM), WIFO and Mendel University (Brno).

The author wishes to thank Gerhard Allgäuer, Felix Butschek, Burghard Feuerstein, Franz Hahn, Jürgen Janger, Helmut Kramer, Karl Pichelmann, Hans Pitlik, Sonja Schneeweiss, Margit Schratzenstaller, Helene Schuberth, Stephan Schulmeister, Hans Seidel, Egon Smeral, Hannes Stattmann, Peter Szopo, Gunther Tichy, Thomas Url and Ewald Walterskirchen for their valuable critique. However, any opinions expressed in the article remain the sole responsibility of the author and do not always reflect the opinions of the critics. I am grateful to Dagmar Guttman for her research assistance and the WIFO team of research assistances under the lead of Christa Magerl for providing data in the WIFO Long-term Database (Silvia Haas, Sandra Schneeweiß, Eva Sokoll, Andrea Sutrich and Roswitha Übl).

<sup>1</sup> The Recent Crisis has been labeled as "Great Recession" by Krugman (2009B), Taylor (2009). Almunia et al. (2009) call it "Great Credit Crisis", Aiginger (2009) "Current Crisis", Romer (2009) "Current Recession".

This paper presents empirical data and stylized facts. It makes use of the large and increasing literature on the causes of the Recent Crisis, and on the similarities and differences between the roots of the two crises.<sup>2</sup> We do not survey the literature on the roots of the two crises but we include data for the build-up period of the two crises in order to further our understanding about causes of the crises.

The paper is structured as follows: Section 2 elaborates on the research question. It reports existing assessments comparing the depth of the crises. Then we describe the data used in this paper and which indicators and countries we focus on. Section 3 provides the main evidence, namely the relative drop in economic activity in the two crises. Section 4 describes the speed and synchronization of the downturn at the start of the two crises. Section 5 analyzes the differences in economic policy reaction, focusing on fiscal and monetary policy. Section 6 reports indicators on trade openness and changing structural characteristics between the start of the Great Depression and the Recent Crisis. Section 7 is the conclusion.

## **2. Research agenda, data, claims**

The main research point of this paper is to compare the severity of the two crises; more specifically how much did the main economic activity variables drop (their relative change) compared with their pre-crisis maximum?

The pre-crisis peak in the Great Depression, for most indicators and most countries, was 1929. This time it was 2008.<sup>3</sup> In both cases economic strains and disequilibria were lingering around after a period of rapid growth and in both cases the peak year was a year where many problems were quite evident with hindsight. These problems, however, became dramatically visible in a specific month or quarter. In 1929 this month was October (with the famous Black Thursday or Friday) and in 2008 it was September (with the demise of Lehman Brothers).

There are surprisingly few studies comparing the depth of the crises. The best known comparison is provided by *Eichengreen and O'Rourke* who claim that the Recent Crisis actually developed more rapidly than the Great Depression. The great advantage of their approach is the use of monthly data, and the quick updating of these. This information was widely used and cited for the hypothesis that the Recent Crisis was as strong as or stronger than the Great Depression. The main shortcoming of *Eichengreen and O'Rourke's* analysis is that they do not report data on GDP, unemployment and employment.<sup>4</sup> For an early expression of the opposite view namely that the Recent Crisis "pales in comparison with the Great Depression in the thirties" see *Romer (2009)*. In between is a series of papers calculating the average length and depth of a larger number of crises in different countries on GDP, the stock market, unemployment etc. Several papers (e.g. *Reinhart – Rogoff, 2009*) analyze how

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<sup>2</sup> See *Aiginger (2009A)*, *Barrell – Stankov (2008)*, *Bordo (2008)*, *Taylor (2009)*.

<sup>3</sup> In a few countries 2007 had been the peak for annual data with a small decline in 2008.

<sup>4</sup> A difference to this paper is the choice of the starting month namely June 1929 for the Great Depression and April 2008 for the Recent Crisis. Their choices are based on NBER data for business cycles for the USA.

the length and depth of the crises depend on certain structural characteristics, inter alia whether there had been a housing or financial crisis at the start. There are also qualitative studies comparing the differences at the onset of the crises.

One of the reasons why there are few studies comparing the depth of the two crises up to now is the lack of data, at least the lack of data which is easily accessible for research purposes. Some historical data are available but they lack a quarterly dimension or are only available for every fifth year. Data on exports and industrial production was available during the thirties but has not been preserved in most international data bases. Surprisingly, none of the large organizations which provide excellent data today (OECD, EU, IMF) have a consistent database covering the Recent Crisis and the Great Depression and offering it to the research community. The WIFO research team therefore had to collect the data from various sources<sup>5</sup> and invested much time and effort to make pre and post WWII data comparable. Sometimes it had to fill gaps using sensible interpolations. Finally, for this study data on GDP, manufacturing, exports, stock markets, employment and unemployment are available on an annual basis. For stock markets and industrial output they are additionally available on a quarterly basis.<sup>6</sup> For the evaluation of the policy reaction we use budget data, the debt-GDP ratio, discount rates, interest rates, inflation, an openness indicator and tariff receipts relative to GDP.

We analyze the activity and policy reactions in large industrialized countries, namely the USA, Japan, the United Kingdom, France, Germany, and Spain, and add small countries like Austria (where the Great Depression was specifically large), Sweden and Finland (where the effects were particularly small) and Belgium. In some cases world data are available; for other indicators we construct an unweighted "world" using averages over the ten industrialized countries available and additionally a "GDP weighted world".<sup>7</sup> The ten countries included made up for 52% of world GDP in 1929 (and 38% today).

Another understandable reason for the lack of quantitative comparisons on the relative depth of the two crises might be that it could be considered premature to give a final assessment if we do not know for sure that the Recent Crisis is over. We cannot be certain that the recovery will not be W-shaped with a second steep decline in 2010 or 2011. A small second dip would, however, not change our results, only a large one.

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<sup>5</sup> The main sources for historical data are *Mitchell* (1996, 1998), *Maddison* (1995, 2003), *Groningen*, *WIFO Monthly Bulletin* 1927 to 1934.

<sup>6</sup> Stock markets data is available on a daily basis (and even higher frequencies). End of the period data (a quarter or a month) are used. We also obtained access to the monthly data on exports and manufacturing used in *Eichengreen – O'Rourke* (2009).

<sup>7</sup> If data for the world is not reported but aggregated for the ten economies we put "world" under quote signs.

### 3. The main stylized facts about the depth of the crises

According to all indicators the Recent Crisis is comparatively smaller. We define the depth of the crisis as the relative drop between the peak year and the year with the lowest activity. For the Recent Crisis we repeat the calculation on a quarterly basis (3<sup>rd</sup> column in table 1). This biases the comparison towards enlarging the Recent Crisis relative to the Great Depression because annual data hides many fluctuations visible in quarterly data.

Table 1: Stylized facts: activity indicators

Unweighted average over ten industrialized countries

	Great Depression	Recent Crisis	
	1932/1929	2009/ peak 2007/2008	Trough 2009/ peak 2007/2008
	Annual data	Quarterly data	
	Percentage change		
GDP, real <sup>1)</sup>	-10.0	-4.0	-5.4
Manufacturing	-23.2	-20.2	-23.0
Exports	-58.5	-20.9	-24.6
Stock market	-55.4	-53.4	-53.6
Employment	-17.3	-2.5	-1.6
Unemployment rate 1932 and 2010	19.6	9.2	
Unemployment rate; change <sup>2)</sup>	13.2	3.1	2.0
Inflation	-12.8	1.0	-0.1

1) At PPP. – 2) Absolute difference 1929 to 1932 vs. 2008 to 2010. Ten industrialized countries: Austria, Germany, Belgium, Spain, France, Finland, Sweden, United Kingdom, USA, Japan.

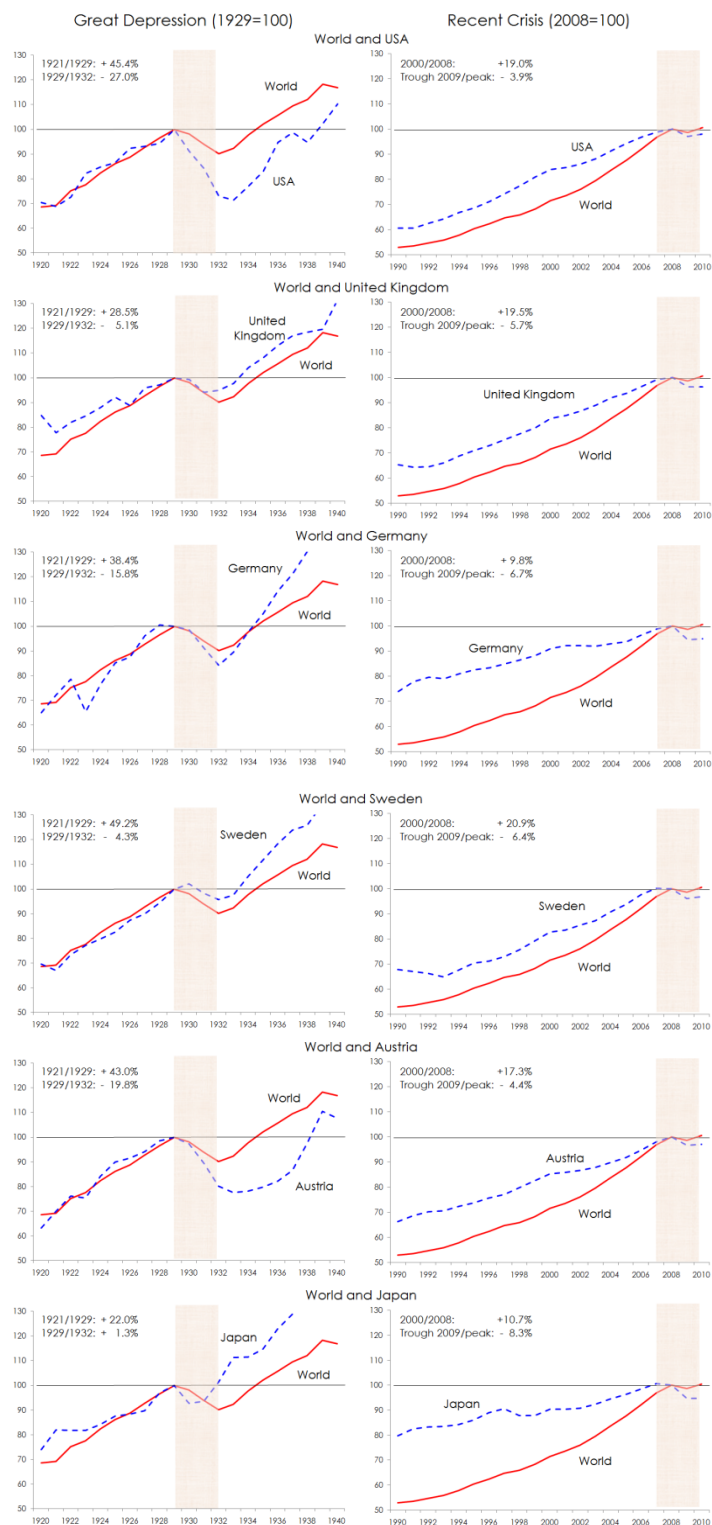
Sources:

GDP: WIFO database, Groningen, BEA, IMF, Dresdner Bank. – Manufacturing: WIFO calculations using Mitchell., IFS, ST.AT. – Exports: WIFO calculations using Mitchell., IFS, WTO. – Stock markets: WIFO calculations using <http://www.econ.yale.edu/~shiller/data.htm> for the USA; <http://stooq.de/q/d/?s=nikkei&c=0&i=m> for Japan; NBER Macrohistory Database; <http://finance.yahoo.com/q/hp?s=^CDAXX>, Gregor Gielen (1960-1979) for Germany; NBER Macrohistory Database; <http://stooq.de/q/d/?s=cac40>, IMF for France; League of Nations; <http://stooq.de/q/d/?s=ftse250&c=0&i=m>, IMF for the United Kingdom; Monatsberichte des Österreichischen Instituts für Konjunkturforschung; <http://stooq.de/q/d/?s=atx&c=0&i=m>, IMF for Austria. – Employment: WIFO calculations using The Economist; Economic Statistics 1900-1983, 1985 and OECD; Eurostat. – Unemployment: WIFO calculations using The Economist; Economic Statistics 1900-1983, 1985 and OECD; Eurostat. – Inflation: WIFO calculations using Mitchell, Eurostat.

#### Large differences in GDP, inflation, and employment

The difference between the Great Depression and the Recent Crisis is specifically large for GDP and price dynamics (deflation). The difference is still very pronounced for employment and unemployment data and for exports, less so for stock market prices and the least pronounced for manufacturing output.

Figure 1: Macroeconomic growth (GDP, real): boom and decline



1) At PPP. – Sources: See table 1.

GDP dropped by 10% in the Great Depression<sup>8</sup>, but only by 4% in the Recent Crisis according to annual data, and by 5% if we use quarterly data. The decrease in annual GDP was larger in eight of the ten countries in table 2, in the USA, Germany, and France more than four times as large. Using quarterly data instead of annual data for the Recent Crisis does not change the picture much. In Finland the Recent Crisis seems marginally deeper than the Great Depression, in Japan total GDP had not fallen between 1929 and 1932.

Table 2: Comparison of two crises: decline of real GDP\*\*)

	Great Depression			Recent Crisis				
	1929/1921	1929/1912	1932/1929	2008/2000	2008/1990	2009	Trough 2009/ peak 2008	
						forecast/ peak 2008		
Annual data			Annual data		Quarterly data			
			Percentage change					
Austria	43,0	4,6	-19,8	17,3	50,9	-3,4	-4,5	1)
Germany	38,4	15,5	-15,8	9,8	35,2	-5,4	-6,7	2)
Belgium	33,4	27,2	-7,1	15,6	42,9	-3,5	-4,2	1)
Spain	34,2	58,8	-3,8	27,9	68,5	-3,2	-4,2	3)
France	61,0	33,6	-14,7	13,6	38,2	-3,0	-3,5	2)
Finland	55,7	53,4	-4,0	25,1	52,0	-4,7	-6,5	2)
Sweden	49,2	38,3	-4,3	20,9	47,6	-4,0	-6,3	3)
United Kingdom	28,5	16,2	-5,1	19,5	53,2	-3,8	-5,6	3)
USA	45,4	69,4	-27,0	19,0	64,7	-2,9	-3,8	1)
Japan	22,0	81,7	1,3	10,7	25,4	-5,3	-8,4	3)
World	44,7	38,8	-9,8	39,8	89,0	-1,3	-4,6	4)
Unweighted average over countries	41,1	39,9	-10,0	17,9	47,9	-3,9	-5,4	
Standard deviation	12,2	25,3	8,9	5,8	13,1	0,9	1,6	
Coefficient of variation	0,297	0,635	-0,886	0,325	0,274	-0,234	-0,294	

\*\*) At PPP; forecast real data. –\*) 2007. – 1) 2Q2009/2Q2008. – 2) 1Q2009/1Q2008. – 3) 2Q2009/1Q2008. – 4) Weighted by GDP.

Source: WIFO calculations using Maddison, IMF, Groningen, BEA, Dresdner Bank, Butschek.

The main difference is the length of the crises. World GDP as a whole decreased by 1.3% in 2009, and if the forecasts of the IMF prove correct, the loss in world GDP in 2009 will be more than compensated by the growth expected for world GDP in 2010. This would mean the drop was small and was recovered within two years as far as world output is concerned. Recovering the output loss took six years during the Great Depression.<sup>9</sup>

In the Great Depression prices declined by 13% (between 1929 and 1932). In the Recent Crisis inflation was rather high in 2008, and prices increased on top of the high price level by 1% in

<sup>8</sup> Unweighted average over ten countries reported in table 2. The GDP weighted average is -15.8% due to the large weight of the USA.

<sup>9</sup> The data for world GDP come from Maddison (1995), since world GDP is published only for some years the missing years were interpolated by WIFO with the development in nine countries for which annual figures are available.

2009. No deflation occurred this time for any of the ten countries for the whole of 2009, with the exception of Japan, and no deflation is forecast for any industrialized country for 2010.<sup>10</sup>

Employment decreased by 17% between 1929 and 1932, but only by 2.5% in 2009 (and forecasts are flat for 2010). Unemployment increased by 13 percentage points during the Great Depression and the unemployment rate reached 20% in 1932. This time it increased by three percentage points if we include the further rise predicted for 2010 (to an unemployment rate of 9% in the unweighted average of the ten countries).

### **Smaller differences for exports, manufacturing, stock markets**

World exports (in nominal terms) declined by 58% between 1929 and 1932. In the Recent Crisis they dropped by 21%<sup>11</sup>. Manufacturing output dropped by 23%, versus 20% in the Recent Crisis (for annual data). The decline of exports is much larger since exports are measured in nominal terms, while manufacturing output is measured in real terms.<sup>12</sup>

Stock market prices dropped by 55% between 1929 and 1932, by 53% in the Recent Crisis. On a quarterly basis the difference is much larger.<sup>13</sup> In the Great Depression there was no recovery until 1939, in comparison with just 18 months between the pre-crisis peak and the trough in the Recent Crisis. The recovery between March and October 2009 was 39%, a recovery which may not be sustainable at this speed. There never was such a large interim recovery in the Great Depression (the maximum interim recovery between 11M/1929 and 4M/1930 was 13%).

In summary the cumulative drop in activity in the Great Depression was much larger for GDP, prices and employment. This confirms that the Recent Crisis “pales in comparison with the Great Depression” (Romer, 2009). The fall in exports and stock market prices between peak and trough was larger during the Great Depression too; the difference is larger specifically for quarterly data. Nearest comes the decline in manufacturing output (if measured in real terms). Analyses which concentrate on exports, manufacturing and stock market indicators but do not make use of GDP, prices and employment data underestimate the difference between the two crises.

## **4. Time pattern, speed, and synchronization**

In both crises in the build-up phase there was high growth, namely about 41% between 1921 and 1929 and 48% if we include the nineties in the build-up period of the Recent Crisis.<sup>14</sup> GDP

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<sup>10</sup> Quarterly data show slightly declining prices for the majority of countries at least in one quarter of 2009.

<sup>11</sup> These data are calculated at the annual basis; the drop was 25% on a quarterly basis.

<sup>12</sup> For weighted data the difference in the drop of output for manufacturing is larger between the crises. As for manufacturing output is concerned it is a major shortcoming that China is not included in the main set.

<sup>13</sup> Stock markets declined by 69% (between 3Q1929 and 2Q1932) in the Great Depression and by 50% (between 2Q2007 and 1Q2009) in the Recent Crisis.

<sup>14</sup> If we use the shorter build-up period 2000/2008 the growth had been 18%.

growth in the build-up period of the Great Depression was more volatile and different across countries (see table 2 and figure 1). In comparison the build-up was much smoother from 1990 up to the start of the Recent Crisis (with the dot.com crisis causing only a small dip in GDP).<sup>15</sup>

Table 3: Synchronization

	Great Depression				Recent Crisis			
	1921/1929		1929/1932		2000/2008		2008/2009	
	Standard deviation	Coefficient of variation	Standard deviation	Coefficient of variation	Standard deviation	Coefficient of variation	Standard deviation	Coefficient of variation
GDP, real <sup>1)</sup>	12,2	0,297	8,9	-0,886	5,8	0,325	1,0	-0,262
Manufacturing	34,3	0,420	16,3	-0,703	10,4	0,750	5,9	-0,290
Exports	53,0	0,901	8,4	-0,143	18,8	0,367	6,2	-0,298
Stock market	255,2	1,217	15,4	-0,279	142,0	1,982	7,5	-0,141
Employment	17,2	1,658	9,0	-0,519	1,7	0,211	0,7	-0,267
Unemployment rate 1929 and 2008	4,8	0,747	10,1	0,517	1,2	0,200	1,9	0,207
Unemployment rate; change <sup>2)</sup>	7,9	7,429	7,4	0,564	1,4	2,447	1,2	0,370
Inflation	67,6	-2,633	7,2	-0,565	7,2	-0,565	0,4	0,362
Average over indicators	51,8	1,154	10,2	-0,314	21,6	0,670	2,8	-0,062

1) At PPP. – 2) Absolute difference 1929-1921 vs. 2008-2000.

Source: WIFO calculations using Maddison, IMF, Groningen, BEA, Dresdner Bank, Butschek (1985).

The synchronization is stronger during the Recent Crisis. During the Great Depression the drop in GDP was concentrated mainly in four countries, namely the USA (-27%), Germany (-16%), Austria (-20%) and France (-15%). Real GDP decreased by 5% or less in the United Kingdom, Spain, Japan, Finland and Sweden. In the Recent Crisis GDP declined in all ten countries reported, with declines between 3% and 5½% according to annual data and 3½% and 8½% according to quarterly data. Cross country differences were much smaller in the Recent Crisis as shown specifically by the lower standard deviation of the rate of declines of GDP (0.9 vs. 8.9).<sup>16</sup> The greater level of synchronization in the Recent Crisis is shown for all indicators by a large margin (see table 2). Relatively the least difference is shown for exports, whose drop was to a greater extent already synchronized in the Great Depression.

The speed of the breakdown of activity at the start of the Recent Crisis is highlighted if we analyze quarterly or monthly data on manufacturing and exports.

Industrial production declined by 19% between 3Q2008 and 1Q2009, and then levelled off. During the Great Depression it declined by 12% in the first three quarters and did not recover

<sup>15</sup> Standard deviation of growth rates across countries was 25.3 in the build-up period of the Great Depression and 13.1 this time.

<sup>16</sup> The coefficient of variation for the reported countries was 0.8 vs. 0.3 (negative signs in the coefficient of variation should be ignored). The largest decreases in countries not reported in table 2 occurred in the Baltic States, Slovakia, and Iceland this time; during the Great Depression the largest decreases were in Canada, Czechoslovakia, Hungary, Poland, and Latin America.

before 1932. Only one half of the total decline therefore happened in the first three quarters in the Great Depression. This time manufacturing output resumed growth after three quarters. The standard deviation of the decline in the first three quarters (across countries) is again much smaller in the Recent Crisis.

Using monthly data on world manufacturing output (by *Eichengreen – O'Rourke*), the decline in manufacturing output in the Recent Crisis occurred between 4M2008 and 2M2009. The decline for the first nine months amounted to 17%. For the same length of time in the Great Depression the decline was 16%. This time the production started to recover after three quarters, during the Great Depression it dropped further to an overall decline of 38%. Again the variation across countries was much less in the Recent Crisis, a fact that holds true from the very first month of decline and also for the ten months together (during which output declined).

Table 4: Speed of downturn in the first three quarters

	Great Depression			Recent Crisis	
	Overall drop 1929/1932	1930/1929	First three quarters	Overall drop 2009/2008	First three quarters
	Percentage change				
GDP, real <sup>1)</sup>	-10.0	-7.0		-4.0	-3.6
Manufacturing; quarterly data	-23.2	-6.2	-11.9	-20.2	-19.4
Manufacturing; monthly data			-16.0		-17.3
Exports; quarterly data	-58.5	-17.3	-13.4 <sup>2)</sup>	-20.9	-25.1
Exports; monthly data			-16.9 <sup>2)</sup>		-27.2
Stock market	-55.4	-27.1	-19.7	-53.4	-19.4
Employment	-17.3	-4.8		-2.5	-1.1
Unemployment rate 1932, 1930 and 2010	19.6	10.2		9.2	
Unemployment rate, change	13.2	2.6		3.1	0.5
Inflation	-12.8	-2.2		1.0	-0.1

<sup>1)</sup> At PPP. – <sup>2)</sup> *Eichengreen – O'Rourke* (trade).

Source: WIFO calculations using Maddison, IMF, Groningen, BEA, Dresdner Bank, Butschek (1985).

World trade declined in the Recent Crisis from 4M2008 to 1M2009, on average this amounted to 20% amongst the countries analyzed<sup>17</sup>. For the same time span the decline was –17% in the Great Depression; again this was only half of the overall decline (–36%; which stopped in 8M1932). Standard deviation of the decline of exports across the countries was 6.2 in the Recent Crisis, and 8.4 in the Great Depression.

We draw the tentative conclusion from the steep and fast decline of manufacturing and exports in the first three quarters that the Recent Crisis did indeed have some potential to develop into a crisis as big as the Great Depression. The level of synchronization in the drops

<sup>17</sup> Data made available by *Eichengreen – O'Rourke*.

in manufacturing and exports, probably due to globalization, added to that potential. In the next chapter we investigate how economic policy reacted differently this time and thus prevented the crisis unfolding more dramatically.

Table 5: Comparison of two crises: industrial production

	Great Depression				Recent Crisis			
	1929/1921	1932/1929	Peak/2000	Peak/1990	2009 forecast	2Q2009/ peak 2008 Quarterly data	Monthly data	
	Annual data							
	Percentage change							
Austria	52,1 <sup>**) 1)</sup>	-39,0	33,0 <sup>1)</sup>	77,2	-15,3	-20,5	-20,5	
Germany	51,8	-41,2	21,2 <sup>1)</sup>	33,5	-21,8	-24,3	-24,3	
Belgium	113,0	-36,5	12,3 <sup>2)</sup>	29,8	-19,0	-16,9 <sup>3)</sup>	-16,9	
Spain	48,1	-6,4	8,5 <sup>2)</sup>	23,8	-22,7	-22,8 <sup>3)</sup>	-22,8	
France	127,8	-26,0	2,4 <sup>2)</sup>	13,4	-18,2	-24,6	-24,6	
Finland	134,6	-13,1	25,4 <sup>2)</sup>	108,6	-24,3	-28,2 <sup>3)</sup>	-28,2	
Sweden	94,1	-10,6	19,1 <sup>2)</sup>	73,9	-22,3	-26,9 <sup>3)</sup>	-26,9	
United Kingdom	57,3	-10,8	0,9 <sup>2)</sup>	7,1	-12,9	-18,4	-18,4	
USA	87,9	-46,0	7,3 <sup>2)</sup>	56,6	-13,0	-15,7	-15,7	
Japan	50,0	-2,6	8,9 <sup>2)</sup>	4,7	-32,2	-32,1 <sup>3)</sup>	-32,1	
"World"	72,2	-29,5	8,0	33,3	-16,5	-18,9	-18,9	
Unweighted average over countries	81,7	-23,2	13,9	42,9	-20,2	-23,0	-23,0	
Standard deviation	34,3	16,3	10,4	34,8	5,9	5,2	5,2	
Coefficient of variation	0,420	-0,703	0,750	0,811	-0,290	-0,227	-0,227	

\*) 01 - 05/2009 compared to 01 - 05/2008. - \*\*) 1929/1923. - 1) Peak/2008. - 2) Peak/2007. - 3) 1Q2009/peak. -

4) Weighted by GDP. --"World": Countries in table weighted by GDP.

Source: WIFO calculations using Mitchell, IFS, ST.AT.

## 5. Policy reaction

It is not easy to compare economic policy in periods as distant as the Great Depression and the Recent Crisis. Institutions are very different as are strategies of countries and the coordination between them. The gold standard restricted monetary policy in most countries during the Great Depression. The central banks were less coordinated, had different objectives and policy instruments and some countries still had obligations and/or debts from World War I. All countries had separate currencies, and lenders of last resort did not exist to the extent they do today. Automatic stabilizers for fiscal budgets were much smaller. Import duties made up an important share of government receipts. Regional integration areas like EU and NAFTA did not exist. No international competition authority could prevent blunt forms of protectionism or subsidies and no World Trade Organization could monitor openness by reference to trade agreements.

Nevertheless, we will try to describe the differences for monetary policy, using indicators on money supply and interest rates. As regards fiscal policy we will use indicators on public deficits and debt.

## 5.1 Monetary policy

Monetary policy was restrictive in the Great Depression, at least in the first years. This had partly purposefully been the case (e.g. the increase in the discount rates in 1929), and partly been the consequence of the gold standard or the necessity to prevent capital outflows. Discount rates were then lowered somewhat, but not towards zero as in the Recent Crisis. Furthermore, high deflation turned low nominal interest rates into very high real rates. Money supply decreased up to 1933, with countries abandoning the gold standard earlier having more room for maneuver and thus a quicker recovery (see *Eichengreen – O'Rourke, 2009; Bernanke, 2004*). In the Recent Crisis discount rates were promptly slashed towards zero and there was a coordinated approach between the USA, the EU, and the United Kingdom. Money supply was expanded, governments guarantees were given for savings and loans etc. Innovative forms of extending money supply and providing credits were applied.

### *Great Depression*

In the USA the Fed increased the discount rate from 3.8% in 1927 to 5.3% in 1929 in order to curb stock market speculation. In the following two years it was reduced in two steps to 2.5% in 1931. The United Kingdom, Sweden and Austria (and to a minor degree Germany) followed a similar pattern of increasing discount rates at the start of the Great Depression, followed by a later decrease; Austria and Germany had to maintain a very high nominal discount rate of 7% up to 1931 to restrict capital outflow *inter alia* after bank failures.

Money supply decreased by 21% in the USA and 29% in Germany between 1929 and 1932.<sup>18</sup> Additionally, indicators show that bank runs had also reduced the velocity of money (*Aiginger, 2009; Bernanke, 2004*), so that money supply may not be the best indicator to show the full extent of the restrictive effects of monetary policy. Money supply started to grow as late as 1933/34, the fourth and fifth year respectively of the Great Depression.

The only exception with respect to the restrictive use of monetary policy was France. It lowered its discount rate to 3.5% in 1929 to 2.1% in 1931. Money supply increased by 20% from 1929 to 1932.

Deflation amounted to 13% (cumulatively) for the average of the countries from 1929 to 1932, with the highest price cuts in the USA and Germany. A main difference between the Great Depression and the Recent Crisis is that deflationary pressure had been lingering around before 1929, specifically in the United Kingdom and the USA. By contrast 2008 was a year with rising prices worldwide as the consequence of strong growth and buoyant demand for raw materials, oil and food. Deflation led to two digit real interest rates in Germany, Austria, the United Kingdom and the USA at least for a few years during the Great Depression.

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<sup>18</sup> There is surprisingly little discussion about the money supply in real terms. Since prices were falling by cumulatively 13% the decrease in nominal money supply implies an increasing nominal supply for the average of the ten industrialized countries. For the USA nominal money supply decreased by 21% between 1929 and 1932, deflation amounted to 20% (Germany –29% vs. –22%). In both cases real money supply decreased too but by a (very) low margin. I owe this perspective to a critique by Gunther Tichy.

Table 6: Policy indicators

	Great Depression 1929/1932	Recent Crisis 2008/2009	
Money supply	-7.6	12.1	
Discount rate; level start	5.6	4.0	
Discount rate; 1 year after start	4.0	0.6	<sup>1)</sup>
Discount rate; 2 years after start	4.5		
Discount rate nominal; absolute change	-1.4	-3.2	<sup>2)</sup>
Discount rate real; absolute change	5.4	-0.7	<sup>2)</sup>
Fiscal balance; level start	0.7	-1.7	
Fiscal balance; 1 year after start	-0.5	-6.4	
Fiscal balance; 2 years after start	-0.8	-7.8	
Debt/GDP; level start	57.3	68.6	
Debt/GDP; 1 year after start	58.9	78.6	
Debt/GDP; 2 years after start	65.6	86.3	
Customs/GDP; level start	1.8	0.1	
Customs/GDP; 1 year after start	1.8		
Customs/GDP; 2 years after start	2.1		

<sup>1)</sup> 1Q2009 -3Q2009. – <sup>2)</sup> 1Q2009-3Q2009/1Q2008-3Q2008.

Sources: Money supply: WIFO calculations using IFS, Bank of England, Risksbank, SAINT MARC (1983). Interest rates: WIFO calculations using Mitchell, IFS. Fiscal balances: WIFO calculations using Mitchell (1999), OECD, IFS Yearbook, Bundesrechnungsabschluss and League of Nations. Debt: WIFO-calculations using Mitchell 1999, OECD, Bundesrechnungsabschluss. Customs: Magerl, 2006; OECD.

### Recent Crisis

By contrast, monetary policy in the Recent Crisis slashed discount rates to less than 1% in the EU, in the United Kingdom and in the USA soon after the breaking down of the credit markets (after the demise of Lehman Brothers). Central banks flooded the markets by boosting the money supply by open market purchases and less conventional measures of “quantitative easing”. This included buying commercial papers and changing the rules for collaterals. The extent of the measures taken by monetary authorities is not something that can be clearly seen from money supply indicators themselves (such as M1), but rather from the increase in the assets in the balance sheets of the central banks (see table 11 in Aiginger, 2009C). However, money supply increased by 17% between 3Q2008 and 3Q2009 in the USA and by 8% in the EU.

Monetary policy was coordinated between the main regions. Monetary and fiscal policy crossed where governments offered guarantees for deposits and loans and banks were recapitalized. Where necessary, governments took a stake (temporary ownership) in banks and sometimes even manufacturing firms and supported “bad” banks or ring fenced toxic assets.

Table 7: Comparison of two crises: discount rates and money supply (M1)

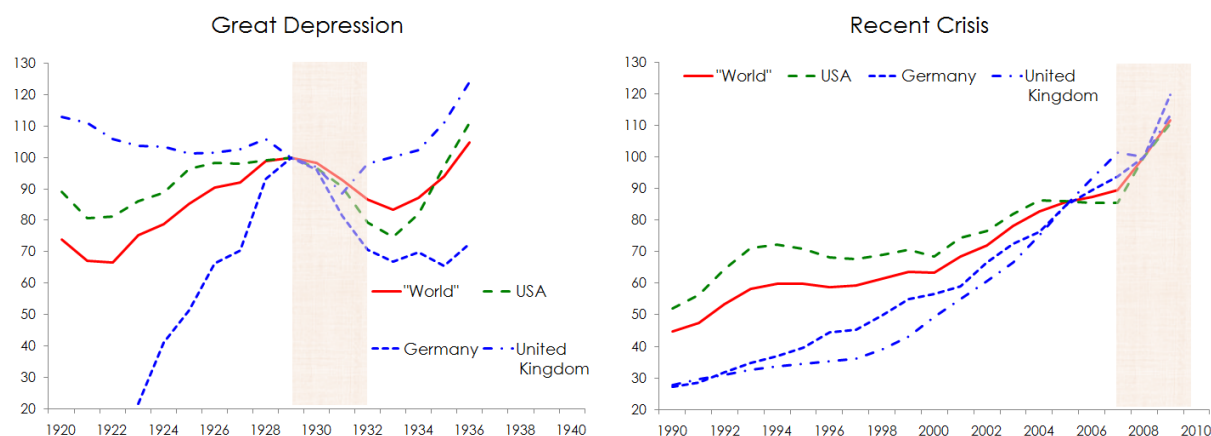
	Great Depression				Recent Crisis		Great Depression		Recent Crisis	
	1928	1929	1930	1931	2008	3Q2009	1932/1929		3Q2009/3Q2008	
	Nominal discount rates						Money supply			
Austria	6.3	7.4	5.7	7.2	3.9	1.0	-16.5		7.8	
Germany	7.0	7.1	4.9	6.9	3.9	1.0	-29.4		7.8	
Belgium										
Spain										
France	3.5	3.5	2.7	2.1	5.4	1.0	20.2		7.8	
Finland										
Sweden	4.0	4.7	3.7	4.1	4.0	0.3	2.9		-6.5	
United Kingdom	4.5	5.5	3.4	4.0	4.7	0.5	-2.1		-8.5	
USA	4.3	5.3	3.3	2.5	1.9	0.3	-20.8		16.8	
Japan						0.1			16.2	
"World"							-11.0		8.7	
Unweighted average over countries	4.9	5.6	4.0	4.5	4.0	0.6	-7.6		4.2	
Standard deviation	1.4	1.5	1.1	2.2	1.2	0.4	18.1		9.7	
Coefficient of variation	0.281	0.263	0.286	0.483	0.294	0.641	-2.381		2.321	

"World": Weighted by GDP.

Source for interest rates: WIFO calculations using Mitchell, IFS.

Source for money supply: WIFO calculations using IFS, Bank of England, Risksbank (NOMINAL MONEY SUPPLY (M1) 1807-1935, MILLIONS OF FRANCS, SAINT MARC (1983, pp. 36-37)). NOMINAL MONEY SUPPLY (M1) 1807-1935, MILLIONS OF FRANCS, SAINT MARC (1983, pp. 36-37).

Figure 2: Money supply: Great Depression vs. Recent Crisis



Source: WIFO calculations using IFS, Bank of England, Risksbank, SAINT MARC (1983).

Thus monetary policy could be applied in a very determined and offensive way in the Recent Crisis. Firstly, it was not limited by the gold standard and many countries did not need to defend a national currency. Secondly, the remit of monetary policy was interpreted flexibly and broadly. Thirdly, there were no haunting memories of hyperinflation since globalization and European integration had led to decades of low inflation. Most European countries were sheltered from devaluation by membership in the euro area. Some countries which were not

members of the EMU had to devalue.<sup>19</sup> They had less room to lower interest rates. They were, however, supported by the IMF and the EU.

## 5.2 Fiscal policy

### Great Depression

Fiscal policy was not used during the Great Depression to counter the declining economic activity, at least not in the first three years. On the contrary governments tried to counteract the automatic stabilization effect of a reduced tax inflow.<sup>20</sup> This time, at least in the USA and France, the increasing deficit was not counteracted by tax increases. In the following years the average deficit amounted to 2.3% (average 1933 to 1936).

Six countries had a budget surplus in 1928, four a deficit, neither was large (maybe with the exception of the surplus of Japan). In 1929 the budget position moved in four countries towards "more restrictive", in six countries into mild expansion.<sup>21</sup> All changes were minor, so that the small surplus of 0.7% of GDP remained constant. In 1931 – the third year of the crisis – the position switched into a deficit, which then increased slowly to 2.8% in 1936.<sup>22</sup>

Table 8: Comparison of two crises: budget deficit/surplus in % of GDP

	Great Depression										Current Crisis							
											Forecast							
	1920 to 1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1931-1929	1931-1936	1932-1929	2007	2008	2009	2010	2010-2008
	Average	Annual data										Absolute change			Annual data			Absolute change
Austria	-0.1	-0.7	0.2	-2.3	-3.1	-0.2	-2.7	-2.5	-1.7	-0.4	-3.3	2.7	-0.4	-0.7	-0.5	-4.3	-6.1	-5.6
Germany	-8.6	-2.3	-1.8	-2.4	-2.2	-1.9	1.0				-0.4	2.2	-0.1	-0.2	-0.1	-3.9	-5.9	-5.8
Belgium	-10.3	2.3	1.7	-1.9	-1.6	-3.9	-1.2	-2.2	-5.4	-4.6	-3.4	-2.9	-5.7	-0.3	-1.2	-4.6	-6.1	-4.9
Spain	-1.6	1.5	1.1	0.8	-0.3	-0.8	-1.3	-1.8	-0.9		-1.5	0.3	-1.9	2.2	-3.8	-7.8	-8.7	-4.9
France	-5.5	1.2	1.4	-1.5	-1.8	-1.7	-4.6	-3.8	-5.1	-6.9	-3.3	-5.1	-3.2	-2.7	-3.4	-6.6	-7.0	-3.6
Finland	-1.6	-2.1	-0.8	-1.9	-2.3	-2.6	-1.6	-2.8	-3.8	-3.7	-1.5	-1.4	-1.8	5.2	4.1	-1.5	-2.8	-6.9
Sweden	-1.7	-0.4	-0.6	-0.3	-0.4	-1.9	-4.0	-2.1	-2.5	-2.2	0.2	-1.8	-1.3	3.8	2.5	-3.3	-4.5	-7.0
United Kingdom	1.8	1.8	0.8	1.0	0.8	-0.2	1.0	0.5	0.4	0.2	0.0	-0.6	-0.9	-2.7	-5.5	-12.8	-14.0	-8.5
USA	0.9	1.0	0.7	0.8	-0.6	-4.7	-4.6	-5.5	-3.8	-7.0	-1.3	-6.4	-5.4	-2.9	-5.9	-12.1	-14.2	-8.3
Japan	8.0	4.5	3.9	2.4	3.1	0.1	-0.5	0.7	1.1	2.4	-0.8	-0.7	-3.8	-2.5	-2.7	-6.7	-8.7	-6.0
"World"	-0.5	0.8	0.6	0.1	-0.5	-2.5	-2.3	-2.7	-2.2	-3.5	-1.1	-3.0	-3.1	-1.9	-3.8	-8.7	-10.3	-6.5
Unweighted average over countries	-1.9	0.7	0.7	-0.5	-0.8	-1.8	-1.8	-2.2	-2.4	-2.8	-1.5	-1.9	-2.5	-0.1	-1.7	-6.4	-7.8	-6.2
Standard deviation	4.2	1.7	1.2	1.4	1.2	1.6	2.2	1.7	2.0	2.9	1.4	3.1	2.0	2.9	3.4	3.9	4.0	1.6
Coefficient of variation	-2.272	2.479	1.746	-2.744	-1.452	-0.875	-1.173	-0.797	-0.844	-1.039	-0.934	-1.579	-0.835	-36.872	-2.085	-0.616	-0.509	-0.266

Sources: WIFO-calculations using Mitchell, Bordo IFS, OECD, Eurostat, Bundesrechnungsabschluss

<sup>19</sup> E.g. Hungary, Ukraine.

<sup>20</sup> Ideally, any thorough evaluation of fiscal policy would need "full employment budget data" to show the extent and length of the restrictive impact of purposive fiscal policy in the Great Depression. Such data are available as to our knowledge only for the USA (Brown, 1956).

<sup>21</sup> More restrictive means that a surplus increased or a deficit was reduced. Expansionary implies that a deficit increased or a surplus was reduced.

<sup>22</sup> This is the average over all countries with deficits of 7% in the USA and France.

Thus budgetary policy tried at the start of the Great Depression to prevent deficits at first but with little success.<sup>23</sup> From 1932 on it started to some extent to support economic activity. This holds specifically true for the USA and France. Country studies and qualitative historic evidence support this view.

The USA had small surpluses all over the twenties, with no cyclical pattern. This tendency continued 1929. Government expenditure increased in 1930 and remained stable in 1931. Tax revenues first fell slightly then massively in 1932. The decline was counteracted by massive tax increases across the board, but specifically in lower and medium income groups. An earned tax credit was slashed, corporate income tax was increased slightly, a gift tax was provided, and a new list of excise taxes was levied. On the local level general sale taxes and excise taxation were raised.<sup>24</sup> Starting from 1932 the deficit jumped to 4.7% and then increased to 5.5% in 1934 and 7.0% in 1936. Some of the increases in expenditure had a semi intentional component, namely the introduction of large bonuses for veterans by congress in 1931 (and 1936). In the mid thirties the New Deal components were added.<sup>25</sup>

The United Kingdom continued to have budget surpluses over the whole period between 1929 and 1936 (with a tiny exception in 1932). Stabilizing budgets, not the economy seems to have been the priority. If the Great Depression was milder in the United Kingdom, this had definitely not been the consequence of an expansionary fiscal policy. The same is true for Japan.

Austria and Germany had deficits already in 1930 and 1931, probably due to the stronger GDP drop, but tried to reduce them through discretionary policy measures. France had the most expansionary policy, at least from 1933 onwards. Sweden and Finland allowed their deficits to continue although these were not very considerable.

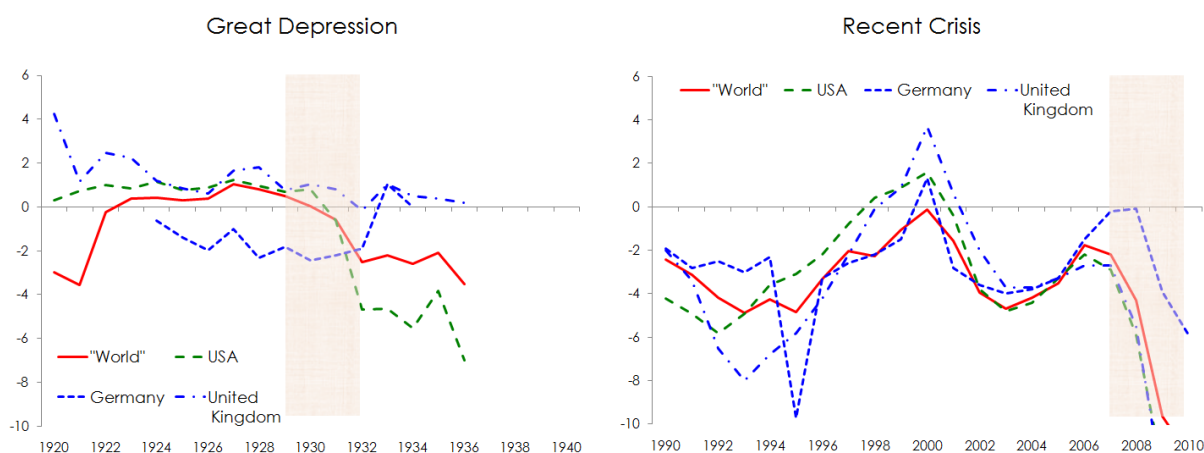
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<sup>23</sup> The conclusion of Brown reads "fiscal policy has been an unsuccessful recovery device in the thirties ... not because it did not work, but because it was not tried". Hansen's reads (1941) "despite a fairly good showing made in the recovery of 1937, the fact that neither before nor since has the administration pursued a real positive expansionist program ... federal government engaged in salvaging program and not a program of positive expansion".

<sup>24</sup> Full employment budgets were heavily contractionary – especially from 1933 to 1939 (Brown, 1956, p. 868). For a contrary view see *Smithies* (1946): "fiscal policy did prove an effective and indeed the only effective means of recovery". This remark refers however to the period from 1938 onwards (and contrasts fiscal policy with government control on wages and prices). In April 1939 President Roosevelt sent a document to Congress "Recommendations designed to stimulate further recovery", "that was the first outright recommendation, ... designed to achieve recovery through fiscal policy" (*Smithies*, 1946, p. 16). "All the fiscal measures before had been trial and error, increasing some taxes, financing public work programs, then curbing expenditures to balance the budget, then enacting emergency budgets etc. ... The first phases of the New Deal continued Hoover's policy of cheap money, home and farm relief programs, national industry recovery act, Labor Relations Act ...". For a recent evaluation of the potential of policy measures see *Almunia* (2009).

<sup>25</sup> The US budget was expansionary in 1936 due to a bill providing large veteran bonuses on the initiative of Congress. It was disliked but not vetoed by the President. The budget in 1937 was then specifically restrictive, due to the end of the bonuses and the start of social security contributions. This contractionary effect is described by *Romer* (2009) as the premature elimination of public support for the economy, which led to another recession (which ended as the budget became expansionary again).

Figure 3: Budget surplus/deficit: Great Depression vs. Recent Crisis



Source: WIFO calculations using Mitchell 1999 (Central Government), OECD (General Government, net lending), IFS Yearbook.

For the average of the ten countries, government debt rose slowly, from 57% of GDP 1929 to 59% in 1930 and 66% in 1931. Its level was extremely different. In France and the United Kingdom it was actually higher than GDP due to debt from World War I; in the USA, Germany and Austria it amounted only to 20% (partly by renegotiating war debt). Debt ratios then increased at a somewhat faster rate in the thirties.

#### *Recent Crisis: Automatic stabilizers plus stimulus packages*

Fiscal policy was intensively used in the Recent Crisis to mitigate the downturn (i) by allowing automatic stabilizers to work, (ii) recapitalizing banks and providing guarantees for banks and firms, and in addition (iii) by providing stimulus packages. The extent to which the downturn was curbed as a result of specific stimulus packages is not easy to assess.<sup>26</sup> But the consensus is that they amounted to at least one percentage of GDP, both in 2009 and 2010, with higher stimulus levels in the USA and China, somewhat lower levels in the EU.<sup>27</sup> The automatic stabilizers did the largest part of the job although it was very important that these were supported and not thwarted by discretionary restrictive measures.

The overall budget deficit which had been 1.7%<sup>28</sup> in 2008 jumped up to 6.4% in 2009 and is predicted to increase up to 7.8% in 2010. The weighted figures are even higher since the USA

<sup>26</sup> Different calculations do exist by OECD (2009A), EU Commission (2009), and Saha – Weizsäcker (2009). The OECD estimates that the cumulative effect of the automatic stabilizers over 2009 and 2010 made up for half of the "deterioration of fiscal balances" (OECD, 2009B, p. 56). The remaining half is made up of "structural measures" which can be further subdivided into discretionary measures in response to the financial crisis (making up one fifth); and a larger part from the loss of exceptional revenues related to the asset price boom and the buoyant growth in construction and financial services. Total stimulus for OECD countries makes up 3.4% in the years 2008 to 2010 together (2% is the unweighted average).

<sup>27</sup> Ireland, Hungary and Iceland could not afford an expansionary policy due to budget or currency problems.

<sup>28</sup> Unweighted average over the ten countries.

and the United Kingdom have double-digit deficits in 2010. The dramatic and decisive use of fiscal policy happened in the first and second year of the crisis. If we define the start of the Recent Crisis as September 2008 the packages were introduced within the first six months. The turnaround in the budgetary positions<sup>29</sup> within one year was a striking difference to the late use of fiscal policy during the Great Depression. Even the New Deal or preparations for war after five or more years of depression in the thirties did not produce equivalent changes in the budgetary positions (see table 8).

The debt to GDP ratio jumped from 69% in 2008 to 79% in 2009 and is predicted to reach 86% in 2010. This level is higher than the maximum in the Great Depression and the increase in percentage points over two years is the same as that over six years during the Great Depression.<sup>30</sup>

## 6. Protectionism and structural differences

### *Protectionism and coordination*

It is well known that the Great Depression was aggravated and became more severe because all countries tried to protect their own economy from the negative impacts of the world depression. The average tariff rate rose by 12.7% during the Great Depression (Newell – Symons, 1988).<sup>31</sup> A specific form of protectionism, cited over and over in the literature, was the *Smoot–Hawley Tariff Act* (1930), in which US-tariffs on imports were raised. In parallel, tariffs and duties were also increased in many other countries.

It is difficult to find general indicators for protectionism. Our data set includes the customs inflow as a percentage of GDP. Tariffs and import duties thus were important at the time of the Great Depression; they constituted a major source of revenue for government. Increasing the duties had additionally the welcomed effect to protect domestic producers.

Customs receipt in relation to GDP amounted to 0.6% for the USA between 1925 and 1928 and was flat. It changed little during the first years of the crisis, and if anything it decreased in the following years. Since trade dropped considerably this implies higher customs duties per unit of trade. There was no specific pattern in the following years, but then a steep increase in 1936.

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<sup>29</sup> In most countries it was a strong increase of the existing deficit. Very few countries had surpluses in their total fiscal balances at the start of the crisis. Japan and specifically the USA started with high deficits (2.5% and 2.9%, respectively). The euro area had a small deficit as compared to previous years (2007: 0.7%, but deficits were high in the United Kingdom and France). Even more stabilization would have been possible if all countries had entered this crisis with budget surpluses.

<sup>29</sup> For other countries see Eichengreen – Hatton (1988).

<sup>30</sup> Debt ratios are surprisingly less reliable than balances for this period. This is partly due to debts from the war period, which were defaulted or renegotiated, partly on an international scale, partly by bilateral agreements (for an overview see Ritschl, 1996 or Eichengreen, 1990).

<sup>31</sup> Average over fourteen countries.

In European countries the level of custom inflows relative to GDP was higher from the start (1.75% for 1925 to 1928, unweighted average over European countries). The receipts strongly increased already in the build-up period. This was the case specifically in France, Germany and Austria. They were flat in the United Kingdom and decreased a little bit in Sweden. From 1929 to 1935 customs inflow exploded in the United Kingdom (from 0.8% of GDP to 4.7%) and France (from 1.4% to 3.0%). The increase was not so pronounced in Germany and tariffs relative to GDP decreased in Austria starting in 1931.

Thus protectionism, if measured correctly by customs receipts, did not start the Great Depression (at least in the USA), but played a role in prolonging and deepening it. It seems to have been applied more in Europe than in the USA, where the *Smoot-Hawley Tariff Act* (1930) is so prominently discussed.<sup>32</sup>

Table 9: Comparison of two crises: openness and change during the crises  
Share of exports plus imports to GDP

	Great Depression			Recent Crisis		
	1929	1932	1932-1929	2008	2009	2009-2008
	Absolute change			Absolute change		
Austria	45.1	22.5	-22.6	84.0	66.4	-17.6
Germany	33.8	20.5	-13.3	72.5	57.8	-14.7
Belgium						0.0
Spain						0.0
France	31.3	18.6	-12.7	45.6	35.9	-9.7
Finland						0.0
Sweden	37.3	26.2	-11.0	71.6	52.9	-18.7
United Kingdom	48.5	29.5	-18.9	40.7	33.9	-6.7
USA	9.4	5.1	-4.3	24.3	18.4	-5.9
"World"	23.2	14.7	-8.5	35.2	27.4	-7.8
Unweighted average over countries	34.2	20.4	-13.8	56.5	44.2	-12.2
Standard deviation	13.8	8.5	6.4	23.0	17.8	7.5
Coefficient of variation	0.404	0.416	-0.460	0.408	0.404	-0.615

"World": Weighted by GDP.

<sup>1)</sup> 1Q2009/2Q2008. - <sup>2)</sup> 1Q2009/3Q2008. - <sup>3)</sup> 2Q2009/1Q2008. - <sup>4)</sup> 2Q2009/3q2007. - <sup>5)</sup> - 1Q2009/1Q2008. - <sup>6)</sup> 2Q2009/4Q2006. - <sup>7)</sup> 2Q2009/1Q2008.

Source: WIFO calculations using Mitchell, IFS, WTO.

<sup>32</sup> The increasing importance of customs in the pre-crisis period of the Great Depression in Europe is a major difference to the Recent Crisis, which was preceded by a phase of trade liberalization.

Another indicator which could contain indirect information on protectionism is the openness indicator. It combines information on export and import shares in GDP.<sup>33</sup> It dropped from 34% to 20% between 1929 and 1932 for six countries<sup>34</sup>. Again the fall was less for the USA, namely “only” more than a third (from 9.4% to 5.1%). It dropped by nearly one half for Germany, France and the United Kingdom (37.8% vs. 22.9%)<sup>35</sup>. The drop of the openness indicator is in the Recent Crisis less than in the Great Depression even in absolute changes and much less for relative changes. The level of openness had been 56.5% in 2008 and dropped to 44.2% in 2009. Exports and imports are predicted to increase in 2010.

This time international coordination meetings (G20, EU Commission, IMF, and OECD) discussed and monitored the danger of protectionism (apart from the WTO). “Buy National Clauses” were clandestinely or openly put into many stimulus programs. However, this usually met with international protest. They were consequently softened, albeit not totally abandoned. New export duties came into existence even before the crisis (to limit the outflow of resources or food in the period of scarcity before the crisis started), but these have, up to now, been limited. Tensions could however rise if the crisis continues and large imbalances between countries begin to occur (see the conflict about tires between the USA and China in September 2009 and the Chinese threats of retaliation).

### *Structural differences*

Some changes in the structural characteristics of the world economy have helped to limit the Recent Crisis, some have increased the probability that a crisis would spread quickly, in a cumulative and accelerating spiral.

One factor mitigating the impact of the crisis will have been the lower share of manufacturing. It amounted to 25% or more in 1929, but now lies below 20% in most industrialized countries and at 12% in the USA.<sup>36</sup> The service sector is less globalized and less cyclical (no inventories, no bulk investment as in manufacturing). The larger public sector also has a considerable stabilizing effect. It now amounts to more than 40% of GDP in most industrialized countries. Public goods are less exposed to economic cycles, and neither exported nor imported at a large scale. Furthermore, specific features of public revenue and expenditure contribute to the stabilization: higher marginal taxes and high replacement ratios for the unemployed increase the so called “automatic stabilization” effects of fiscal budget (for more factors defining the resilience of an economy see Aiginger, 2009B).

On the other hand openness and globalization have increased. As already mentioned openness measured by the sum of the export and import ratio had been 34% in 1929 and reached 56% in 2008. For the USA the figures are 9% versus 24%. For Germany and France the

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<sup>33</sup> Nominal exports plus nominal imports divided by nominal GDP.

<sup>34</sup> Austria, Germany, France, Sweden, United Kingdom, USA.

<sup>35</sup> Unweighted average.

<sup>36</sup> It is however much higher if we include China and the share of manufacturing does not fall for real data to the same extent as for nominal data (Aiginger – Sieber, 2006) and not for industrial latecomers (see Almunia et al., 2009).

openness increased rather dramatically, namely from a little above 30% at the start of the Great Depression to 73% and 46% in 2008. This reflects the impact of European Integration. The United Kingdom is the only exception insofar as openness has actually decreased according to this measure. Indicators on foreign direct investment and financial flows indicate increased globalization. Goods are traded today for longer distances and the horizon for direct investment has become worldwide.<sup>37</sup>

## 7. Summary

The goal of this paper has been to provide stylized facts about the differences in the depth of the Recent Crisis and the Great Depression. This is important in view of the fact that some economists have claimed that the Recent Crisis was as severe as the Great Depression, while others claim it “pales in comparison” with the Great Depression (Romer, 2009A). The facts are presented in view of the consensus that the Recent Crisis levelled off in mid 2009 for production but continues for unemployment in 2010.

Stylized Fact 1: There is clear cut evidence that the Recent Crisis did not reach the dimensions of the Great Depression. This holds true for all seven activity indicators presented. There are especially large differences for real growth, employment and unemployment. Considerable differences for exports and the stock market indices (on a monthly or quarterly basis) can be shown. The smallest difference was for manufacturing output in real terms. There had been severe deflation in the thirties, this time round there were a few but short episodes where the overall price level declined.

Stylized Fact 2: Economic activity has been more synchronized across countries in the build-up period to the Recent Crisis, and also for the first stage of the crisis itself. The Great Depression had two epicentres (Germany/Austria and the USA). This time round almost all industrialized countries had rather parallel declines in economic activity in the first three quarters of the crisis. The measures of dispersion across countries for all activity indicators are lower in the Recent Crisis. It is still an open question whether this will be the case for the exit phase, too.

Stylized fact 3: The decline in the first nine months was stronger in the Recent Crisis for manufacturing and trade but rather similar to the Great Depression for the stock markets, supporting the view that this crisis had the potential to develop into a Great Depression. This was never the case for GDP, employment and unemployment. The share of the decline in the first year, relative to the overall decline for the prolonged crisis, was small in the Great Depression. By contrast this time, most, if not all, of the decline happened in the first nine months. The larger overall drop in activity in the Great Depression was the result of its length. The downturn of the stock market, of world trade, and finally the bank failures happened in different waves over years rather than simultaneously.

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<sup>37</sup> For 2009 alone GDP of non-triad countries decreased by 1.2% which was not very different from 1929/1932.

Stylized Fact 4: Economic policy, specifically monetary policy and fiscal policy, re-acted quite differently in each crisis. This was partly due to lessons learned from the Great Depression itself. During the Great Depression fiscal policy was restrictive, at least during the first three years. It tried to keep budgets balanced and counteracted the automatic stabilizers by increasing tariffs and taxes and by reducing expenditure. In the Recent Crisis automatic stabilizers were a priori larger. Their effect was amplified by stimulus programs. Bank failures and the breakdown of the credit market were combated through the use of guarantees, recapitalization or nationalization. Furthermore, all these measures were implemented expeditiously and sometimes with coordination at an international level. The same difference in activity holds true for monetary policy. In 1929 interest rates were first increased, and then cautiously reduced. High deflation turned the lower nominal rates into high real rates. Money supply declined over several years for many countries (at least in nominal terms). This time monetary policy slashed interest rates towards zero and engaged in traditional and innovative increases in money supply. Some institutional factors helped. There was no gold standard to limit money supply and fewer national currencies to defend due to European monetary integration. There was more consensus among economists and more international coordination due to the G7, G20, the IMF, and the World Bank.

The stylized facts are compatible with the conclusions that (i) the Recent Crisis had the potential to develop into a much larger crisis and that (ii) fiscal and monetary policy prevented the Recent Crisis from developing into a crisis of the magnitude of that of the Great Depression. The final proof of the impact of economic policy needs more empirical work with sophisticated models and methods<sup>38</sup> and a little more knowledge about the further economic development. The stylized facts presented concentrate primarily on ten industrialized countries, even if, wherever possible, data on world output (trade, stock markets etc.) are added.

This time there were institutional factors which mitigated the danger of a larger crisis, such as the lower share of manufacturing and the higher share of services and the public sector. However, there were also factors increasing the danger of cumulative downward spirals, namely the higher degree of openness and larger shares of international investment and finance. International cooperation hindered furthermore blunt forms of protectionism. Newly industrializing countries, specifically in Asia, used accumulated surpluses for stimulating their own economy and they had gained enough weight (due to recent growth) to contribute to the stabilization of the world economy.

Thus the Recent Crisis (the Great Recession) and the Great Depression can be seen as siblings that were born under different circumstances and were given different foster parents (insofar as economic policy reacted differently). Let's watch how the luckier sibling (the younger one) matures.

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<sup>38</sup> For a recent attempt to analyze the impact of monetary and fiscal policy during the two crises see *Almunia et al.* (2009). They conclude that "fiscal policy made little differences during the 1930s because it was not deployed on the requisite scale". They suggest a positive impact of government expenditures on GDP during the interior period, with substantial fiscal multipliers. The study also provides some evidence that monetary policy was effective but with less robust results. Results are tentatively positive also for the Recent Crisis for both fiscal and monetary policy.

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## Annex

### *Employment policy*

International literature focuses on labor market policy in the Great Depression in the USA (For other countries see *Eichengreen - Hatton* (1988)). The USA tried to mitigate unemployment early through intensive work relief programs (in which the government employed people at low wages). Starting in 1930 0.6% of unemployment and then in 1935 a maximum of 5.9% was "parked" in relief programs: the unemployment rate including relief program workers was 20.1% in 1935, and 14.2% without them (*Margo*, 1993, p. 42).

A different important feature of labor market policy was that firms did not cut wages. Indeed real wages were increasing sharply during the recession e.g. by 20% between 1929 and 1931. This was followed by a phase where wages went up and down, but there was a general trend of 30% higher real wages in 1939 as compared to 1929 (*Margo*, 1993; *Bernanke*, 2004; etc). The macroeconomists of the time blamed the length of the recession for this trend of rising real wages. There had, however, also been a lot of variation in working times, which mitigated costs for firms and which may have encompassed an element of lowering wages not reflected in the statistics. There are several explanations as to why real wages increased despite the slump. The first one is the stickiness of nominal wages which, due to falling prices, increased in real terms. Other authors cite an echo effect from the recession in 1921, in which wages had been cut and the crisis worsened. Furthermore, reference is given to a social norm, that firms should not decrease wages in a recession. Finally, the concept of efficiency wages could be used. Firms did not like to cut wages since this lowers motivation and productivity.

A macroeconomic policy, in the Keynesian form was not applied and there would not have been an appropriate channel at that time. Roosevelt's New Deal Legislation, the National Industry Recovery Act of 1933, established guidelines that raised nominal wages and prices and encouraged higher levels of employment through reducing the working week. Part of the legislation was declared unconstitutional in May 1935. *Weinstein* (1980) investigated the effect of this legislation and it was criticized by *Temin* (1976) for making unemployment even more persistent.

In the Recent Crisis, in many countries, labor market policies have been used to dampen the effects of declining economic activity on employment. Programs have been started to support shorter working times specifically in firms that have been hard-hit ("Kurzarbeitsprogramme"). This is likely to be the reason why e.g. in Germany and Austria the increase in unemployment and the decline in employment as compared with the decline in GDP is actually less than in the USA. A less pronounced decline in employment in turn stabilizes GDP via consumption. The impact of the crisis is also reduced if the mismatch between the supply and demand of qualifications is minimized and if regional and job mobility is increased.

A general shortening of work time has not been considered (the same holds for large early retirement programs), specifically since in most industrialized European countries the population of working age is predicted to shrink in the next years due to an ageing population.

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