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The “Crisis Before the Crisis” – The Export Engine Out of Gear

It is common knowledge in economic history that there have been different phases of secular growth since the Industrial Revolution. The years from the outbreak of the First World War until the end of the Second on the one hand and those afterwards until the beginning of the seventies on the other provide a striking contrast. Whereas the first of these periods saw only very slow economic progress, the second comprised the so-called “Golden Age” of growth.

This paper mainly deals with a sub-period of the first, i.e. the twenties. Knut Borchardt once characterized the state of the German economy at that time as being “sick”¹. However, it was not only Germany which then experienced a kind of continuous crisis. Britain was another case in point. In a way (Western) Europe as a whole already showed clear signs of sluggish development before the outbreak of the Great Depression. This being the case, it appears to be appropriate to look for a general cause. There might be a deeper reason for the economic problems for example in Germany and Britain than high labour costs or an obsolete capital stock. The proposition made here is that it was a weak dynamic of exports reflecting the lack of a liberal trading system which lay at the root of the problem.

Today the theory of catching-up is widely accepted as an explanation of the Golden Age. But it is clear that catch-up growth does not develop automatically if there is such a potential. Whether or not convergence will occur depends on the “social capability” of the follower countries. Moses Abramovitz identified the social capability of a country with its technical competence as well as its institutions². Thus the social capability influences “the diffusion of knowledge, the rate of structural change, the accumulation of capital, and the expansion of demand”, which among themselves determine the speed of catching-up³. Now, trade and export further each of the four factors listed. Trade in machinery is a most important means of the international diffusion of knowledge. Exports are, seen for each

¹ K. Borchardt, Constraints and Room for Manoeuvre in the Great Depression of the Early Thirties: Towards a Revision of the Received Historical Picture, in: *idem*, Perspectives on Modern German Economic History and Policy (Cambridge 1991) 157.

² M. Abramovitz, Catching Up, Forging Ahead, and Falling Behind, in: *Journal of Economic History* 46 (1986) 388.

³ *Ibid.* 390.

country separately, an exogenous element of demand. An upswing of exports therefore normally induces new investment, which in turn leads to an increase of productivity. Exports and investment together greatly facilitate structural change. After 1945 world exports rose very quickly, and the share of exports in the gross national product of industrial countries multiplied. Therefore it is hardly surprising that post-war growth often is characterized as export-led. The growth potential offered by the possibility of catching-up was thus realized mainly through buoyant exports. Seen from this perspective it is astonishing that slow export growth in the interwar period often plays a much less conspicuous role in explanations for the poor performance of European economies.

The paper is organized in two parts. In the first the development of growth and exports after the First and after the Second World War is compared generally. In the second part the German case in the twenties will be analyzed in more detail. In conclusion some remarks will be made about the institutional setting of the world economy in both periods.

Growth and Exports

Catching-up growth occurs if more productive technologies used in a leading country are imitated by follower countries. Given the appropriate level of social capability this normally brings about convergence, because it seems to be more difficult and time-consuming to innovate and develop new technologies from scratch than to import and apply technologies which are already used successfully elsewhere. Therefore comparative productivity levels of leading and follower countries are a rough measure of the extent of potential catching-up growth.

Table 1: Average GDP per Manhour in Western Europe as percentage of U.S.

<u>1913</u>	<u>1929</u>	<u>1938</u>	<u>1950</u>	<u>1973</u>
64	61	60	50	73

Source: A. Maddison, *Monitoring the World Economy 1820–1992* (Paris 1995) 249.

A big productivity gap between the United States and Western Europe⁴ already existed before the First World War. However, in the next quarter of a century there was no catch-up growth. The contrary was the case, for in 1938 the gap was greater than in 1913. This clearly underlines the fact that convergence is not a necessary outcome even of quite large differences in productivity levels. After the Second World War a process of catching-up indeed developed. The gap was very much reduced in the quarter of a century after 1950. With regard to the interwar

⁴ Throughout this paper “Western Europe” includes the following countries: Belgium, France, Germany, Italy, The Netherlands, Sweden, Switzerland, United Kingdom.

period, it is interesting that, according to the figures presented, the gap widened more before 1929 than after. The reason is that the U.S. economy grew much more vigorously than Western Europe before but not after the Great Depression⁵. Prima facie, this is plausible because the U.S. as a very large economy was much less dependent on exports than the smaller West European countries.

With regard to export performance, the First World War marks a turning point. Whereas real exports of West European countries rose by 3.4 per cent annually on average between 1899 and 1913, from then on to 1929 it was only 0.4 per cent. Manufactures had the biggest share in those exports. Manufactured exports grew with a rate of 4.0 per cent and 0.8 per cent respectively⁶. It is revealing to compare rates of growth of exports and social product per head before and after the War as is done in table 2.

Table 2: Growth of Total Exports and GDP per Capita (constant prices; % p. a.)

	<u>1899–1913</u>		<u>1913–1929</u>	
	Exports	GDP/capita	Exports	GDP/capita
France	2.7	1.3	0.8	1.9
Germany	5.6	1.6	–0.1	0.8
UK	1.8	0.5	0.0	0.3
Other Western Europe	3.9	2.0	1.2	1.5
U.S.	2.9	1.9	3.3	1.7

Sources: A. Maizels, *Industrial Growth and World Trade* (Cambridge 1965) 428–429;
A. Maddison, *Monitoring the World Economy 1820–1992* (Paris 1995) 104–107;
180–183, 194–197.

In all cases exports rose with a faster pace than living standards (GDP/capita) before the war⁷. After the war the reverse was true except for the U.S. Therefore, exports clearly were not an engine of growth in Europe after 1913. In the United States it was different especially with regard to manufactured exports which even increased by 5.8 per cent p.a. between 1913 and 1929 (1899–1913: 5.1 per cent), not least because overseas countries replaced European suppliers, which during the war could not deliver, by American, which could. West European countries themselves, however, were not such a good market for American manufactures, with export growth thereto being a third lower than in prewar years (1899–1913: 3.5 per cent p.a.). Together with the fact that manufactured exports of West European

⁵ A. Maddison, *Monitoring the World Economy 1820–1992* (Paris 1995) 196–197.

⁶ A. Maizels, *Industrial Growth and World Trade. An Empirical Study of Trends in Production, Consumption and Trade in Manufactures from 1899–1959 with a Discussion of Probable Future Trends* (Cambridge 1965) 428–429; 432–433.

⁷ This seems to have been true even before the turn of the century; compare for all countries included in table 2: A. Maddison, *Dynamic Forces in Capitalist Development. A Long-Run Comparative View* (Oxford 1991) 312–315 (volume of exports 1870–1899); Maddison, *Monitoring the World Economy*, 194, 196 (GDP/capita 1870–1899).

countries to each other rose at only half the rate than those to other destinations this means that intra-industry trade in the twenties must have been especially weak⁸. And indeed the steeply rising tendency of manufactured imports in industrial countries from before the First World War was already interrupted or reversed in the twenties⁹. Only after the Second World War did it reemerge strongly, and then intra-industry trade between industrial countries proved to be the most dynamic element of world trade¹⁰. Three conclusions can be drawn from these observations:

1. As the growth of intra-industry trade heavily depends on a high degree of trade liberalization, the severe break in the upward development of this subdivision of world trade after 1913 clearly hints to much greater protectionism after the war than before¹¹.
2. The shrinking share of intra-industry trade in total trade meant lower competition from foreign suppliers in home markets of industrial countries. This must have been more damaging to the growth of productivity in the smaller countries of Western Europe than in the U.S. and therefore explains at least partly the lack of catching-up in the twenties.
3. Sharply rising intra-industry trade opened up worldwide markets to manufacturing enterprises of all industrial countries after the Second World War. It really was this kind of trade which made for export-led growth and thus reduced the pressure for the re-introduction of protectionist devices. On the other hand the lack of a similar dynamic of intra-industry trade could have been largely responsible for problems of overcapacity and low industrial investment in West European countries after the First World War.

In order to further substantiate these conclusions let us now compare the development of manufactured exports after the First and after the Second World War in some detail. To do this the years 1913, 1929, 1937, and 1955 are chosen, i. e. years for which Alfred Maizels has compiled comparable export figures from the trade statistics of industrial countries. The years mentioned generally were part of cyclical upswings, and in some cases they marked an upper turning point of the business cycle. 1913 and 1937 saw maxima of real world exports before the beginning of the respective wars. In 1929 the peak level of exports in the whole interwar period was reached¹². The increase in exports between 1913 and 1929 therefore is a true measure of their dynamic in the twenties. The time span between 1913 and 1929 was about twelve years not counting the years of war. The same happens to be the case for the second pair of years (1937 and 1955). By comparing relative additions to manufactured exports between 1913 and 1929 and between 1937 and

⁸ Intra-industry trade is very roughly defined here as exports and imports of manufactures between industrial countries themselves.

⁹ *Maizels*, *Industrial Growth and World Trade* 156–157.

¹⁰ GATT, *International Trade* 1954, 164–165; WTO, *Annual Report* 1998, 91, 158, 160.

¹¹ See the contribution of Forrest Capie in this volume.

¹² *Maddison*, *Monitoring the World Economy* 239.

1955 we therefore can make reliable statements about their different contributions to overall growth in the two postwar periods.

Table 3: Increase of Real Exports of Manufactures in Two Postwar Periods

	<u>1913–1929</u>	<u>1937–1955</u>
France	+ 32%	+ 167%
Germany	+ 7%	+ 62%
UK	– 7%	+ 66%
Other Western Europe	+ 59%	+ 75%
Total Western Europe	+ 14%	+ 77%
Among Western European Countries	+ 9%	+ 103%
Total Western Europe and North America	+ 36%	+ 83%
Among Western European and North American Countries	+ 28%	+ 116%

Source: A. Maizels, *Industrial Growth and World Trade* (Cambridge 1965) 432–433.

Table 3 fully confirms the above findings. Not only were manufactured exports, especially from West European countries, growing several times faster after the Second World War than in the twenties, but intra-industry trade among industrial countries which had risen still slower in the twenties quickened its pace even more than total manufactured exports after the War. That must have greatly contributed to full capacity utilization of West European economies in the fifties. Consequently investment ratios were much higher in those years than in the interwar period¹³. The rise in real national product in the second period was exactly double the increase in the first¹⁴. It appears plausible to suspect that this had a lot to do with the export surge.

The Case of Germany in the Twenties

The weakness of the economic development of the Weimar Republic led to low incomes from entrepreneurial activity¹⁵. Recently this observation has been persuasively confirmed by Mark Spoerer in his analysis of the profits of industrial joint stock companies. He showed that their equity yield was more than 8 per cent on average between 1886 and 1913, whereas from 1926 to 1929 it fell to 3.3 per cent¹⁶. Initially industrialists might have accepted low profits, "because they

¹³ *Idem*, 76; see also B. Eichengreen, *Mainsprings of Economic Recovery in Post-war Europe*, in: *idem* (ed.), *Europe's Post-war Recovery* (Cambridge 1995) 11.

¹⁴ *Maddison*, *Monitoring the World Economy* 180–183.

¹⁵ *Borchardt*, *Great Depression* 156.

¹⁶ M. Spoerer, *Von Scheingewinnen zum Rüstungsboom. Die Eigenkapitalrentabilität der deutschen Industrieaktiengesellschaften 1925–1941* (Stuttgart 1996) 160.

judged this a temporary penalty which would disappear as export markets were regained and home demand returned to normal"¹⁷. Therefore they engaged in rationalization and expanded operations expecting a rise in profitability. In this context it is interesting that German industry managed to slightly reduce the productivity gap vis-a-vis the U.S. in the period 1925 to 1929¹⁸. And in fact, according to Spoerer, the equity yield also began climbing up from 0.2 per cent in 1925 to 4.2 per cent two years later. However, long before having attained the normal level of the pre-war years, it again fell to 3.3 per cent in 1928¹⁹. Now all hopes of industry for an imminent return to higher profitability were dashed and business pessimism surged. Fixed net investment of industry collapsed to 0.4 billion Reichsmark in 1929, i.e. 0.7 billion Reichsmark lower than one year earlier²⁰. Entrepreneurs accused the state of greatly overburdening industry with costs. Industrial relations worsened appreciably, because fast growing wages were seen as the principal reason for the profit squeeze.

Whether or not the complaints of industry were borne out by reality has been a matter of debate in the so-called Borchardt-controversy. After a careful revision of the evidence Albrecht Ritschl concluded that real wages grew faster than productivity in the second half of the twenties compared to 1913, thus giving substance to the contemporary accusations of entrepreneurs and supporting Borchardt's opinion²¹. But if one also pays attention to the increase of the German terms of trade in the same years²², the answer to the question of an undue wage pressure is less clear²³.

There is still more to be said about the case. This becomes obvious from an inspection of table 4:

¹⁷ T. Balderston, *The Origins and Course of the German Economic Crisis. November 1923 to May 1932* (Berlin 1993) 381.

¹⁸ S. N. Broadberry, *The Productivity Race. British Manufacturing in International Perspective, 1850–1990* (Cambridge 1997) 36.

¹⁹ Spoerer, *Scheingewinne* 147.

²⁰ Statistisches Jahrbuch für das Deutsche Reich 1941/42, 610.

²¹ A. Ritschl, *Zu hohe Löhne in der Weimarer Republik? Eine Auseinandersetzung mit Holtfrichs Berechnungen zur Lohnposition der Arbeiterschaft 1925–1932*, in: *Geschichte und Gesellschaft* 16 (1990) 375–402; compare also S. N. Broadberry, A. O. Ritschl, *The Iron Twenties: Real Wages, Productivity and the Lack of Prosperity in Britain and Germany Before the Great Depression*, in: C. Buchheim, M. Hutter, H. James (eds.), *Zerrissene Zwischenkriegszeit. Wirtschaftshistorische Beiträge. Knut Borchardt zum 65. Geburtstag* (Baden-Baden 1994) 15–43. For Borchardt's original contention see *Borchardt, Great Depression* 154–157.

²² W. G. Hoffmann, *Das Wachstum der deutschen Wirtschaft seit der Mitte des 19. Jahrhunderts* (Berlin 1965) 606–607; 612–615.

²³ See R. Tilly, N. Huck, *Die deutsche Wirtschaft in der Krise, 1925 bis 1934*, in: *Buchheim et al. (eds.), Zerrissene Zwischenkriegszeit* 50–53.

Table 4: Development of Costs in German Industry 1925 – 1929 (1913 = 100)

	1925	1926	1927	1928	1929
1. Productivity per man hour	89	98	106	105	110
2. Real hourly wages (deflated with cost of living index)	103	110	116	125	130
3. Real hourly wages (deflated with price index for manufactures)	101	110	113	123	132
4. Unit wage costs	113	112	107	117	120
5. Costs of material inputs relative to prices of manufactures	97	92	87	87	87
6. Unit variable costs relative to prices of manufactures	103	100	95	99	100

Sources: A. Ritschl, Zu hohe Löhne in der Weimarer Republik? In: Geschichte und Gesellschaft 16 (1990) 375–402; T. Balderston, The Origins and Course of the German Economic Crisis (Berlin 1993) 51; Statistisches Jahrbuch für das Deutsche Reich 1931, 262.

Lines 1 and 2 of the table reproduce Ritschl's figures. In line 3 a price index for manufactures instead of the index of living costs is taken for deflating nominal hourly wages, because from the perspective of industrial producers this seems more appropriate. If the price index for finished manufactures of the German Statistical Office²⁴ had been used for the calculation, the outcome would have been a lower level of real wages than shown in line 2. However, Theo Balderston's criticisms of the official index are accepted²⁵ and therefore the price index recalculated by him is taken in line 3. The not implausible result is that real wages in the later twenties behaved even more unfavourably from the viewpoint of entrepreneurs than is thought by Ritschl. Line 4 therefore is no surprise any more, signalling a continuous rise of wage costs from 1927 onwards, which obviously caused increasing business unrest. But what industrialists at the time ignored is that there was a balancing factor for the bigger wage costs. For input relative to output prices had apparently been declining since 1913, which can be seen in line 5 of the table. Here the official price index for raw materials and semi-finished products is used for the calculation. The fall in relative input prices was even greater for an index of raw material import unit values as employed by Balderston²⁶ – an indication of the high degree of cartelization in Germany which kept prices of homeproduced inputs higher. A rough index of unit variable costs combining wage costs and costs of input materials (without taxes and other contributions) is then constructed in line 6 assuming a ratio of its two elements of 2:3²⁷. The result is clear: Variable

²⁴ Statistisches Jahrbuch für das Deutsche Reich 1931, 263.

²⁵ Balderston, Origins 50.

²⁶ Ibid. 55.

²⁷ The ratio of 2:1 used by Balderston in his calculation (Origins 55) seems far too high in the light of information supplied by the German Statistical Office. For example, the following ratios for single industries in 1928 can be calculated from information contained in "Stati-

costs of industry as defined had hardly changed in the second half of the twenties compared with the pre-war period. The inspection of wage costs alone therefore must lead to erroneous conclusions about the competitiveness of German industry before the Great Depression. In fact German manufactured exports were quite competitive on world markets, as Balderston has shown. Machinery exports of Germany for example quickly grew from their low after the stabilization, approaching their prewar share of world exports towards the end of the twenties²⁸.

If variable costs were not higher than in 1913 and the international competitiveness of the German industry not bad, why then were profits so much smaller in the twenties than before the war? The answer to this apparent paradox was low capacity utilization²⁹. Thus the capacity utilization index of the "Institut für Konjunkturforschung" stood at 72 per cent in the second half of 1928³⁰. Perhaps this figure derived from business reporting was overpessimistic, as Balderston is inclined to think³¹. Capacity utilization however continued to decline in 1929, whereas in 1925 it still was 76 per cent³². Rationalization after 1925 had obviously led to a further lowering of capacity utilization, possibly also aggravated by widespread cartelization. Anyway, it seems certain that capacity utilization towards the end of the twenties was poorer than in 1913. That can also be seen from machine-building, where capacity utilization apparently was more than 20 per cent below prewar levels in 1928³³. Thus we arrive at the interesting fact that high competitiveness leading to a rising share of world exports in the later twenties was not sufficient for a satisfactory utilization of given capacity in the machinery industry. There, as well as in other branches of industry, lack of demand appears to have been the fundamental problem resulting in low profits. Not high variable costs because of wage pressure therefore were the primary reason for sharply reduced profitability, but much increased fixed costs per unit of production as a consequence of bad capacity utilization. Incidentally this might also explain why the productivity level attained by industry at the end of the twenties was only about

stisches Jahrbuch für das Deutsche Reich", various editions, and in "Vierteljahrshefte zur Statistik des Deutschen Reichs":

Table: Wages and Salaries as Percentage of Value of Material Inputs

Machinery industry	88	Cotton spinning	19
Iron and Steel	67	Tyre production	18
Knitting industry	46	Leather production	13
Production of cars	32	Soap industry	13
Clothing industry	24	Margarine industry	5

²⁸ Balderston, Origins 83–128, esp. 111.

²⁹ Svernilson mentions excess capacity, aggravated by collusion, as a serious problem in the industry of Europe as a whole; see I. Svernilson, Growth and Stagnation in the European Economy (Geneva 1954) 48–49.

³⁰ Konjunkturstatistisches Handbuch 1936, 17.

³¹ Balderston, Origins 366.

³² A. F. Mester, Eine Zeitreihe der Ausnutzung des Sachkapitals (1925 bis 1938 und 1950 bis 1957), in: IFO-Studien 7 (1961) 81.

³³ Balderston, Origins 370.

10 per cent higher than in 1913 which otherwise might call into question the effectiveness of the rationalization movement³⁴.

It is ironical that the literature refers to undue wage pressure as an important cause of the weak economic performance in the Weimar Republic on the one hand and to wage moderation having supported growth in the Federal Republic of the fifties³⁵ on the other, although the increase in wages was even slightly higher between 1950 and 1955 than between 1925 and 1930³⁶. Strike activity in the first half of the fifties also was more widespread than later³⁷. And, as has recently been confirmed, "the rhetoric of the unions and the counter-rhetoric of business and the liberal press were by no means moderate throughout."³⁸ The real difference of the two periods did not lie in the trend of wage growth but in the trends of capacity utilization and thus productivity growth and investment. These proved to be far higher after the Second World War, although in the twenties there already was ample scope for catch-up growth. However, lack of demand prevented its implementation after the First World War, which was, by the way, quite a popular explanation of low growth at the time. But the solution could obviously not have been even higher wages. Instead a much more dynamical growth of world trade would have led to the exogenous rise of demand for German manufactures, which was so urgently needed at the time. In this way it would have been possible to set into motion the virtuous circle of export-led growth already in the twenties, which finally did the job after the Second World War.

Concluding Remarks

It was protectionism of all sorts which brought the export engine out of gear after the First World War. For some time after the Second World War, however, protectionism was also flourishing – on a still higher level. In the interwar period the League of Nations tried to tackle the problem. Several world economic conferences passed sounding resolutions, but to hardly any avail. Why then was the situ-

³⁴ As is indeed done in *H. James, The German Slump. Politics and Economics 1924–1936* (Oxford 1986) 146–155.

³⁵ See e.g. *B. Eichengreen, Institutions and Economic Growth: Europe After World War II*, in: *N. Crafts, G. Toniolo* (eds.), *Economic Growth in Europe Since 1945* (Cambridge 1996) 45–46.

³⁶ *Statistisches Jahrbuch für die Bundesrepublik Deutschland* 1990, 502, 548.

³⁷ *J. Frerich, M. Frey, Handbuch der Geschichte der Sozialpolitik in Deutschland*, Bd. 3 (München 1996) 96.

³⁸ *H. Giersch, K.-H. Paqué, H. Schmieding, The Fading Miracle. Four Decades of Market Economy in Germany* (Cambridge 1992) 76; see also *K.-H. Paqué, How Cooperative was the Spirit? A Note on the "Eichengreen-View" of Europe After World War II* (Kiel Working Papers 701, Kiel 1995). The union rhetoric, however, might have been more frightful for entrepreneurs in the Weimar Republic in the context of state arbitration; compare *C. Zahn, Arbeitskosten und Lebenslagen zwischen Inflation und Großer Krise. Zur Geschichte der Weimarer Lohnbewegung* (St. Katharinen 1996).

ation after 1945 different? Why could protectionism then effectively be reduced and a liberal international trading system be established in the course of time?

A modern conceptualization of their possible role in the process of growth says that international organizations function as commitment mechanisms solving the problem of adherence to a code of good conduct by all involved³⁹. The above questions can be reformulated to suit this theoretical framework: Why did the League of Nations or any of its sub-organizations fail to develop such a commitment mechanism in order to insure coordinated reductions of protectionism in the twenties, whereas after the Second World War exactly that could be done through OEEC and GATT? The fundamental problem therefore is how organizations fulfilling their role as efficient commitment mechanisms came into being, because obviously not every international organization does so.

A liberal and multilateral world trading system is clearly a kind of public good, which can only be attained by collective action. According to Mancur Olson, the incentive of each actor to commit himself to the achievement of such a good is very small. This is true even if he is a member of an organization with that purpose. But the situation is very different if there exists a dominant member with the same aim within the organization. In case of such a benevolent hegemony means will be made available by the strong member to bring about the coordinated action by the others necessary for the attainment of the public good.

This is the fundamental difference between the interwar and the post-war period. In the former, the United States as the dominant country was not very much interested in a liberal trading system. It abstained from the League of Nations and unleashed a spiral of protectionism. Then, however, the U.S. changed from being Saul to Paul. The first step in the new direction was the Reciprocal Trade Agreements Act of 1934. In the forties the U.S. repeatedly asked its allies for pledges to multilateralism – in the Atlantic Charter and in the Lend-Lease Agreements. After the end of the second war it resolutely engaged in the erection of such a system. By the provision of special favours the U.S. finally secured the compliance of its partners with this course of action. In the first GATT negotiations, for instance, the Americans offered big tariff cuts against rather small and ineffective concessions by the others. The liberalization of intra-European trade and payments was achieved by the U.S. using Marshall Plan dollars as a carrot⁴⁰. In this way the process of reducing protectionism was set into motion, the U.S. initially employing its hegemony to the advantage of its partners. In the end, however, all profited by the establishment of a free system of world trade thus achieved. The Europeans could exploit the potential for catch-up through export-led growth. But the American economy also grew with a higher rate than in the interwar period.

³⁹ *Eichengreen*, Mainsprings 5–7.

⁴⁰ Compare C. *Buchheim*, *Die Wiedereingliederung Westdeutschlands in die Weltwirtschaft 1945–1958* (München 1990) 99–107.