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II. The Years of Reconstruction

Planning a Free Economy: Germany 1945–1960*

by

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I. The Social Market Economy

Never in German economic history have so many people reached so high a standard of living. Table 1 shows the accelerated growth and the unprecedented levels of per capita income reached since the war. The achievement is impressive by any standards. The development of the Federal Republic has left the East German economy limping behind. And even in international terms, the achievement is very good. At the same time, it is well to remember that *all* advanced countries have grown substantially compared to their pre-war base. And it is important to realize that until the Federal Republic achieved full employment between 1956 and 1958 it primarily succeeded in catching up with the other advanced industrial countries.

These are facts. They have been described as an economic miracle. But what is a miracle? If it is that events cannot be logically explained, Germany's economic development is no more a miracle than any other economic development. For, nowhere do we really fully understand what makes economies grow. This fundamental limitation of our knowledge aside, if a miracle is defined as the coincidence of good luck, good policies, and fortunate developments elsewhere, then, perhaps, what has happened has been a miracle though an explicable and rational one. But, if a miracle is defined as a unique event that

* This contribution was originally finished in 1965 as a projected chapter of a book on German developments after the Second World War. Professor Henry A. Kissinger, who had planned and edited the book, was called to more important service before it could be finished. He has given permission for the publication in a somewhat shortened form. The original chapter was about 90 pages in length and was an analysis of German developments until about 1965. The present version has been shortened by limiting the discussion to the period until 1960 and omitting various subject matters such as the currency reform which are dealt with in other contributions to this issue.

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has not been open to others, then, perhaps, it was no miracle at all, as Japan, Taiwan or Israel suggest.

Table 1
Real Per Capita National Income at Factor Cost, Germany within the Boundaries at the Time. Constant 1913 Prices.

Date	Mark/RM/DM
1871/75	352
1911/13	728
1925/29	696
1930/34	596
1935/39	827
1950	845
1951	922
1952	993
1953	1.065
1954	1.138
1955	1.272
1956	1.350
1957	1.414
1958	1.442
1959	1.514
1960	1.633

Sources: HOFFMANN und MÜLLER [1959], T. 2, p. 14; STATISTISCHES JAHRBUCH FÜR DIE BUNDESREPUBLIK DEUTSCHLAND 1964, p. 548.

Note: Figures in current prices. 1950–60 deflated by implicit price deflator for GNP and linked to average 1950/4 calculated by HOFFMANN und MÜLLER [1959]. It is a statistical accident that the average of the period 1950–54 is equal to the income of the middle year. Figures for 1950–59 excluding, 1960 including West Berlin. Inclusion of West Berlin lowers per capita income slightly.

The notion of a “miracle” is perhaps mostly due to the startling continuities and breaks in German development. The dramatic changes of borders aside, it is, however, not at all clear what in history can be considered a break, German history, as all history, consists of more than one strand. The last break in German history might be understood as a reaction against the Nazi period. As economics is our topic, we shall restrict ourselves to it. The Nazis not only armed and developed armament industries, they had a view of the economy as an entity which had to get detailed direction from the State if it was to work in the desired manner. They were obviously not hostile to private property. But they could not understand that an economy might work by itself within a social framework controlled and influenced by the government. They never grasped that the performance of an economy might be much improved if the influence of government is limited primarily to create such a general social framework.

During the war, controls became essential in Germany as everywhere else. But price and trade controls, exchange and investment controls, forced cartels, semi-forced labor (*Arbeitsdienst*), abolition of unions and the rest were already introduced in the thirties, and some of them were introduced even before Hitler in response to the Great Depression which no one knew how to handle.

Much of the emphasis on private enterprise and the virtues of the market economy can only be understood as the reaction against the Nazi past. The insistence of the so-called “*Ordo*” Circle, that an economy works even if no minor party official tells it to work, can be interpreted as a break with the past or a reawakening of the more distant past¹. Many of the “new” discoveries often sound hollow to American or English ears because they seem to be preaching the self-evident and unnecessary. But in the nightmarish context of the recent Nazi past, these statements are neither.

Whether or not the catastrophe of 1945 is described as a break the fact is that it was a terrible shock. A world crumbled. Individuals who had been told that their lives did not matter but the country’s survival did, found that the country as they knew it had ceased to exist while they continued to live. The alternatives were suicide, or working, keeping quiet and coming to terms with the catastrophe.

Thus foreign observers were puzzled by the lack of belligerence of German trade unions which contrasted sharply with the revolutionary fervor of the period after World War I. In 1918, the end of the war found an exhausted country, but the basic framework had been preserved. In 1945, the framework itself had disappeared. In such a situation, with millions of unemployed and more millions of refugees streaming in, insistence on higher wages was unrealistic and ideological fervor simply beside the point.

Germany, divided and occupied, at least initially, had no defense burden to slow its efforts at rebuilding and she had help through the Marshall Plan and its predecessors. Though the place of defense expenditures was largely taken by a substantial burden of war and refugee relief, there is a difference. Refugees and soldiers may consume equivalent amounts, but the equivalent of the hardware that a soldier needs may be the equipment necessary to provide a refugee with a new job.

In explaining German economic developments luck has undoubtedly played an enormous role. But, again, what is luck? One of the “lucky” happenings was that Germany, since 1945, grew with the rest of the Western world. Indeed, the

¹ The *Ordo-Kreis* refers to a group of economists, civil servants, politicians, and other interested citizens that formed after the war around the ideas of Walter Eucken, and which was concerned with problems of organizing the postwar German economy along more liberal lines than in the past while still solving the urgent social problems inherited from the war. The former chancellor Erhard is commonly considered a member of this group which has published a yearbook since 1948 (*ORDO, JAHRBUCH FÜR DIE ORDNUNG VON WIRTSCHAFT UND GESELLSCHAFT*) and which physically centered around the University of Freiburg, where Eucken was teaching. Major ideas as far as relevant for this essay are summarized in the text. [See also WATRIN, this issue, pp. 405ff. (ed.)]

fact that the rest of the world solved its problems ahead of Germany made it possible for Germany to profit from the experience of others until she herself became a leading force in the world economy.

Secondly, however, Germany succeeded in using events favorable to her growth. This is far from self-evident and suggests a particular interpretation of her economic policies. Germany made two decisions early: to integrate with the western world, and to develop a highly productive and internationally competitive economy through the maximum use of the price and market mechanism.

German official spokesmen have, of course, contributed to the notion that her recovery and spectacular growth were due to the adoption of a Smithian laissez-faire philosophy and, perhaps, they are not so far wrong. Germany has opposed "planning" and preached the virtues of monetary restraint and competition. Yet, much of this is verbiage. For, as we will try to show, Germany has pursued a flexible, pragmatic policy without unnecessary ideological blinders (see MALENBAUM and STOLPER [1960]).

Actually, the more thoughtful German thinkers of this problem never committed themselves to "free enterprise" or "laissez-faire". If they did, they qualified their view very considerably, and their insistence that they dealt with a Social Market Economy (*soziale Marktwirtschaft*) must be understood in this manner. Space precludes the detailed discussion of the thoughts of the so-called *Ordo-Kreis* concerning the proper function of the State in the economy. There can, however, be not the slightest doubt that the State was assigned a very positive role. Thus Walter Eucken, who is justly considered the intellectual godfather of the postwar German economic policy, pointed out that the question of the role of the State in the economy was wrongly put if it was to be reduced to quantitative terms. It did not matter whether the State intervened much or little, but how it intervened. It may be worthwhile to quote Eucken himself, because many interpreters of German policy have not always had the breadth of understanding of the master who was a good economist and a great man.

"Whether more or less Government activity – this question misses the essential point. The problem is not quantitative but qualitative. However unbearable it is to leave the economy (*Gestaltung der Wirtschaftsordnung*) to itself in the age of industry, modern technology, huge cities and mass population, the State is incapable to direct the daily economic process of this enormously complicated economy with its division of labor and continuous changes. How then should the State act? The answer is: The State has to influence the *forms*, the institutional framework, the economic order, and it has to set the conditions within which a viable (*funktionsfähig*) and humane (*menschenwürdig*) economic order develops. But it must not direct the economic *process* itself ... Government planning of forms – yes; Government planning and direction of the economic process – no. To know the difference between forms and process and to act accordingly – this is essential."(EUCKEN [1949], p. 92–93. Italics in the original, translation by W. F. Stolper.)

This general statement leaves the State a very wide field, indeed. Thus Eucken himself discusses investment policy in connection with business cycle stabilization, and feels that stability can be maintained by avoidance of deflation and inflation, and by making investments profitable through keeping their prices in a proper relation to those of consumer goods. Other measures might or might not be necessary (*ibid.*, p. 91). Whether he would have approved of the measures actually undertaken and recounted below can remain open. Eucken also favored a progressive income tax as long as it did not interfere with incentives to capital formation (*ibid.*, p. 73).

The Social Market Economy has certainly achieved this aim: capital formation in Germany has remained at a very high level throughout the postwar period. All the same, questions about the cost of postwar growth in terms of inequalities of income distribution have never ceased and there have been persistent suggestions that growth was accompanied also by serious inequities. Yet we feel that first things had to be solved first, and that the overwhelming problem was to achieve growth and full employment. We feel also that, since *everyone* became better off, the problem lost much of its moral sting. We feel, thirdly, that with the achievement of full employment and the increasing share of labor income in the national product, a development to which we will pay more attention below, the income distribution problem is now being tackled. We feel, finally, that the concept of the Social Market Economy is sufficiently broad to permit considerable future adjustments in both the distribution of income and of wealth. In short, Eucken's view can be easily interpreted as a defense of a welfare state which, when applied in other countries is subject to German scorn but which in Germany is defined as the Social Market Economy.

Two additional aspects differentiate the present activities from earlier interventionism. First, the interventionism of earlier days was seen as a flaw in an otherwise perfect world in which the State had no role. Now it is seen as part of a system in which the State is an integral element. Secondly, the activity of the State is introduced only to achieve a particular end, be it social policy or stimulation of investment. Once the end is achieved it is again abolished. This self-liquidation is a new feature of the postwar German scene².

The policy makers were concerned with „*Grundfragen*“, the basic policy lines, and they tried to hold to them. However, the contrast between too many published statements on the free economy and the actual continual and substantial government intervention into the economy make an outsider's reinterpretation of the economic policies inevitable.

Our interpretation is simply this: German economic policy makers understood – perhaps for the first time in German history – that an economy is a complicated network of interrelationships, and that prices and profits are important signals for action. They also understood, perhaps instinctively,

² Unfortunately, there is evidence that this important lesson has been unlearned.

perhaps consciously, that prices and profits have no ideological content in themselves, but are tools to be used for specific purposes. Finally, they knew that policy decisions are made not only in the rather rarefied atmosphere of monetary and fiscal policies, but also on the day-to-day operating level of government and business by people with foibles, and in the face of uncertainty and ignorance of facts. They therefore concentrated on establishing a framework which permitted the constant adaptation to changing events. It was this attitude of seeing the long run as a sequence of short runs without losing sight of the ultimate policy aims of establishing a free market; of seeing policy as the art of widening the areas of choice and then making at any one moment the best possible choice which permitted Germany to use favorable opportunities creatively.

This, however, is obviously not the whole story. In the late forties and early fifties the opportunities open to German unilateral efforts were limited. In explaining Germany's growth one important fact must be kept in mind: the policies and developments of other countries and especially the help from the United States.

Table 2
Population, Employment, and Unemployment in the
Federal Republic 1949 to 1960

Year	Population		Employed ^d	Unemployed	% of Labor Force
	Excluding ^b West Berlin	Including ^c West Berlin			
	Millions	Millions	Millions	Millions	
1939 ^a	39.300	42.999	n. a.	negligible	negligible
1949	46.700	49.198	13.489	1.283	8.7
1950	47.522	49.989	13.827	1.580	10.3
1951	48.075	50.528	14.556	1.432	8.9
1952	48.488	50.859	15.291	1.383	8.3
1953	48.938	51.350	15.888	1.258	7.3
1954	49.693	51.880	16.598	1.173	6.6
1955	50.195	52.380	17.496	.936	5.1
1956	50.801	53.008	18.383	.767	4.0
1957	51.432	53.656	18.945	.667	3.4
1958	52.069	54.292	19.175	.688	3.5
1959	52.665	54.876	19.748	.540	2.7
1960	53.234	55.433	20.184	.271	1.3

Source: STATISTISCHES JAHRBUCH FÜR DIE BUNDESREPUBLIK DEUTSCHLAND, various issues.

^a Prewar figure refers to area of West Germany.

^b Figures for 1939 through 1954 excluding Saar; 1955 following including Saar.

^c Including Saar throughout.

^d Without West Berlin.

II. The Legacy of the Lost War

When hostilities ceased in 1945, West and East Germany appeared physically, politically, economically, and emotionally hopelessly destroyed. Refugees swelled the population of West Germany from 43.0 million to 50.5 million between 1939 and 1951, both figures including West Berlin (Table 2). By contrast, the East German population increased only from 16.7 million to 18.4 million. Thus, while a large part of physical assets was destroyed, population had increased substantially, leading to considerable difficulties, especially in food supply and decent housing. The misery of those years left a vivid memory. It also led to somewhat exaggerated notions as to the extent of the destruction when the currency reform of 1948 ushered in the reconstruction and subsequent phenomenal growth of the West German economy.

It is obvious that neither the West nor the East German economy started from zero in 1948. Considerable productive capacities remained. So did an industrious population with all the know-how and skills necessary in a highly developed economy. In West Germany, at least, there turned out to be also considerable stocks of all kinds of goods which the monetary chaos kept in hoards, but which found their way quickly into the market once it was re-established by the currency reform.

Capital Stock

There were very large destructions of housing and durable consumer goods, yet, West German industrial capacities survived at a fairly high level despite the war and postwar dismantling because of the substantial increase in capacity during the war: Industrial capacities were about the same in 1939 and 1948 (Table 3). In East Germany, too, substantial capacities survived the war – the Russians put a good number of industries to work immediately – but dismantling was much more serious than in the West.

Table 3
Capital Stock in Industry. Area of the Federal Republic, 1950 Prices

Year	Billion DM
1936	51.2
1939	57.3
1943	71.7
1945	62.0
1948	57.8
1950	62.5

Source: KRENGEL [1958], p. 94. For earlier periods see also GRÜNING [1958], p. 41.
Note: "Capital Stock" refers to plant and equipment.

However, even though the aggregate capital stock in West Germany was about the same in 1948 as in pre-war days, its structure was considerably changed. Some key capacities, such as rolling mills in the steel industry, were sharply reduced or completely missing. There were considerable disproportions in the capital stock, many of them caused by the split of the country into a western and eastern part which was latent since 1945, but became obvious with the separate currency reforms in 1948. Although detailed data on East Germany are missing, there is no doubt that the story would be substantially the same.

The years between 1945 and 1948 were marked by uncertainty as to Germany's future politically as well as economically. As long as her political destiny was unclear the economic problems remained unsettled. Yet, even in this period, many factories and machines were repaired and used again, and output increased, perhaps much beyond what the published figures indicate. Thus, in 1948, there were enough capacities available in West Germany to permit resumption of production once political, monetary, and economic stability was restored. When the currency reform established the conditions for revival in West Germany, capital stock in industry was certainly not the limiting factor.

Labor Force

For various reasons the labor force in West Germany did not increase proportionately with the increase in population and in East Germany, it even declined (STOLPER [1960], p. 27). It is estimated that in 1948, shortly before the currency reform, the West German labor force was, with 21.6 million persons, only as large as in 1939³. Because of losses in the age group between 20 and 40 years the proportion of old and very young workers was high. Refugees and expellees created special problems. A large part of them had worked in agriculture but could not find employment in their old pursuits. Retraining became essential. The refugees settled initially in rural areas where shelter could be found. Yet, employment opportunities existed mainly in industrial areas which had especially suffered during the war and in particular, could not accommodate whole families. The efficient use of labor often depended on investments in housing. Nevertheless, in 1948, there was plenty of labor available to be drawn into the productive process⁴.

Most of the workers were only too happy to work for a wage which would permit them to furnish the bare necessities of life for their families. Unlike the twenties, ideology, on the whole, was conspicuous by its absence. One may speculate to what extent the experience of a war and the fate of the labor force in the Russian-occupied part of Germany may have caused this. Perhaps the

³ JOINT REPORT OF THE MILITARY GOVERNMENT, p. 89. Since the French zone did not admit refugees it probably had the same population as in 1946. See also DEUTSCHES INSTITUT FÜR WIRTSCHAFTSFORSCHUNG [1947], p. 271.

⁴ This was also true for East Germany, despite the decline in the labor force.

willingness to work hard, even for low remuneration, was a way of coming to terms with the past. Perhaps with the fate of Soviet-occupied territory before their eyes, there was a feeling of not wanting to disturb the precarious *status quo*. It probably goes too far to say that at the time labor had a stake in the survival of the market economy. Nevertheless, the Russian experience, which all members of the German armed forces on the Eastern front shared, had a devastating effect. If nothing else, it convinced labor that socialization was not necessarily the answer to their problems. The ideological turn of the social democrats in later years away from nationalization and dogmatic insistence on government ownership to a new-deal type of approach is foreshadowed in the early attitude of workers. It cannot be explained merely by the prosperity achieved in the sixties.

Whatever the motives underlying labor's attitude, there was a willingness to work hard. There was no restraint on the labor side in West Germany's period of economic revival.

Land

With the agricultural surplus areas in central Germany lost, West Germany had to rely on food imports to prevent mass starvation. Under various aid programs the Allies imported substantial amounts of grains and other foodstuffs into West Germany⁵. In this situation, the highest possible agricultural output was called for. Because of the lack of important inputs, especially fertilizers, the crop yields were far below pre-war levels. The resultant fodder shortage reduced the number of pigs, the most important source of meats and fats. All of this improved only after the currency reform reintroduced an effective price system and provided incentives for farmers, and the necessary key inputs became once again available. During the period of food shortage there were many instances of considerable hoarding in agriculture, but hoarding occurred also elsewhere in the economy.

International Trade

One of the first measures of the Allied Control Council was to forbid individual Germans to engage in international trade. All trade had to go through Allied channels. The decision as to what the zones should export and import was completely in Allied hands. Traditionally, Germany had always imported foodstuffs and raw materials, and exported mainly finished goods of the machine-building, the electro-technical, and the chemical industries. Before the war about 97 per cent of Germany's exports consisted of industrial products, most of them finished goods.

After the war, imports still consisted mainly of foodstuffs donated by the

⁵ The combined U.S.-U.K. zone of occupation received in 1947 the food equivalent of 4.15 million tons of wheat.

Western Allies. But imports of raw materials for industrial production amounted to only 1 per cent of all imports in 1947 and 6 per cent in 1948. The area of West Germany exported, however, mainly raw materials – especially timber in addition to the traditional coal exports. It is uncertain whether this structure of exports reflected physical limitations or policy decisions on the side of Allied authorities. Certainly, the traditional export pattern was reversed.

The East German situation was infinitely worse. The Russian army lived largely off the land, and reparations were paid out of current output, including goods whose production supposedly was forbidden.

It is impossible in a short compass to give a detailed account of the labyrinthian ways of Allied policy in this period. The cold war quickly exploded the assumption that all four occupation zones would be treated as a unit. In the West, the Morgenthau policy remained stillborn. So did the Limitation of Industry Plan, which never had prevented the Russians from producing in German factories what they needed. The famous Byrnes speech in Stuttgart⁶ in 1946 marked the first open change in Western policy. The American and British zones were unified in 1947 and were joined by the French zone in 1948. Allied food and raw materials poured into the western zones while Russia despoiled hers. When the Marshall Plan was established, Germany became at first a *de facto* and later, a full member of the European Recovery Program. If one were to characterize the U.S. and English policy it would have to be as, at first, an attempt to prevent complete economic disintegration in the wake of the last war, gradually changing to reestablishing hope and “normality” within the inherited structure of controls. West Germany had no independent voice but was nevertheless heard by the Western victors.

Russian policy towards her zone of occupation looked much more quickly to the establishment of a separate country. “The German Economic Commission (*Deutsche Wirtschaftskommission*), the *de facto* predecessor of the later Government, was established as an advisory body to the Russian Military Government in June, 1947, but became on February 12, 1948, an executive body under Russian supervision” (STOLPER [1957], p. 522), four and one-half months before the currency reform, which is often and not quite correctly made responsible for the final split of Germany.

III. The Period of Anxiety

The Currency Reform of 1948

The long overdue currency reform was finally carried out in June 1948, with

⁶ Speech of Secretary of State Byrnes, September 6, 1946. This speech was held in the Staatstheater, Stuttgart, before an audience of leading members of the American military government. Selected passages reproduced (in German) in *Keesing's Archiv der Gegenwart*, 16./17. Jahrgang (1946/47), pp. 861 ff.

far-reaching consequences for the future development of the West German economy⁷. The basic problem was the organization of the West German economy after the reform. Inherited price controls and rationing devices had persisted into the postwar period 1945–1948 governing the legal markets. In addition, black markets existed because of the enormous excess money supply. In both markets, transactions were cumbersome. A currency reform could certainly eliminate black markets by wiping out the excess money supply. Yet opinions differed whether to eliminate price controls at the same time. Professor Erhard and others favored as much de-control as possible. Others had strong reservations and argued that complete de-control would, in the face of an expected discrepancy between the supply and demand for many key products, completely undermine the new price system. Finally, a compromise was adopted. Rationing ceased for most manufactured commodities⁸. However, for iron and steel, coal, basic foodstuffs, rents and transportation, controls remained, some up to 1952. Three months after the currency reform, wage controls were also abolished⁹.

West Germany had gone through a rigorous currency reform which had wiped out the financial legacy of the war. The reform was overwhelmingly designed to increase efficiency and stimulate productive effort. Its inequities were keenly felt, and even though they were eventually dealt with, they could not be entirely eliminated. It was perhaps fortunate for the future political stability of the Federal Republic that the currency reform was designed and executed by the Allies.

After the currency reform West Germans began increasingly to have a voice in economic policy matters from which they had so far been largely excluded, or in which they had mainly a consulting function. The West German currency reform in 1948 established the preconditions for the increases in effort, output, productivity and, after some time, also individual savings.

From the currency reform onward, West Germany relied on the working of the market mechanism as the major means to achieve her policy aims. Where necessary she skillfully modified the price mechanism in order to influence the results of market decisions without shying away from direct interference when more subtle and indirect means did not suffice.

⁷ In this respect, Germany followed where the rest of Europe had led. Belgium had its reform in 1944, France had a series of reforms from 1946 on; the Netherlands established monetary order in 1945; so did Denmark and Norway. Austria had two reforms, in 1945 and 1947 (PEDERSON [1949]). [Cf. also L. A. METZLER, this issue pp. 365–373 (ed.).]

⁸ Dr. G. Harkort explained the urgent necessity of the currency reform with a convincing simile. Since prices had remained more or less fixed since 1936, it was as if one had to run a railway with all switches and signals wrongly set. It was simply essential to get some ideas of the true scarcities even if it should turn out to be necessary to re-introduce some rationing.

⁹ The original contained a lengthy discussion of the currency reform which has been omitted because other contributions in this volume discuss the issue in great detail.

The Uncertain Recovery: 1948 to 1950

It is almost forgotten that the period between the currency reform of 1948 and the end of 1950 was full of uncertainties and anxieties for the West German economy. Great efforts were made to reach again the prewar level of production and to overcome a large number of difficulties. Aggregate prewar output was reached in 1950. Per capita GNP, however, remained below the prewar level because of the greatly increased population.

One industry after the other reached prewar levels. In 1948, only three industries surpassed their 1936 output. In 1950, already thirteen industries reached this target. Some industries doubled and more than doubled their production between 1948 and 1950. The production of vehicles, for example, increased threefold over 1948. An improved supply of raw materials was usually the reason for rapid expansion. However, the outputs of coal mining and iron and steel lagged seriously. These industries very early became bottleneck sectors endangering the further expansion of the economy.

In 1950, labor productivity per hour worked was still 7 per cent below the 1936 level, due to the unfavorable age composition of the labor force and antiquated and worn out equipment. In industry, real hourly wages in 1948 and 1949 were about 15 to 20 per cent below the 1938 level which itself had been far from satisfactory. In spite of low real wages, the economy was unable to achieve full employment. The number of unemployed increased from 0.78 million in 1948 to 1.5 million in 1950 as the currency reform forced disguised unemployment into the open.

The prewar level of production was reached in an economic setting characterized by strong profit incentives for entrepreneurs, low wages for workers, and heavy unemployment. Our task is to indicate the role of economic policy in this most precarious period for the West German economy. We turn first to monetary policy.

Before doing this it is interesting to note that the period 1948–1950 is also one of uncertainty and experimentation in East Germany. Half-year and quarterly plans were followed by a Two-Year Plan of Reconstruction (*Wiederaufbau*) for 1949–50, which was to prepare the economy for its First Five-Year Plan. Thus, 1950 marks a caesura both in West and in East German postwar developments.

Monetary Policy: 1948–1950

The currency reform made monetary policy again possible, but in the first three months after June 1948, the new Central Bank (at that time „*Bank Deutscher Länder*“) was forced to remain passive. The initial allocations of new money to banks and public authorities were rather large and the Central Bank apparently did not wish to check the resulting high liquidity of the banking system. Business was clamoring for credit, and the banking system could, with available resources, oblige with short-term funds. Until October 1948, commercial

banks had no need to borrow from the Central Bank to obtain additional funds.

Production increased in this period, but so did prices. Goods continued to be in scarce supply and occasionally, black markets and inflationary pressures reappeared. Fortunately for monetary stability, money wages remained stable because trade unions, for reasons already hinted at, voluntarily abstained from demanding wage increases. The new inflationary pressures came from the demand side which the Central Bank could and did check with a restrictive monetary policy. By 1949, the inflationary pressures had been brought under control.

Prices declined in West Germany between 1948 and 1950 – one of the rare instances in recent history. The substantial import surpluses of 1948–1950 probably contributed to this decline. In any case, the stringent monetary policy slowed down the expansion of the economy and, until the outbreak of the Korean War, only very little idle labor was absorbed. With a continuing influx of refugees from the Soviet zone of occupation unemployment rose to about 1.5 million, or approximately 10.3 per cent of the labor force in 1950¹⁰. The West German economy was seriously threatened by stagnation.

There were many complaints about too tight a monetary policy but the Central Bank considered avoidance of inflation a paramount policy objective. However, as unemployment figures rose and its policy came increasingly under criticism, it reluctantly agreed to finance a public works program of the Federal Government in 1950–51. Yet the program never gained real momentum. Until March 31, 1950, a total of only 175 million DM was involved. By March 1951, 854 million DM of credit had been extended but much of this was only indirectly connected with the public works program.

The role of monetary policy in this period has remained controversial. The Central Bank argued that monetary policy should not aim at, nor was it effective in achieving, full employment because unemployment was largely structural and not the result of insufficient aggregate demand. It maintained that labor could be absorbed into the productive process only as the available physical plant and equipment increased. This was consistent with Keynesian theory about the relation of employment and investment. At the same time, however, it insisted, contrary to Keynesian reasoning, that the amount of investment was limited by the amount of savings. A tight monetary policy, stable prices, and high rates of interest would induce such savings, and in this manner contribute to the absorption of unemployment.

Thus, at a very early stage in postwar West German economic development we encounter a problem which has never disappeared. On the one hand, the doctrine of a free market assumes that the smooth working of the market mechanism guarantees efficient and optimal resource allocation in the econo-

¹⁰ Between June, 1948 and June, 1950 about 1.1 million refugees came into West Germany, of which about 800,000 originated in the lost eastern areas.

my. Adjustments in prices for commodities and factors of production would provide important signals for changes which, given sufficient flexibility in production and consumption patterns, could be quickly achieved. Yet, in fact, it was early recognized that there were all sorts of rigidities and bottlenecks. To rely exclusively on the market mechanism to overcome these would, in many cases, have caused intolerably high social cost. To allow the prices for the products of bottleneck sectors to rise sufficiently to generate the necessary investible funds, would have endangered the price structure. Price increases would have spread rapidly throughout the economy, whereas general downward price rigidities would have made compensating price decreases unlikely.

Thus, other than monetary methods had to be used to overcome these structural rigidities. As a result, there evolved a larger number of policy measures. Most of them were of a fiscal nature. The problem was to coordinate public intervention with the working of the market mechanism while making maximum use of the latter.

Fiscal Policy Measures to Stimulate Economic Expansion

The impact of fiscal policy on West Germany's economic growth has been fully recognized only much later¹¹. For a long time it remained obscure. Ideological reasons must be partly blamed for this state of affairs. For reasons which are not entirely clear, both Germans and their critics played down the importance of fiscal measures and other direct interventions of the State. One reason may have been that West German budget data are difficult to compare with those of other Western countries. Furthermore, the numerous measures to stimulate capital formation and growth were often complicated, and they are not readily systematized. Even today there is not complete agreement among experts about the quantitative importance of these measures. Moreover, it is still not certain in what years West Germany had, in U.S. budget terminology, a surplus or a deficit¹².

The first fiscal measure was to change the inherited tax structure. Before the currency reform the occupation authorities kept taxes high in order to siphon off part of the excess money supply. After the reform they were eager to assure that no fiscal irresponsibility should jeopardize the new currency and, in anticipation of rising government expenditures, they preferred that tax revenues continue to be high. Many West Germans felt, however, that the rates were much too high and would stifle incentives. In the tug-of-war between Allies and West Germans the Allies agreed only very reluctantly to general tax

¹¹ One of the first authors dealing with the fiscal aspects, largely from a legal standpoint, is REUSS [1963]. See also ROSKAMP [1965] (Manuscript published in 1959).

¹² See, for instance, DREISSIG [1963]. See also ROSKAMP [1965], p. 144, for an estimate of the leverage effects of the consolidated German budgets. Most authors refer only to the Federal Budget, which is only part of the total picture.

cuts. The West Germans, on the other hand, did their best to reduce the tax burden by liberalizing tax exemptions in the German income tax code.

Secondly, a number of selective fiscal measures were designed to solve specific problems. From the very beginning the problem of capital formation overshadowed nearly all others. The volume of capital formation had to be drastically raised and it had to be channelled into those sectors which were vital for economic growth, that is, precisely the bottleneck sectors of iron and steel, coal mining, electricity generation, and transportation.

High priority was given to increasing the volume of savings. It was difficult to induce West Germans, with low incomes, a huge backlog of consumer demand, and two shattering experiences of inflation and currency reform within one generation, to save again. High interest rates simply were not a sufficient incentive. Indeed, as we now know, personal savings in West Germany have responded very little to interest rates and very much to income changes: when incomes were low, personal savings were low; when incomes rose, West Germans began to save¹³.

In the first phase of West German revival the largest contributions to savings were made by business and government (Table 4). West Germans did not save voluntarily; they were forced to save. Savings took the form of earnings retained by business out of large profits (most of them non-taxable if invested). Large profits, in turn, were possible through high prices in sellers' markets and relatively low wages. The government saved because it had an excess of current receipts over current expenditures which could be used either for direct investment by government or investment loans to the private sector. Between 1948 and 1960, government contributed 27.4 per cent of gross savings and 43.9 per cent of net savings. To a large extent, the government savings were possible because even though social expenditures were impressive, defense expenditures and interest payments remained very low.

As important as budget surpluses used to stimulate investment were taxes which the government forewent, so-called "tax expenditures" in present U.S. budgetary parlance. In 1949, a large number of tax incentives were introduced to stimulate savings. Tax exemptions were granted to savings deposits, savings in building associations, and favorable tax treatment was given to interest on securities. Business could use liberal accelerated depreciation provisions to avoid tax payments temporarily. If funds were not withdrawn from business, taxes were reduced. Loans to special sectors of the economy, such as residential construction or shipbuilding, were either fully or partially deductible from taxable income.

The legal provisions were complicated and changing. Thus, it is difficult to assess the importance of these measures precisely, particularly as the tax revenues kept increasing at an impressive rate. Experts of the German Ministry of Finance have estimated the total tax deductions under the above provisions

¹³ This, incidentally, is in keeping with both Schumpeterian and Keynesian theory.

Table 4
Sources of Net Savings 1949 to 1960. Current Prices, Bill. DM

Year	Private Households	Business	Government ^a	Social Insurances
1949	2.4	4.7	3.3	.5
1950	2.0	4.7	4.1	1.2
1951	2.3	7.5	5.5	1.8
1952	4.3	8.4	6.5	1.7
1953	5.4	5.8	8.3	2.4
1954	6.7	7.8	9.0	2.8
1955	6.9	13.6	10.7	3.3
1956	7.0	14.7	11.7	3.7
1957	11.1	14.0	11.8	2.7
1958	12.8	14.6	10.7	2.1
1959	14.1	15.6	13.6	2.3
1960	14.8	17.4	18.1	3.3

Sources: MONATSBERICHTE DER DEUTSCHEN BUNDESBANK, various issues; ROSKAMP [1965], Tables 13 and 14.

^a Includes Balance of Capital Transfer to Rest of World.

between 1949 and 1957 at 28.4 billion DM, or about 6.6 per cent of total budget receipts (estimates quoted in ROSKAMP [1965]). Some of the 28.4 billion DM represents deferred payments rather than permanent budget losses, but the magnitude of this aid to capital formation is still impressive. There is no doubt that German policy makers did not rely exclusively or even primarily on the market to provide the necessary savings, and that government made an outstanding direct and indirect contribution to total savings, especially in the early years of economic revival.

The considerable effort of the German government to generate savings was, however, only part of the story. The volume of investible funds in the period 1948 to 1950 was considerably increased by foreign aid. From April, 1948 to June, 1950 the Federal Republic received a total of \$ 2.031 billion in foreign aid of which \$ 714.4 million was made available under the Marshall Aid Program.

The availability of foreign aid funds required some kind of investment planning. The Economic Cooperation Agreement Act had stipulated that foreign aid to West Germany should accelerate the revival of the economy and especially diminish prolonged dependence on outside aid. To this end, Marshall Plan funds were channelled into the lagging sectors of the economy. The precise allocation criteria are not known. The Marshall Plan funds have become revolving funds and permanent parts of the German economic landscape¹⁴. In some years, investments were made predominantly in mining; in others

¹⁴ For a brief description, see Bundesschatzminister DOLLINGER [1965]. By the end of 1964, the revolving fund amounted to DM 8.3 billion. The STATISTISCHES JAHRBUCH FÜR DIE BUNDESREPUBLIK DEUTSCHLAND, 1965, p. 456, publishes data on this special fund for the first time in easily accessible form.

in the iron and steel industry or in export industries. The emphasis changed. Special selection procedures were developed and some of these have no doubt served for later public investment programs such as the "Investment Aid Program" discussed later on.

Where Marshall aid or other government funds were available for investment, public preferences determined their use. In other cases, especially when tax exemptions were used as investment incentives, a mixture of public and private preferences shaped the investment pattern. In many instances, businessmen used funds in ways desired by the government and not by them. As credit was tight under the monetary policy pursued in 1949–50, they were very eager to save taxes; first, to maintain liquidity, second, to build up inventories. Thus the tight monetary policy in 1949–50 made selective fiscal measures to influence capital formation more effective.

The Capital Market

The resurgence of the German capital market is too intricate to be discussed adequately in a small compass. Yet, the manner in which the central mechanism of allocating scarce investment funds was built up both reflects the difficulties of the period and the essence of German economic policy. It reflects the concern and main weaknesses of the period, and the quite unorthodox methods of overcoming them.

This is not to suggest that the capital market by 1960 was perfect, competitive, and efficient. Normally, and other things being equal, as savings increase the supply of funds for long-term investment, the interest rate structure would decline. In Germany, however, individual savings tend to flow into savings accounts and not into typical capital market investments. The funds available to business and government come traditionally from banks and from business itself, from the government (including the various social insurances) and from foreign sources. Only a fraction of individual savings find their way into capital market investments. To look only at the rapidly increasing individual savings would therefore give a somewhat misleading picture of the supply of long-term loanable funds.

The allocation of funds available to the capital market is significantly influenced by the advice of the Central Capital Market Committee which suggests to potential borrowers how various demands for and supplies of funds might be balanced. At the same time the demand for funds is sharply affected by government policy, directly by the decision of the government about the extent of its own demand, and indirectly by its policies of stimulating or restraining particular economic sectors. The government, though a net supplier of funds to the economy, has a crucial influence on the interest rate structure through its activity on the borrowing and the lending side.

In 1948, no capital market worthy of that name existed. In 1949, the volume of new fixed-interest bearing securities and new shares sold was 811.4 million

DM. In 1954, the volume had jumped to 5.1 billion DM; in 1960 it was 7.3 billion DM. Offerings (as distinct from actual sales or "placements") in 1949 were 1.4 billion DM, nearly twice the level of placements. In 1960 almost all of the 7.6 billion DM offered were placed. The volume of bonds outstanding in 1948 was 18.6 million DM; in 1960 it was 40.9 billion DM. "Resurgence" is not too strong a word¹⁵.

Throughout this essay we have made the point that while German economic policy aimed at re-establishing a working market mechanism it did not shy away from using highly unorthodox methods to achieve this end. The orthodox method of overcoming her capital shortage would have been to let interest rates rise. Indeed, this method was used after the hyperinflation of 1923 when yields on capital were raised from 5 per cent to 10 per cent¹⁶.

Interest rates as reflected by prime bank rates of commercial banks were indeed very high. At the same time, however, the German government pursued a low-interest policy for longterm investible funds. While commercial bank rates might be anything between 10 and 15 per cent, long-term capital for approved purposes could be had at a nominal rate of 5 to 6 per cent. The low-interest capital market was largely fed by government funds, including funds from the social security system. Private investors were induced into this section of the capital market by tax exemptions and later by direct means, as will be described presently. The tax system was thus used not only to direct funds, but also to bridge the discontinuity in the interest rate structure.

The low-interest rate policy required at the same time an allocation device to take the place of the market mechanism. For this purpose a special Capital Market Committee was set up to decide on a system of preferences. Historically, the creation of the committee was a consequence of Marshall Plan aid which insisted on coordination of German efforts with the aid. Under this system low-interest funds were channelled into the bottleneck sectors of transport, housing, iron and steel, and the rest. We shall return to this complex of problems further on.

Balance of Payments and External Monetary Stability

One of the areas in which Allied control persisted longest was foreign trade. Only in 1950 did control over foreign trade revert completely to Germany. Between 1945 and 1948 the three Western zones developed growing import surpluses which were financed by foreign aid. Allied agencies (in the U.S.-U.K. zone, JEIA) supervised all foreign trade transactions. In May, 1948 the official dollar-mark exchange rate was set at thirty cents and paradoxically, the

¹⁵ MONATSBERICHTE DER DEUTSCHEN BUNDESBANK, August 1965, p. 99. A technical description of the workings and imperfections of the German capital market is found in BECKER [1965].

¹⁶ STRATHUIS [n.d.]. During the hyperinflation itself real interest rates were, of course, often negative.

Reichsmark became a hard currency which nobody wanted. (After the successful currency reform the DM was devalued to 23.8 cents for one DM [see also below pp. 478f. (ed.)].) All payments for West German exports had to be made in U.S. dollars and no bilateral arrangements were permitted. This, coupled with cumbersome administrative licensing and application procedures, discouraged potential exporters. After 1949, JEIA slowly yielded its authorities to the West Germans, and with it came important changes. The first was to give up dollar pricing and follow, at least temporarily, the then prevailing bilateral exchange practices in Europe. The second, in 1950 was the adherence of Germany to the European Payments Union (EPU) formed by U.S. initiative to counteract the bilateral tendencies stifling European trade. Finally, West Germany herself began a drive for trade liberalization.

In 1948, West Germany had an overall balance-of-payments deficit of 946 million dollars: in 1949, of 1,018 million dollars; and in 1950, of 607 million dollars. Exports had risen from 1.136 billion dollars in 1949 to 1.985 billion dollars in 1950, yet this was not sufficient to achieve a balance in the international accounts. Imports were 2.247 billion dollars in 1949, but they increased to 2.543 billion dollars in 1950¹⁷. This strong increase in imports must be partly ascribed to West Germany's rapid trade liberalization. By September, 1950 Germany had boldly liberalized 60 per cent of all imports from OEEC countries, mainly raw materials. This turned out to be too much too soon. It also turned out to be a blessing in disguise. With the Korean War and the orders it brought for German goods, German firms increased their raw material purchases heavily, and ahead of their deliveries of export. By October, 1950 West Germany's EPU quota was completely used up and the government was forced to restrict imports. Liberalization was stopped in February 1951, and was not resumed until January, 1952. This was to remain the only balance-of-payments crisis of the German economy.

The obvious long-run solution for the balance-of-payments problem and external monetary stability was a strong expansion of exports. In view of the overwhelming importance of an increase in exports, the government did not hesitate to help with export promotions of various kinds. In 1951 the "Law to Promote Exports" provided for the creation of tax-free reserves in export businesses. Also, special guarantees were extended to exporters, decreasing the risk of international transactions. Finally, the Central Bank began to promote exports by discounting export drafts at preferential rates.

There are good reasons for spending what may seem a disproportionate amount of space on the early period of German growth. One is that it is nowadays nearly forgotten how uncertain were the first years of recovery, and

¹⁷ These figures are taken from WALLICH [1955], pp. 230, 238. The ultimate sources are the Annual Reports of the Bank Deutscher Länder (GESCHÄFTSBERICHTE DER BANK DEUTSCHER LÄNDER).

how much care had to be expended by Germans and Allies alike to get the economy going again.

More important, the period illustrates the pragmatism with which economic decisions were made. The future development was assured at that time when careful policy decisions had to be made which, as our account is intended to show, can hardly be described as orthodox *laissez-faire* policies. The basic framework was set in this early period, but once the framework was built, it was possible to relax, as it were, and let the market take over more and more.

IV. Absorption of Unemployment and Full Integration Into the World Economy

The Korean Boom

German policy makers could not foresee that the Korean war would bring an economic boom. Yet by good luck their economic policy had prepared the West German economy to take advantage of it. The German economy entered the boom period with substantial idle resources while the economies of most potential competitors had already substantially reached full-employment levels. Germany could, therefore, more easily meet the growing domestic and foreign demand without disastrous inflation.

The vivid memories of war shortages led to an immediate response by German consumers. Simultaneously, German importers rushed to buy raw materials in world markets which led to the already mentioned balance-of-

*Table 5
Index of Industrial Production, West Germany, 1950 = 100*

Year	Total Industry
1951	118
1952	126
1953	139
1954	155
1955	178
1956	192
1957	202
1958	208
1959	224
1960	249

Source: STATISTISCHES JAHRBUCH FÜR DIE BUNDESREPUBLIK DEUTSCHLAND 1964, p. 243, 1965 p. 246.

Note: Refers to average monthly production for the year. The figures quoted in the text refer to June of the year.

payments difficulties and EPU deficit. This immediate reaction to the war had the incidental and unforeseen result that West Germany obtained in many instances raw materials at prices well below those of calmer competitors. The increase in domestic demand was accompanied by a sharp rise in world demand for precisely those goods which Germany was eminently skilled to produce. When other countries diverted their resources to war production, Germany entered the field as a handy supplier, especially for investment goods. Exports nearly doubled between June, 1950 and June, 1951. In that period, too, the index of industrial production rose by 26 points (Table 5).

The slack in the economy diminished and employment rose. Unemployment, however, persisted around the 9 per-cent level until 1953, because the continuous influx of refugees replenished the West German labor reserves: in the eighteen months between June, 1950 and December, 1952, 900,000 refugees entered the country.

The strong increase in demand brought rapid price rises, especially for raw materials and manufactured goods. The painfully established price stability was seriously jeopardized. In October, 1950 the Central Bank raised the discount rate from 5 to 6 per cent, increased minimum reserve requirements,

Table 6
Prices and Wages 1949 to 1960. 1950 = 100^a

Year	Implicit Price Deflator of GNP ^b	Producer Prices ^c	Construction Prices ^d	Cost of Living ^e	Hourly Wage Rates ^f
1949	106.0	103	104.7	106.7	93.3
1950	100.0	100	100.0	100.0	100.0
1951	110.4	119	115.6	107.8	115.0
1952	116.5	121	123.3	110.0	124.0
1953	116.4	118	119.1	108.1	130.0
1954	116.4	116	119.7	108.2	133.0
1955	118.9	119	126.2	110.0	142.0
1956	122.6	121	129.6	112.9	156.0
1957	126.5	124	134.2	115.2	170.0
1958	131.0	125	138.3	117.7	182.0
1959	133.3	124	145.6	118.8	191.8
1960	137.3	126	156.6	120.5	209.6

^a Calculated from data in STATISTISCHES JAHRBUCH FÜR DIE BUNDESREPUBLIK DEUTSCHLAND, various issues. Some rebased.

^b Calculated with 1954 constant prices.

^c Producer prices in industry.

^d Construction of apartments.

^e Refers to employee households.

^f Average hourly wage rate in industry, including mining and construction.

and introduced special eligibility requirements for discounts. It reduced import licenses and required importers to deposit 50 per cent of the DM value of foreign exchange for which they had applied. Only in November, 1951 were prices again stabilized at a new higher level at which they were to remain more or less until full employment was reached (Table 6). In 1951, the real Gross National Product rose by 10.5 per cent over the 1950 level. In April, 1951 exports exceeded imports for the first time. The accumulation of foreign exchange reserves had started. The threat to external monetary stability disappeared for good. The EPU deficit was soon wiped out, and the country became a creditor to the Union. West Germany had achieved independence from foreign aid just before the Marshall Plan Aid ended.

The economy had received a shot in the arm, correct in timing, extent, and length. It had increased the level of economic activity above the prewar level and had caused the absorption of idle factors. At the same time the reintegration in an expanding world market, so painfully slow between 1948 and 1950, was greatly facilitated and accelerated. By the end of 1951 the West German economy had successfully coped with all the difficulties of getting started. The most critical phases in re-establishing the economy were over. The future task was to facilitate further expansion.

Threats to Further Expansion: Bottlenecks in Production Sectors

During the 1950's the real German GNP increased on the average by 7.5 per cent, and per capita income by 6.5 per cent¹⁸. Throughout, gross investment amounted to between one-fifth and one-fourth of GNP. Unemployment disappeared, and the economy successfully made important structural adjustments of which the decline of the contribution of agriculture to GNP from 10.3 per cent in 1951 to 6.3 per cent in 1960 is, perhaps, the outstanding example. Production rose steadily, until in 1960 productivity per man hour was 188 per cent of that in 1950.

In retrospect these impressive developments look almost automatic. Yet no one foresaw these developments, and deliberate policies were required to bring them about. The Korean boom revealed serious bottlenecks in the production of coal, steel, and electric power. To a certain extent, bottlenecks could be overcome through imports, but this was limited by the precarious balance-of-payments situation. The preferred remedy therefore was large investments in the appropriate industries.

Once again this crucial problem was not solved by methods which Germans refer to as „*marktkonform*“ (based on the market economy). There were perfectly good reasons for rejecting an orthodox market solution in favor of direct public intervention. Coal and steel are basic inputs in the West German

¹⁸ Reproduction of the statistics of the GNP and labor productivity has been omitted because of their easy availability.

economy, and price rises for these items cannot be prevented from spreading quickly throughout the economy. Price increases in coal and steel sufficient to generate a necessary volume of investible funds would thus have endangered the treasured price stability without guaranteeing success. At the same time, the conventional methods of attracting funds from the capital market were limited for reasons which we have already sketched.

The debate on the best method to overcome bottlenecks in industry started in late 1950, and continued throughout 1951. The so-called "Investment Aid Law" was finally promulgated in 1952. It was labeled a "self-aid program" of the economy and provided for large transfer of funds from the business community at large to the bottleneck sectors. Business was forced to buy one billion DM of securities from the bottleneck sectors. This was, of course, a massive interference in the free market economy. It embarrassed many who believed in the curative powers of a market economy and those who had to pay had little enthusiasm for it; 132,000 firms were forced to contribute the funds which were channelled into 187 enterprises: 34 in coal mining, 22 in the iron and steel industry, 34 in electricity generation, and the rest in other bottleneck sectors¹⁹.

In addition to the large direct and involuntary transfer of funds, special accelerated depreciation provisions permitted increased internal financing in these industries. According to a West German source, the coal mining industry derived probably 1.3 billion DM in investible funds from special accelerated depreciation between 1952 and 1955. For the iron and steel industry, the amount was probably 1.0 billion DM, and for the electric power sector, 1.1 billion DM²⁰.

Not much information is available on the precise criteria for the allocation of "Investment Aid Funds". There can, however, be no doubt that this investment aid was both unpopular and extremely effective for rebuilding a very powerful and well-rounded industrial machine. It was pinpointed to the right spots, and the timing was good. It did not use the market to overcome structural disequilibria. But once those disequilibria were overcome, the *raison d'être* for direct interference vanished. The law was allowed to expire in 1954, and the market was encouraged to take over.

Other Selective Public Efforts to Accelerate Capital Formation

The elimination of bottlenecks in the industrial sphere was only one major problem. Equally important was residential construction. The war had left West Germany with large deficit of housing units. Very early a construction

¹⁹ See ROSKAMP [1965], p. 168, and „Zahlen zur Investitionshilfe“, *Zeitschrift für das gesamte Kreditwesen*, 1955.

²⁰ Out of the ERP funds and Investment Aid Funds, the bottleneck industries received between 1949 and 1956 approximately the following investible funds: coal mining, 2.0 billion DM; iron and steel industry, 1.3 billion DM; electric power sector, 2.1 billion DM (ROSKAMP [1965], p. 168).

program was started, and between 1949 and 1959, 5.1 billion apartments were built. A large part of them were constructed with direct public aid. In addition, many took advantage of tax incentives, special low interest rates for certain types of residential construction and other benefits. According to an estimate by the German Treasury, the government provided, between 1950 and 1959, about 55 per cent of total residential construction outlays of 91.5 billion DM. About 37 billion DM of this public aid were loans and direct investments; the rest accrued in the form of interest subsidies and tax exemptions²¹.

Like all countries West Germany has its agricultural problems, and annually substantial amounts of public funds are diverted into this sector, partly for modernization investments, and partly for price supports. Probably around 800 million DM of public funds annually were, on the average, channelled into agricultural investment. The remaining sectors in which public aid to investments continued to be high were shipbuilding and, of course, the transport and communications sector with the government-owned Federal Railway and telephone and television networks.

The characteristic feature of the first phase of actual economic growth is thus, the sustained high level of public capital formation, benefitting the various key sectors of the economy. Government savings remained substantial and more than offset low individual savings. As time passed, the capital stock not only grew, but also became better balanced. It was of newer vintage and more efficient. With its expansion and rejuvenation the problem of unemployment was solved.

Aggregate Demand and Integration Into the World Economy

Most observers would agree that between 1951 and 1958, the expansion was sparked off by foreign demand for West German exports and by internal investment demand. Private consumption also increased substantially as incomes rose, but as a percentage of GNP, it fell from 65.8 per cent in 1949 to 61.1 per cent in 1951, 58.8 per cent in 1957, and 57.3 per cent in 1960.

Commodity exports increased from 14.6 billion DM in 1951 to 31.0 billion DM in 1958, and 47.8 billion DM in 1960. The bulk of this (73.1 per cent in 1951, 82.2 per cent in 1958, and 82.4 per cent in 1960) were finished goods. The traditional pattern of exports was soon re-established in spite of an initially large change in factor proportions: machinery, motor cars, iron and steel products, chemical products, and electro-technical equipment dominated exports.

The intensive German export drive was greatly facilitated because Germany was able to supply precisely those products which an expanding world economy demanded. The relative price stability in West Germany strongly increased the competitiveness in international markets. Yet, throughout the period, the terms of trade improved, particularly after 1957.

²¹ ROSKAMP [1965], pp. 180–181, Table 39 and sources given there.

Imports also rose rapidly (see Table 7). Nevertheless, foreign exchange reserves continued to accumulate at a rapid pace. By 1958, the country's foreign exchange reserves amounted to 26.1 billion DM, larger than Germany had ever held even in the best years before 1914. (By 1960 the foreign exchange reserves had climbed to a phenomenal 31.6 billion DM.) The rapid expansion of foreign trade gives, of course, only a limited picture of Germany's participation in the expanding world economy. With the establishment of the Coal and Steel Community in 1951, the first important step for European economic integration was taken. It was followed six years later by the Treaty of Rome, establishing the Common Market. Between these two events, Germany became a European leader in the expansion of free world trade.

Once sizable foreign reserves were accumulated, the Deutsche Mark became a hard currency. For all practical purposes the DM was already freely convertible in 1954. On December 27, 1958, general convertibility was officially announced and all foreign exchange control ceased, thus ending a period of exchange control in German history which had lasted for nearly 28 years.

The phenomenal success of integrating Germany into the world economy raised, however, serious problems for internal monetary stability. Between 1953 and early 1957, the influx of foreign exchange added approximately 15.2 billion DM to German monetary reserves. Open market operations, increases in currency in circulation, decreases in discounts, and increases in minimum reserve requirements, absorbed approximately 8.3 billion DM. This practically exhausted the restrictive powers of the Central Bank.

Table 7
Foreign Trade 1950 to 1960. Billion DM. Current Prices.

Year	Exports f.o.b.	Imports f.o.b.	Balance of Payments ^a	Change in Foreign Reserves ^b	Terms of Trade ^c 1954=100
1950	8.356	10.670	-200	-564	80
1951	14.577	13.084	2.428	2.038	80
1952	16.894	14.732	2.505	2.761	92
1953	18.477	14.848	3.843	3.614	100
1954	21.938	18.046	3.234	2.782	100
1955	25.580	22.339	1.755	1.851	98
1956	30.712	25.079	4.537	5.014	99
1957	35.831	28.509	3.442	5.122	101
1958	36.849	29.380	3.673	3.188	109
1959	41.025	33.141	-2.008	-2.204	111
1960	47.849	39.574	6.492	8.007	111

Source: MONATSBERICHTE DER DEUTSCHEN BUNDESBANK, June 1965, p. 34-35.

^a Balance of Current Accounts and Capital Accounts.

^b Independently found. Difference between Balance of Payments and Change in Foreign Reserves is due to omission and errors.

^c INTERNATIONAL MONETARY FUND, *International Financial Statistics*, various issues.

In this situation unexpected help came from the Treasury. Finance Minister Schäffer decided to build up Federal government deposits in the Central Bank in anticipation of future defense expenditures. Between 1953 and 1956 these deposits reached a level of nearly 7.5 billion DM. This was enough to eliminate the inflationary potential caused by the balance-of-payments surplus in these years. It is ironic that this perfect timing was probably completely accidental. Also, the very success of stabilizing German prices aggravated the balance-of-payments problem of subsequent years.

Investment demand continued to increase simultaneously with exports. Gross domestic investment amounted to 21.8 billion DM in 1950, and to 26.0 billion DM in 1951. By 1958 it had increased to 54.1 billion DM, and during 1960, to 75.0 billion DM!

Business investment in equipment was motivated by a need to expand and modernize productive capacities, a need greatly favored by public policy. Investment in residential construction was largely independent of market forces; as a social necessity it was pushed as much as available resources permitted. Again public policy heavily influenced its volume. In non-residential construction government played a large role with direct investments in road building and construction of public buildings.

While this large volume of investments was taking place the normalization of the capital market was gradually achieved. We have already mentioned the forced allocation of investment funds to the bottleneck sectors. In addition to the so-called "Investment Aid Law", a "Law for the Encouragement of the Capital Market" was enacted in 1952, which broadened already existing tax exemptions. This law, too, expired in 1954.

Both laws reveal the difficulties in achieving the required capital formation with orthodox methods. Both were designed to solve specific problems and to make themselves unnecessary. The hope was that the forced capital formation would raise income sufficiently to generate the large volume of savings which would make direct intervention in the capital market unnecessary. This hope was largely fulfilled by 1955. The last time the government resorted to strong fiscal incentives to influence the capital market was in 1956–57, when the so-called "Lex Preusker" was enacted to promote the financing of residential construction. Thereafter, taxpayers at large ceased to subsidize bond holders, although the market remained far from perfect²².

As long as idle labor could be absorbed into the process of production expansion of economic activity was possible with more or less constant price levels. For some years monetary policy in West Germany seemed to be more successful in maintaining price stability than in other countries. However, Germany obviously did not rely exclusively on monetary policy. Abundance of labor – largely due to a continuous influx from East Germany – relative wage

²² One can speculate with some unease how long the lessons of the 'fifties will remain learned in the uncertain 'seventies and 'eighties.

stability, rapidly increasing productivity associated with the new investments, and low levels of consumer spending contributed greatly to this price stability and the vigorous expansion of the German economy²³.

V. Conclusion: Growth With Full Employment

It is always difficult to determine precisely when an economy achieves full employment: In 1957 the West German unemployment rate fell to less than 4

²³ While the Federal Republic gradually became fully integrated into the (free) world economy and achieved full employment, the East German economy went through its First Five-Year Plan. There is some evidence that it achieved full employment roughly at the same time as the Federal Republic. Thus it is our view that the emigration of over two million persons between 1949 and 1959 did not hurt growth in East Germany until about 1956 or 1958.

Population in the German Democratic Republic actually fell until 1961 or 1962. Per capita consumption rose throughout the period by about 300 per cent between 1950 and 1958, and it has undoubtedly increased further since. Per capita GNP has increased, however, only about 60 per cent in the same time span. These figures are reconciled by the fact that the substantial drain of reparations ceased in 1953. By 1958, the East German per capita income level was only about three-fifths of the West German level.

It is impossible in a short space to go into detail for this differential performance. Suffice it to list three reasons: East Germany had to pay high reparations while West Germany received aid. East Germany was very imperfectly integrated into the Soviet Bloc, with which it now traded to the extent of 75 per cent of its total foreign trade – and the block itself groped only slowly towards a more efficient „socialist world economy”. Finally, planning itself was inefficient, and did apparently not improve substantially until the early sixties.

Thus neither lack of labor, nor of land, nor of investment can be blamed for the poorer performance, even though labor left, land was inefficiently used, and investments went largely into heavy industries, neglecting housing and consumer goods.

Trade with the Federal Republic remained small. It is interesting to note, however, that the same forces that led in West Germany to a re-emergence of the prewar pattern of trade also did so in East Germany, and traditional products of German industry, particularly chemicals, optical products, and machinery again became dominant in exports. By 1957 it also became obvious that something had gone wrong with planning. A second currency reform – called a money exchange – became necessary which squeezed excess money out of the economy. Currency in circulation was reduced by about a fourth. The foreign value of the East Mark vis-à-vis the ruble had already been changed in 1953. By 1958 or 1959, the East German economy had run into serious trouble. Even according to official figures, net product in current prices, which was supposed to have risen on the average by over 8 per cent between 1955 and 1959, showed an official growth rate of 4.6 per cent between 1959 and 1960, and only 3.2 and 2.2 per cent in the two succeeding years. Knowing the bias in the figures – western calculations indicate a growth between 1955 and 1959 of about 5 per cent – it is doubtful whether East German output increased at all between 1959 and 1962.

See STOLPER [1960] for a detailed account of developments. The official East German figures are from the STATISTISCHE JAHRBUCH DER DEUTSCHEN DEMOKRATISCHEN REPUBLIK, 1964, p. 30, and earlier issues. See also STOLPER and ROSKAMP [1961], and STOLPER [1961].

per cent of the labor force; in 1958–59 it fell below 3 per cent. We may arbitrarily take the summer of 1958 when unemployment dropped temporarily to 2 per cent of the labor force as the date when the country entered a period of growth with full employment. Between 1958 and 1961 growth in employment increasingly depended on an influx of workers from East Germany, but after 1961 when erection of the Berlin wall curtailed emigration, workers have been drawn from a continually widening radius.

Full employment in 1958 was reached under favorable conditions. The pace of economic growth relaxed after several years of rapid expansion. Export demand decreased as the general boom in the world economy from 1953 to 1957 subsided, but domestic investment demand, especially in the construction industry, remained high. Some basic industries such as coal mining, iron and steel industry, had difficulties in finding outlets for their products. Among consumer goods industries, textiles became more difficult to sell.

Fortunately, the fear that the 1958 recession in the United States might spill over and stop West German economic expansion proved groundless. The economy continued to expand, though it did so at a lower rate. Full employment was thus reached in a period in which aggregate increases in demand diminished. Domestic prices remained stable, and the accumulation of foreign reserves seemed to slow down. West German interest rates approached those prevailing in other countries. As a result, the unwanted inflow of foreign funds was temporarily reduced while German short-term funds even began to find foreign outlets. The danger of excessive balance of payment surpluses, which had in previous years led to a high degree of domestic liquidity, seemed to have been overcome. The Central Bank stated with justifiable satisfaction in its Annual Report that economic prospects were almost ideal.

As bright as the overall picture was, serious difficulties lay ahead. The problems which full employment posed were aggravated by a general reduction of the work week from 48 to 45 hours. In 1959, a general revival of the world economy initiated another rapid increase in West German exports. The steel strike in the United States that year aided the suffering West German steel industry, and there was again an increased demand for German exports mainly from industrialized nations.

In 1959 the real GNP rose again by 6.7 per cent. All the symptoms of a strong excess demand reappeared. Increase in aggregate demand outran production possibilities which were restrained by a shortage of workers. In March, 1959 one still counted about 600,000 jobless but in the fall, the number of unemployed was only 190,000, or 0.9 per cent of the labor force. Only 36,000 foreign workers could be recruited and only 72,000 workers fled from East Germany²⁴. Moreover, working hours were again slightly reduced. The shortage of labor led to voluntary wage increases by competing employers. Negotiated union wage ceilings were exceeded, soon followed by inevitable union demands for

²⁴ GESCHÄFTSBERICHT DER DEUTSCHEN BUNDESBANK, 1961, p. 62.

general wage increases in a full-employment economy. On the average, negotiated wages increased by about 8 per cent in 1959.

The boom extended into 1960 when industrial production increased by 11 per cent and real GNP by a phenomenal 8 per cent. Yet the need for labor continued to restrain further expansion. By September, 1960 there were five unfilled positions for each unemployed.

The average annual wage increased from 5,580 DM in 1959 to 6,100 DM in 1960. Money wages outran labor productivity. Between 1958 and 1962 average hourly wages in manufacturing industry rose by 39.8 per cent in Germany compared to 34.7 per cent in France, 26.2 per cent in the United Kingdom, 17.5 per cent in Belgium, and 13.3 per cent in the USA²⁵. Labor's share in total national product grew, a not undesirable occurrence which was accompanied by a large upsurge in the individual savings mainly in savings accounts – the traditional form of saving by the lower and middle classes.

Thus, the West German economy had its first experience of rapid growth under full employment with rising prices and wages. The monetary authorities viewed these developments with some discomfort and decided in the fall of 1959, to switch to a more restrictive policy. The discount rate was increased to 2.67, 3, 4 and, finally in June 1960, 5 per cent. The Central Bank's sole intention was to maintain internal monetary stability, and it consciously ignored the impact such a restrictive monetary policy might have on the balance of payments. But these traditional measures were no longer effective because of Germany's renewed balance of payments surpluses. The old dilemma of external vs. internal monetary stability, so familiar from the 1920's, reappeared. Ironically, the very success of Germany's integration into the world economy depended to no small extent on her refusal to abide by the "rules of the game" internally and to let domestic prices rise (much as the U.S. had done in the 1920's).

The ineffectiveness of monetary policy after 1958 can be attributed to two factors. Domestically, the increase in the interest rate did not perceptibly lower aggregate demand. The real problem of the tight monetary policy concerned, however, the international economy. When Germany switched to higher interest rates many other foreign countries, including the U.S., did the opposite. Thus investments in Germany became again attractive, and a new influx of capital occurred. The massive capital inflow raised the overall balance-of-payments surplus to about 6.3 billion DM, the largest surplus in the country's history, and international reserves increased by 8 billion DM.

The huge increase in foreign exchange reserves completely obliterated the restrictive monetary policy measures, and the Central Bank had to concede that its efforts had been selfdefeating. With prices still rising it decided on November 11, 1960, to reduce the rate of interest to 4 per cent. On March 6, 1961, the dollar rate of the DM was adjusted from 4.20 DM/\$ to 4.00 DM/\$.

²⁵ STATISTISCHES JAHRBUCH FÜR DIE BUNDESREPUBLIK DEUTSCHLAND, 1964, pp. 500, 129*–132*.

That even a restrictive monetary policy may be ineffective has been recognized for a number of years in other countries whose economists had begun to explore its domestic structural limitations. In the German case, the balance-of-payments surplus was largely responsible for its failure. A flexible anti-cyclical fiscal policy was obviously needed, yet no such policy existed.

The story of the 1960's and '70's is left to future contributions. It is evident that the world economy has entered a period of great uncertainty. However, if the recent past is any guide, German policy *will* be directed to keep her economy productive and internationally competitive, and to keep her even more integrated with the free world. The lessons of the postwar period are clear: independence of action depends upon a flexible and productive economy, and withdrawal from the world economy will result in a loss of independence of action. We have no doubt that German policy makers will use the market mechanism to the widest possible extent. But, once again, if the recent past is any guide, they will not hesitate to interfere directly when necessary. And, unless the lessons of the past have been completely forgotten, they will not maintain the interference any longer than is necessary to achieve its purpose.

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