Modern Germany

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Reform after the French Wars

The French wars (1792-1815) radically altered the political map of Germany. They led to the dissolution of myriads of mostly ecclesiastical micro-territories, brought down the Holy Roman Empire, and triggered legal and social reforms on a large scale. Traditional historiography (as Nipperdey, 1994) has tended to regard Napoleon's impact as decisive for Germany's modernization in the 19th century. Under French occupation, feudal structures were uprooted, French civil law was introduced or imitated, and a customs barrier was erected that isolated Germany from England while the wars lasted.

However, even prior to the French Revolution, Germany had been less static than it often seems. In the second half of the 18th century, industrialization gradually took hold in the commercially advanced regions along the Rhine river and in Saxony (Pollard, 1981). Population size had just recovered the losses from the Thirty Years War and kept growing steadily. Still, institutional reform advanced only slowly, with the Prussian Civil Code of 1794 and the Josefinian reforms in the Habsburg monarchy as the major exceptions.

The pace of reform changed after Prussia's defeat against France in 1806. Between 1806 and 1810, Prussia abandoned the guild system, introduced free enterprise, freed its peasantry, and reshaped its administrative system. Entry exams for Prussia's higher civil service were created that included Adam Smith in the list of required readings. An era of economic liberalism began that lasted into the 1870s.

Economic and institutional reform elsewhere in Germany often proceeded more cautiously. West of the Elbe river, liberation of the peasantry was less of an issue, as in many regions, the manor system hardly consisted in more than rental payments for farmers and in – usually detailed and restrictive – entitlements to the use of the village commons. Compensation schemes were drawn up, but full implementation was often delayed until the 1860s. On the other hand, this gradualist

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approach ensured the transition of property rights without much social disruption. This contrasted with the East where compensation often forced smallholders into selling off their land.

Industrial recovery from the war remained unbalanced and was often slow. High taxation to pay off the war debts combined with inefficient market size and British dominance in the markets for manufactures. Prussia combined its scattered territories in a customs union in 1818, which fostered industry but damaged the export interests of its agriculture. Successive enlargements soon widened this union to most of Northern Germany, except for the coastal regions with their strong British trade links. A more protectionist South German customs union formed in 182X as a countervailing block. Significantly, it excluded the Habsburg monarchy, which stood to gain even less from agricultural exports and had opted for a high-tariff system.

Formation of the *Zollverein* in 1833, to go into effect in 1834, unified the North and South German customs unions. It involved, albeit limited, economic concessions by Prussia to the protectionist South, but also achieved the Prussian goal of excluding Habsburg and its Austrian territories.

Canals and roads continued to reduce transport cost and helped to exploit the possibilities opened by the new customs arrangements. Still, due to Germany's mostly uneven terrain, the railway boom may have been more important for the economic integration of Germany than in Britain or Northern France. A railway industry quickly developed in the 1840s, followed by a growth spurt in heavy industry after 1850, when development of the coalfields north of the Ruhr began.

Prussian dominance

Prussia's dominance in the *Zollverein* survived the failed revolution of 1848. A national assembly convened in Frankfurt during that year failed to resolve the rivalry between Prussia and the Habsburg monarchy. A strongly protectionist proposal by the Habsburg delegates antagonized the North, deepened the rift between Prussia and Austria, and contributed to the failure of attempted unification (Best, 1980). Low tariffs favored Northern Germany with its proximity to the sea, and kept the door open for the coastal regions not yet in the customs union. In contrast, peasants and small-scale industry in landlocked Southern Germany favored protectionism. Export interests of the landed aristocracy met with the railroad business that depended on imports for its expansion. Prussia's conquest of most of Northern Germany in 1866 tipped the balance even further in favor of free trade. Indeed, customs on iron and machinery imports were lifted in 1873.

Still, economic development remained imbalanced, as did the political map. Controlling most of Germany's nascent heavy industry, Prussia easily imposed its hegemony on Germany in the Austro-Prussian War of 1866, and achieved easy victory over France in the war of 1870. The German Empire of 1871 reflected Prussia's unwillingness to share power. The new central government only received authority over customs and some indirect taxes and depended well into the 1890s on transfers from its member states. Parliament was elected through universal and equal male suffrage but had only limited prerogatives. It voted on the budget but could not impeach the - chancellor. The military budget could only be approved as a global sum, effective several years ahead, while the details would be left to the king of Prussia. With military expenditure consuming up to 80percent of the budget, parliament's prerogatives had precious little value.

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After - 1870, Germany experienced another upswing fuelled by abandoned restrictions on joint-stock companies, the French war indemnity, and a wave of business start-ups. The stock market crash of 1873 swept many of them away. It foreshadowed the end of the railway boom, marked the beginning of the depression, and changed the political climate. Excess capacity in metal industry made further imports of railway material unnecessary. Agriculture was affected by increasing American competition in the grain market. The structural crisis in South and West German peasant farming was aggravated by reduced possibilities for migrants in the industrial cities. This and depressed export markets created a new coalition of interests between Prussia's landed aristocracy, South German protectionists, and heavy industry (Klug, 2001).

The new tariff of 1879 introduced moderate to high levels of protection combined with export subsidies to compensate industry for its elevated raw material cost. -Paradoxically, this tariff strongly resembled the failed Austrian proposal of 1848. The new tariff indeed favored the South at the expense of the coastal North and contributed to a gradual southward drift of Germany's economic center of gravity.

Otto von Bismarck's turnaround in welfare policy reflected the same political pattern. The introduction of social security as a corporatist organization coincided with a ban on the Social Democratic Party and its trade unions in 1880 that lasted to 1890. Social democracy had its historical roots among journeymen in the trades and expanded into the skilled segment of the manufacturing labor force (Welskopp, 2000). These groups had long asked for a corporatist system resembling the old guilds. Austria and parts of South Germany had been more responsive to these demands than Prussia. The organization of social security in corporatist self-administration bodies was a first concession. The introduction of a corporatist system in the traditional trades with apprenticeships and other barriers to entry followed. Prussia's departure from a traditional policy stance again marked the beginning of a new trend. Vocational training through apprenticeship and access control to the workplace gained popularity in the 1920s and was made almost universal after 1933. In weakened form, it - survived into the postwar period.

Soon after 1871 Germany's fragmented financial sector began to centralize around large universal banks. Alongside these financial all-purpose companies, heavy industry trusts developed that integrated coal, steel, and machine building. Cross-ownership, long-term credit, and interlocking directorates established a tight network of control. Rudolf Hilferding (1981) argued that dependence on long-term credit gradually brought big business under the control of the Berlin banks. Restrictive stock market legislation beginning in the 1890s gave further importance to bank finance at the expense of the market for equity. Alexander Gerschenkron (1962) adopted a more optimistic perspective on the same theme: state intervention, monopolistic industry, and control through universal banks formed the basis of Germany's rapid catching-up on Britain as the European industrial leader. –The tight network between universal banks and oligopolistic firms - appeared to be Germany's way of overcoming backwardness and was seen as a historical model.

Recent research has cautioned on the power of universal banks. Smaller-scale regional savings banks, mostly in public hands, continued to hold a large market share in corporate bank credit. Also the power wielded by the big banks seems far from clear (Wellhöner, 1989; Fohlin, 1999). Nevertheless there exists a large body of research in support of the Gerschenkron hypothesis (Tilly, 1980).

Germany entered a new growth cycle in the 1890s. Fertility began to decline, population pressure diminished slowly, and emigration to the New World subsided. Still, almost 50percent of the population worked in agriculture, although often in connection with occupation in manufacturing. At the same time- the first immigrants began to arrive. Mostly- these were Polish mine workers destined to the Ruhr district. Internal migration flowed from the east to the west and later to the coastal port cities. Germany's efforts to build up a commercial fleet and a navy created a sizable shipbuilding industry. This tied the economic interests of the main ports closer to the rest of Germany and led to the entry of Hamburg, Bremen, and Lübeck into the German customs union.

Germany's maritime ambitions went hand in hand with colonial aspirations and the desire to challenge Britain's naval superiority. Coming late, starting from a weak basis, and being at a locational disadvantage, these efforts were necessarily futile. But they tilted Germany's heavy industry basis toward unhealthy expansion, locking in its economic interests with the fate of German militarism. Around 1910- German mining and manufacturing enjoyed a clear productivity lead over Britain (Broadberry, 1997). However this armament boom created - structures that could hardly compete in peacetime.

On the eve or World War I, Germany enjoyed elusive stability. Social revolt had been avoided, although the social democratic party gained majorities in parliament without gaining power. The *Kaiser* was popular, although much of his success in public was owed to fostering national chauvinism and creating international tension. Engineering and the sciences flourished, and Germany reaped a good share of the newly awarded Nobel prizes each year. Still, the political basis of this prosperity was unsound, both internationally and domestically.

World War I

Germany triggered off World War I with the anticipation of a short campaign and without being prepared for a war of attrition. Niall Ferguson (1998) has argued that Germany's strategic stance was essentially defensive, while a large research tradition in the wake of Fritz Fischer (1967) has emphasized the radicalism of important factions of Germany's military leadership, which aimed at a continental empire and at German colonization of East Central Europe. Contrary to any of these aspirations, Germany's war economy soon slipped into stagnation and decline. Total output stagnated and probably fell, and the Allied naval blockade caused severe food shortages. A peace treaty imposed on Russia in early 1918 did not alleviate these difficulties, although in an operation strangely foreshadowing World War II, German troops occupied the Ukraine and parts of southern Russia down to the Caucasus. Still, the collapse of the German war machinery in 1918 had military rather than economic reasons. Given the failure of the German public to realize this, it may be argued that armistice was granted to Germany too early. Germany asked for and obtained negotiations after meeting formally with demands for democratization and the abdication of its monarch. Yet the old elites successfully placed the economic and political burden of coping with military defeat in the hands of their democratic successors.

Germany emerged from the war burdened with the quest for social change and the reparation problem. The reparations bill of 1921 amounted to 132 billion gold marks, its realistic parts to 50 billion gold marks, which was roughly equivalent to its national income in 1913. A net indemnity of 12 billion served to compensate for war damage; a further 38 billion for inter-Allied debts. Relative to pre-war national income, the net indemnity itself did not exceed the French indemnity to Prussia of 1871. At the root of Germany's reparation problem was lack of enforceability, arguably more so than Germany's capacity to pay. By modern standards Germany was overindebted, not because payments were unbearable but rather because in the given quantity they were not enforceable. Full payment of reparations seemed unlikely from the beginning, and the country remained close to foreign debt crises or in outright default to the early 1950s. Confiscation of German overseas assets and protectionism in the recipient countries further reduced the gains from cooperation and made a retreat into autarky seem more attractive. Germany soon tested the limits of enforcement by deferring payments and was declared in default already in late 1922. French and Belgian troops occupied the Ruhr district in January 1923 to secure payments and to enforce German cooperation. The experiment ended with disappointing results for both sides and paved the way for a rescheduling arrangement under American aegis in 1924.

The paramount concern of domestic welfare policies was to ease workers' discontent, which had contributed to the revolution of 1918 and threatened to fuel a communist takeover in 1919. The Stinnes-Legien Agreement of 1919 between organized capital and labor introduced workers' representation at the factory level, the eight-hour day, and pay increases. In the national assembly- a similar coalition worked out a centralized tax constitution for the new Weimar Republic. Tax authority and collection were for the most part centralized in the hands of central government, and a redistributive tax code with a broad tax base was introduced. The system was designed to yield sufficient tax revenues to pay for substantial but "bearable" reparations. However, when rumors spread in late 1920 of the likely reparation burden, the new tax constitution came under public attack. The two architects of Germany's new fiscal and foreign policy, Matthias Erzberger and Walther Rathenau, found themselves exposed to shrill public campaigns and were assassinated within a year's time-.

Weimar Republic

The Weimar Republic never solved the domestic policy problem posed by the reparation conflict. Cooperation with reparation creditors required austerity policies that produced trade surpluses to pay for reparations. Legitimacy in a weak democracy with deeply rooted social conflict called for income redistribution and welfare policies. Politicians were unable to cope with this two-sided principal-agent problem, whose solutions appeared to be mutually exclusive. The Weimar Republic only enjoyed relative prosperity when reparations were shifted abroad through foreign credit. Gerald Feldman (1993, p. 837) has referred to Weimar as a "mortgaged democracy."

Inflation was the way out of the dilemma in the short term. It concealed the distribution of the war burden, financed welfare through the printing press, and created a short-lived export boom that even permitted the transfer of parts of the reparations bill. Inflation also isolated the German economy from the international recession of 1920-1921 (Holtfrerich, 1986). Export surpluses also furthered the case against reparations in Britain, where cheap German imports were unwelcome. Until 1922 recovery was fast, and unemployment gradually disappeared. Only in early 1923 did inflation begin to have adverse macroeconomic effects. High subsidies to the idling industries in the occupied Ruhr district combined with a sharp recession to render further inflation unsustainable. Stabilization in late 1923 fixed a new currency unit, the rentenmark, later the reichsmark (RM), at 1000 billion:1.

American mediation led to the Dawes Plan of 1924. It introduced a scheme of reparation annuities starting at very low levels. An international loan provided working capital to restock the German economy. Germany's central bank, independent since late 1922, was put under international control. The new currency was pegged to the gold standard at the prewar parity of 4.2 RM to the dollar. A transfer protection clause prevented the transfer of reparations into foreign currency whenever a foreign exchange shortage threatened. De facto this rendered commercial debts senior to reparations. As a result, Germany enjoyed spectacular capital inflows during the following years. Reparations were paid on schedule, albeit entirely on foreign credit. Even interest payments were rolled over by fresh money. Still, substantial trade deficits remained. Germany's foreign borrowing between 1924 and 1929 amounted to a third of its 1929 GNP. By opening the gates for foreign credit, Germany abused the protection clauses of the Dawes Plan to drive out reparations (Schuker, 1988).

Based on foreign credit, Germany enjoyed its own version of the Golden Twenties. However, the domestic basis of recovery remained unsound. Unit labor cost increased and soon exceeded the 1913 level. Fixed business investment remained disappointing and peaked already in 1927, two years before the turnaround in the U.S. Public budgets ran deficits, particularly at the levels of the states and municipalities. A new costly unemployment insurance scheme burdened the social security system.

When the foreign credit pyramid collapsed, Germany was left with the choice between paying reparations out of surpluses or resorting to debt default. To prevent future reparation payments on credit, the Young Plan of 1929 reduced reparations but tightened the terms of payment. As a result Germany switched to austerity in 1929, even before the international depression set in. An emergency cabinet under Heinrich Brüning formed in early 1930 and pursued a policy of forced austerity. Brüning has been charged with deflating the German economy on purpose to get rid of reparations. The defense of his policy argues that the public budget faced a binding credit constraint. The debate about these conflicting views has been summarized by Knut Borchardt (1990) and Carl-Ludwig Holtfrerich (1990), the main contenders in this controversy -.

Under mounting domestic pressure to default on reparations, Brüning in June 1931 combined a new austerity package with a call for international renegotiations. Capital flight and a banking panic followed, and in July, U.S. president Herbert Hoover proposed a moratorium on reparations and war credits, which relieved Germany of half its reparation payments (James, 1986). Short-term credits extended to Germany were prolonged by half a year. Fearful of recurrent inflation and unwilling to go the full way toward autarky, Brüning avoided default on commercial debt and hoped for a reparation write-off that would restore Germany's international creditworthiness. Negotiations over such a settlement were overshadowed by Britain's departure from the gold standard. Elections in France and Germany in early 1932 caused further delay. In May, 1932, Brüning's government fell because of lacking support from the nationalist entourage of the president. Just weeks later, - the conference of Lausanne began, when most further reparations were forgiven.

Two short-lived successor governments oscillated between fiscal orthodoxy and credit expansion, activating off-the-shelf programs devised already under Brüning for the day when reparations would be gone. Foreign trade policy turned increasingly to protectionism and diverted trade away from the main creditor countries. Domestic credit expansion and the retreat into autarky were strongly intensified -after the National Socialists took power in January, 1933.

National Socialism

National Socialism had no clear-cut economic program of its own. Adolf Hitler appears to have believed in a racist version of Malthusian doctrines, according to which scarcity of land and food in the light of growing populations were a pressing problem that could only be overcome by wars of annihilation. Such ideologies did not bode well for the future. In addition, they had little advice to offer for day-to-day business-cycle policies. Indeed, economic policy mostly remained in the hands of administrative experts from the Weimar Republic. Hjalmar Schacht, the former architect of Germany's return to the gold standard in 1924, was reappointed to the presidency of the Reichsbank in 1933 and later also served as interim head of the commerce ministry.

Germany declared partial default on its foreign debt in 1933 and applied the typical policies of a defaulting debtor country, ranging from split exchange rates to import substitution. Foreign exchange and trade control was embedded in a tight network of bilateral trade and exchange agreements. Germany diverted - trade away from the creditor countries, where sanctions threatened, and toward smaller trading partners in eastern Europe, aiming to establish dominance there.

Financed through a clandestine system of shadow budgets, an armament boom began as early as 1934, violating the Treaty of Versailles. Civilian work creation drew much public attention and was exploited for propaganda, but was quantitatively less important. A*utobahn* construction in particular only grew into sizeable proportions in 1936, when high levels of employment had already been reached. The overall effect of public spending on recovery has probably been exaggerated: public deficits oscillated between 2.5 and 5 percent of national product, hardly an impressive amount even by the standards of the day (Ritschl, 2002). National product itself did not expand faster than in the U.S. recovery.

Economic policies consisted mainly of adhoc measures typical of a war economy. However, there was also a large body of legislation that changed the deep parameters of the German economy. It regulated everything from banking and insurance to public utilities, introduced Germany's dual vocational training system to industry, established new regulations for the free professions, and shifted power towards company managers in joint-stock companies. Rather than relying on Soviet-style central planning, these laws remodeled Germany's economic system in a peculiar blend of corporatist and market elements. Remarkably most of these regulations survived the war and later formed the institutional fabric of market regulation in West Germany . Often their substance remained almost unaltered to the deregulation wave of the mid-1980s.

Labor relations were the major exception. Trade union headquarters were stormed in May 1933. A subsequent labor act introduced authoritarian structures at the firm level, and regulation kept wages down at the depressed levels of 1932. Living standards slowly recovered from the depression, but lack of imported goods, extended workweeks at low wages, and lower nutritional and health standards were noticeable. The brutal oppression of the Jewish minority and of political opponents led to massive emigration and created shortages in all professions, notably among medical doctors. Those who had to stay were gradually driven out of their jobs and soon reduced to misery through expropriation and confiscatory taxation.

World War II

The Four Years Plan of 1936 introduced elements of central planning but badly failed to achieve its goals. Worried about excess capacity, business leaders resisted against investment at the stipulated rates. A state-managed heavy industry conglomerate under Hermann Göring was built up to fill the gap. Still, Germany's economic preparation for war was only half-hearted. Autobahns were built through 1940; female labor market participation was minimal, and at the time of the attack on Russia, output of heavy armament stood at just a few pieces per day.

Conversion to a full-scale war economy came after the failed assault on Russia. Faced with another war of attrition, planners reinvigorated the capacity targets of the Four Years Plan but left practicalities to industry associations. Germany drew heavily on capital goods looted abroad. A slave economy was established that forced about eight million foreign workers into Germany under often abysmal conditions. At the same time, the abundant supply of forced labor from Eastern Europe removed the last inhibitions that may have existed to completing the destruction of at least six million of Europe's Jews.

Exploitation of occupied Europe allowed Germany's output to grow through late 1944. By the time of the Allied victory, industrial capital stock, often composed of multipurpose machinery, exceeded pre-war levels by one third. In the subsequent years of stagnation, it remained higher than before the war in spite of losses due to depreciation, reparations, and dismantling. However, almost half of Germany's urban housing stock was destroyed, and the transport network was severely disrupted.

During the last weeks of war, production in Germany almost ground to a halt. The Potsdam agreements divided Germany into four zones of occupation and introduced strict economic planning to dismantle the war economy. About twelve million refugees flowed in from the lost eastern provinces and Southeast Europe, while millions of displaced persons within Germany waited to emigrate or to be repatriated. Faced with growing transfers to the ailing German economy, occupation policy in both the Soviet and the Western zones shifted away from restricting and dismantling capacity to promoting recovery, not without mutual accusations (Gimbel, 1976; Karlsch, 1993).

The Marshall Plan of 1947 made the shift in American policy manifest. Through U.S. commitment to a continuing military presence, political security against Germany and economic recovery in Germany could be disentangled from each other. Aid to the European countries was conditioned on accepting the economic unification of Germany and on cooperation in trade. This involved renouncing reparations and reprisals. To maximize acceptance of this policy in Britain and France, almost half the volume of transfers under the European Recovery Program went to these two countries. Marshall aid to West Germany - was important in opening bottlenecks but probably worked more through its conditionality than its size.

The Soviets interpreted the Marshall Plan as a ploy to ensure American dominance in Europe and to foster a revival of German militarism. Its zone of occupation was prevented from participating, and both sides prepared for the economic split of the two Germanies. After unsuccessful negotiations on German currency reform, the military government mopped up the monetary overhang by introducing a new occupation currency in July, 1948, called *Deutsche Mark*. Soon, this new brand name, and the company created along with it, became a stunning success. The Soviets reacted with their own currency reform and a blockade of West Berlin, the three Western sectors of occupation in Berlin that were surrounded by the Soviet zone. In an operation of profound symbolic value for a whole generation of Germans, resources and food were airlifted into West Berlin during a full year, and the political division of Germany became official in 1949.

Recovery in divided Germany after that date was rapid, albeit from an extremely low basis. With annual growth rates of output around 10%, West German recovery was soon called an economic miracle, or *Wirtschaftswunder*. Still, the West German economy attained full employment only in the mid-1950s, when the economy gradually converged to its historical trend. At the same time, labor scarcity was felt in East Germany. Owing to successive waves of collectivization and rigid ideological control, professionals, business people, and farmers left for West Germany in droves. Growth in East German consumption fell short of output growth, largely because of forced deliveries to the Soviet Union, which had placed large parts of industry under its direct control. Strikes and anti-Soviet manifestations in 1953 were suppressed but convinced the Soviets to reduce economic pressure.

Epitomized by its firmly market-oriented commerce minister Ludwig Erhard, West Germany gradually abandoned wartime regulations and introduced antitrust measures. Partial trade liberalization in the European Payments Union from 1950 on gave West Germany access to Europe's markets (Kaplan and Schleiminger, 1989). By modern standards, however, the economy was still regulated rather tightly. The European Coal and Steel Community substituted political quotas and capacity targets for the old transnational cartels in mining and heavy industry. Investment planning to overcome bottlenecks in price-regulated public utilities was reintroduced for some time in 1951.

The West German currency reform of 1948 had converted prices and recurrent liabilities at par, annihilated domestic government debt, and converted other nominal claims at an average rate of 6.5 to 1. Real capital was left untouched, with only minor corrections in later tax reforms. As a consequence owners of real assets saw their property values skyrocket after 1950. A provisional central bank was converted into the independent Bundesbank in 1957. It completed West Germany's transition to full convertibility under the Bretton Woods system in 1958. Free of any sizeable interest burdens, West Germany's public budgets were easily balanced. Twin surpluses appeared in the balance of payments and the public sector accounts. Unlike after World War I, West Germany began to transfer substantial resources abroad and became an engine of European recovery. Integration into the European Economic Community after 1957 deepened this process.

However, it also perpetuated import protection against the rest of the world, particularly in agriculture.

East German reconstruction was based - partly on the import substitution industries from the World Wars, large parts of which were based on its territory. Curtailed by West German sanctions, trade with West Germany was negligible, except for a few raw materials. Trade with the countries of the Eastern bloc remained strangled by foreign trade monopolies and bilateral trade treaties. Systematic trade policies developed only with the transition to closer cooperation within the COMECON but then evolved into almost complete specialization in production, involving a strong degree of trade diversion.

In 1961- the Berlin Wall closed the last escape for East Germans to the West. Without a continuing drain of human capital, East Germany experienced relative prosperity in the 1960s. However, domestic pressure toward economic and political reform now mounted, and attempts to implement a system of planning by shadow prices were made in 1963. As the reform movement threatened to get out of control, these reforms were successively reversed. In the late 1960s central planning was reinvigorated through the Soviet model of huge trusts, which were highly diversified and sometimes almost self-sufficient.

In West Germany the labor shortage increased after immigration from the East stopped. Hiring campaigns for “guest workers” from Southern Europe and Turkey were launched, bringing in several million immigrants. After the beginning of détente in 1969, immigration brought in several hundred thousand people of German ancestry from Southeast Europe and the Soviet Union, later followed by waves of immigrants seeking political asylum. Without a systematic policy but with an eye to low fertility rates, West Germany converted into Europe’s major destination for immigrants.

Economic growth remained high in the two Germanies to the mid-1960s and briefly resumed in the early 1970s. West Germany’s export surpluses combined with increasing foreign exchange reserves. Upward pressure on the deutschmark exchange rate had existed since the late 1950s, and a first realignment in 1961 brought only temporary relief. A recession after 1966 led to a major expansion in welfare spending, tighter labor market regulation, and a new tax constitution that required majorities both in parliament and in the chamber of state representatives for most changes. Increased public spending contributed to economic overheating in the early 1970s, when speculative foreign exchange inflows into Germany brought the Bretton Woods system to a collapse. As a consequence West Germany entered the international recession of 1973 with a growing fiscal burden that could only be reduced by joint legislation, an unlikely outcome under Germany's federal two-chamber system. Monetary policy after Bretton Woods cooperated with other European central banks under a crawling peg while floating vis-à-vis the dollar. Driven by monetarist orthodoxy, the Bundesbank pursued quantity targets, frequently clashing with Keynesian-minded governments.

East Germany experienced its own version of an expanding welfare state after 1970. International détente provided East Germany with access to substantial international credits, which were largely used to increase living standards. Chronic labor scarcity propelled employment, particularly female labor participation rates, to extreme levels. Extended child care facilities and preferential housing allowances for families were introduced to counteract the fertility decline since the 1960s, apparently with some success.

The two crises of 1973 and 1979 hit Germany both as an oil shock and as a monetary shock. West German unemployment increased without falling again. Structural problems in mining, steel, and heavy industry led the old industries of the Ruhr and northern Germany into decline. Low growth in total factor productivity had reappeared in the 1960s and now became chronic. Keynesian stabilization attempts doubled West Germany's national debt during the 1970s and again in the 1980s.

Increased oil prices initially afforded a privileged position to the COMECON countries, including East Germany, which benefited from subsidized Soviet oil. Often these deliveries were resold in the West at world market prices, relieving the pressure on the balance of payments and compensating for dwindling exports of its increasingly obsolete products. The tide turned in 1985, when the Soviet Union started to insist on payment for its oil deliveries in convertible foreign exchange.

While East Germany was struggling to make its international payments in the second half of the 1980s, West Germany experienced relative prosperity and another export boom under a strong but temporary increase in the dollar-deutschmark exchange rate. East Germany renounced - parts of its welfare commitments, lowered technical and safety standards, and made desperate attempts to substitute oil imports with domestic lignite. West Germany was still slow to reform its consensus model of political decision-making from the 1970s (Giersch, Paqué and Schmieding, 1992). Gradual reforms, such as the privatization of West Germany's state-owned telecommunication and public transport monopolies, began only under the pressure of European Community directives.

Unified Germany

An ailing domestic economy, mounting foreign debt, and a lack of financial support from the Soviet Union, which was entangled in reform itself, accelerated East Germany's demise in 1987. East Germans greeted unification in 1990 as a way of importing the Western model together with its standards of social security. West German policy aimed at securing East German incomes and savings to prevent massive migration to the West. Currency holdings were converted at rather generous rates, and wages were permitted to increase rapidly (Sinn and Sinn, 1992).

Unification soon brought high unemployment in the East and pressure on government budgets, which borrowed heavily to bolster the effects of unification on the taxpayer. The Bundesbank increased interest rates considerably to resist the inflationary shock caused by an excessively generous conversion rate. This contributed to a series of currency realignments throughout Europe and an international recession in the early 1990s. Under a European commitment to budget stability and tighter monetary cooperation in the Maastricht Treaty of 1989, Germany agreed to a conversion of the European Monetary System into a currency union, to go into effect in 1999.

A decade after unification the rigidities and structural weaknesses of Germany's corporatist consensus system have become persistent. Created in times of high export growth and little concern about sustainability, the German welfare state proved slow to absorb the shocks from unification. While still strong in traditional sectors, Germany's economy has failed to deliver significant growth for over two decades. By the new millennium, the German economy appeared to have lost the leading role in European growth and development that it had set out to acquire around 1870.

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