

AN AUSTRIAN ANALYSIS OF THE NAZI ECONOMIC RECOVERY (1933-1939)

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Dictatorship is a governing system
in which everything which
is not forbidden is compulsory

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Hitler came to power in 1933. By that time, the economic situation of Germany was critical: there were almost six million unemployed, prices were in a decreasing trend and production had reduced considerably. In other words, Germany was suffering the worst economic crisis of its history. The Nazi Party promised to solve this dramatic situation and the truth was that, after six years, the German economy reached full employment, the industrial output doubled and the Government raised a strong army. This amazing development has always puzzled many historians. How did they achieve this? What was the secret of the Nazis? In opinion of many economists and historians the Nazi Recovery demonstrated the power of the State to overcome economic problems. Thus, according to this view, the State could solve even the worst economic crisis, if it applied the right policies. Is this view correct? Could we learn anything from this historical episode to overcome economic crises? Did the Nazis discover the secret of full employment? In this paper I will study the Nazi growth strategy and I will try to answer these questions. In the first part of this article, I will explain the concrete policies that

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were undertaken by the Nazi Government, in the second part I will analyze them and finally there will be a section with the main conclusions.

I THE NAZI STRATEGY

1. The facts

The German economy was severely hit by the Great Depression. During the second half of 1920's there was a massive credit expansion process which brought about a huge boom that ended in a sharp depression.¹ After four years of political and economic crisis, Hitler came to power and his main objectives were to solve this critical situation and to restore the national dignity. Beforehand, it is appropriate to look the evolution of the main macroeconomic magnitudes (Table 1).

As we can see, unemployment was reduced extremely quickly and at the same time real production increased. If we look in more detail, the industrial production doubled in this period. And what happened to prices? We can say that prices did not increase significantly: just 10% if we take the official prices and 20% if we trust John Klein's estimations. It is not an exaggeration to say that any Prime Minister would like this economic development for his country. Let's explain what policies they exactly undertook to achieve these results.

2. Economic policies

The mind behind the Nazi Recovery was Hjalmar Schacht (1877-1970). He approved several measures in order to achieve two main objectives: rearmament and work creation. We could distinguish

¹ There are some peculiar features of this crisis, but we will not explain them here as it would far exceed the purpose of this article. However, a good overview could be found in: Bagus (2007), pp. CCXVII-CCLII.

TABLE 1
MACROECONOMIC FIGURES OF GERMANY (1932-1939)^{2, 3}

| Year | Unemployment (millions) | GDP bn RM | GDP bn RM (prices 1928) | Industrial production (1928 = 100) | Official Wholesale Prices | Price level estimations of John Klein |
|------|----------------------------|-----------|----------------------------|--|---------------------------------|---|
| 1932 | 5,6 | 57,6 | 71,9 | 58 | 100,0 | 100,0 |
| 1933 | 4,8 | 59,1 | 73,7 | 66 | 96,7 | 100,7 |
| 1934 | 2,7 | 66,5 | 83,7 | 83 | 102,0 | 103,8 |
| 1935 | 2,2 | 74,4 | 92,3 | 96 | 105,5 | 106,8 |
| 1936 | 1,6 | 82,6 | 101,2 | 107 | 107,9 | 109,3 |
| 1937 | 0,9 | 93,2 | 114,2 | 117 | 109,7 | 114,4 |
| 1938 | 0,4 | 104,5 | 126,2 | 122 | 109,5 | 115,6 |
| 1939 | — | — | — | — | 110,8 | 120,4 |

² For the first four columns I use Overy (1991), p. 29 and for the two last columns, Klein (1973), p. 140.

³ It is important to say that these figures are only estimations. German macroeconomic data of this period is not at all clear for two reasons: first, the Nazis elaborated a complicated system of shadow budgets and, second, in those days German public accounting rules were deliberately opaque in order to hide deficits a way from the Reparation Agent's monitoring staff in Berlin. See Ritschl (2000), p. 4.

two kind of polices, massive public work programs and private incentives:

1. Massive public work programs: The Government promoted civil and military projects. The first ones included construction of highways, railroads, housing and general construction, and the second ones included the production of weapon and military vehicles, massive recruitment, construction of defensive military infrastructures, production of synthetic raw materials to avoid the German dependence of the foreign markets, etc. It is not at all clear what the proportion between military and civil expenditure was and when the rearmament exactly began. However, Albrecht Ritschl's estimations seem to be quite accurate, so I will base my analysis on these data.⁴ Looking at them, the following features of these public expenditures programs could be deduced:
 - a. The Central Government spending between April 1932 and March 1933 (fiscal year) was 1.950 billion ReichMarks and between April 1938 and March 1939 it was 24.154 billion ReichMarks, i.e. in six years the public expenditure increased more than 1200%. Or, in other words, the budget increased more than a 50% accumulative each year.
 - b. The total amount of money spent by the Central Government between March 1933 and April 1939 was 72.736 billion ReichMarks. Of this figure, the military expenditure represented around 70% of the total (i.e. 51.432 billion ReichMarks) and the rest was civil expenditure.
 - c. Germany began a fast rearmament during the second year of the Nazi regime: in 1934-1935 military expenditure represented 51% of the total expenditure (the following years this proportion was higher and even reached 80% of the budget).⁵
 - d. In 1932, the public investment represented 25.8% of the current investment of that year and in 1938 it represented

⁴ Ritschl (2000), Tables 1, 2, 3, 4 and 5.

⁵ Other historians such as Richard Overy defend that rearmament started in 1936. Therefore, there is not a consensus among specialists about this issue.

41.6%. However, this figure undervalues the control over investment that Hitler's Government really had: according to the *National Labour Law* (1934), the State would exert direct influence and control over all business employment over twenty persons. In other words, medium and large companies were put under the control of the Government. The Nazis took this economic control gradually. We could say that the turning point was 1936 when the *Four-Year Plan* was approved. This Plan used medium and large private companies as parts of the global rearmament strategy. The economic control was carried out through regulations, political interference in the companies and credit rationing.

2. Private incentives:

- a. Farming sector: tax breaks, measures to increase agricultural prices, reduction of interest rates for farm businesses and tariff protection. After 1933 this sector experienced a huge increase in its activity and also this brought about a significant increase in the demand for some capital goods (tractors, etc.) which had spillover-effects in other industries.
- b. Automobile sector: before 1933 this sector was highly taxed because it was considered that automobiles were a rich and aristocratic whim. This high taxation prevented its development during 1920s. However, Hitler wanted to change this situation so he helped this sector with huge tax reductions and a lot of propaganda to promote car sales. Therefore, one of the aims of the Nazi's regime was the motorization of Germany. Thus, during 1930s there was a huge boom in this sector and automobile production increased 300% in 6 years.⁶
- c. Support for small businessmen: the Government used small businesses as contractors; therefore, lots of small firms provided inputs to the State for the building, road construction

⁶ For an interesting discussion about the motorization in the 1930s see Overy (1975), pp. 466-483, Spenceley (1979), pp. 100-106 and Overy (1979), pp. 107-113.

and rearmament. In addition, there were tax breaks in these sectors. Of course, all of this helped to increase the activity in these areas.

- d. Anti-trade union policy: the Government created a single trade union (*Labor Front*), forbade strikes and froze salaries. This measures helped firms to control costs and to increase production.

Finally, it is appropriate to comment briefly other additional measures to reduce unemployment:

- a. The creation of the *Voluntary Labour Service* (VLS) and the *Voluntary Youth Service* (VYS) which were similar to the *Civilian Conservation Corps* introduced by Franklin D. Roosevelt in the United States. In particular, the VYS planted forests, repaired river banks and helped reclaim wasteland.
- b. Also, the Nazi Government reduced unemployment by introducing measures that encouraged some women to leave the labour market. For example, newly married women were paid a lump sum of 1.000 ReichMarks to stay at home.

3. Financing policies

As we have seen, the Nazi Government increased the public expenditure really fast. How could they pay for all of these expenditures? They used three sources of incomes:

1. Debt monetization: since the German hyperinflation, the Reichsbank had strong statutory restrictions on lending money to the Government. But the Reichsbank could still discount bills of exchange. With these restrictions, Hjalmar Schacht had an idea: the Government could issue bills of exchange to pay contractors and suppliers and later the Reichsbank could discount them so these entrepreneurs would have their money; thus, through this method the central bank would monetize the Government debts. The process worked as follows: first, the Government paid businessmen that worked as contractors

with bills of exchange issued by it, then these companies could discount these bills of exchange at certain commercial banks; later these banks could rediscount those bills at the Reichsbank. Even though these bills were issued with maturation periods of six months, these maturation periods were extended to five years and, therefore, the State did not have to pay its debts to the Reichsbank during this period. Thus, at the end the Government financed its public programs by issuing a five year debt that was massively discounted (i.e. monetized) by the Reichsbank. With this strategy, the Government financed part of the civil and military expenditures:

- a. Civil projects were financed with «work-creation bills». This source of financing was important above all the first two years of the Nazi regime (the first year, it represented around 33% of the total Central Government incomes). After that, the Government changed its strategy and financed itself through the capital market.
 - b. Military projects were financed secretly with the so called «Mefo bills». The Government created a fake company called *Metallurgische Forschungsgesellschaft* or «Mefo» (in English, *Metallurgic Research Society*) and used it to issue bills to pay the contractors. The aim of this subterfuge was to finance the rearmament secretly. Thus, these Mefo bills were really important in the Nazi financing strategy: during 1930s this false company issued bills of exchange valued in 11.850 billion ReichMarks (aprox.), i.e., it paid the 23% of the Nazi rearmament.⁷ All this secret financing strategy was discovered by the Allies in the Nuremberg Trials.
2. Forced public debt purchase: under the Nazi regime, all capital transactions were controlled by the Government. Thus, banks needed special authorizations to lend money to companies and companies needed special authorizations to issue shares or bonds. So the Government decided which companies could expand their activities by borrowing money in the market. This

⁷ Ritschl (2000), Table 5.

was one of the mechanisms used by the Nazi's Government to control and to redirect the private investment to the goals they wanted. In this situation, banks and private savers could lend money (mainly) to the Government or, in other words, they were forced to buy public debt to cover the public deficits. Therefore, the State used this credit monopsony to finance its activities. Thus, between 1933 and 1939 the Government issued public debt valued in 17.858 billion ReichMarks,⁸ i.e. almost the 25% of the whole public expenditures were paid this way. Therefore, massive forced public debt purchase strategy was one of the main sources of public financing.

3. Taxes: Heinrich Brüning's Government (1930-1932) increased significantly the level of taxation in order to balance the public budget and when the Nazis came to power in 1933 they did not modify those taxes. Thus, the revival of economic activity that occurred between 1933 and 1939 brought about a substantial increase of the social income and therefore of the tax revenues. Besides, at the same time, the decrease in unemployment reduced the costs of unemployment relief. This is why taxation was also one of the main sources of extra funding that helped Hitler's Government to achieve its economic aims.

In short, these three financing strategies (debt monetization, forced borrowing and high taxes) provided the Nazi Government all the income they needed.

4. Other measures

It is appropriate to highlight other additional measures that the Nazi Government took:

1. Germany had a big problem with its balance of payments: on the one hand, almost all countries devalued their currencies at the beginning of the 1930s and/or erected several tariffs to protect their national industries; on the other hand, Germany

⁸ Ritschl (2000), Table 5.

- had limited international reserves and a great need for raw materials and other inputs; besides, they did not want to devalue the ReichMark because this would not have been politically well seen as it would have recalled to the Germans the hyperinflation's experiments of the 1920s and because this would have increased the real external debt of Germany. The first year of the Nazi regime (1933-1934), Germany used almost all its international reserves of gold and foreign currencies. In this situation Hjalmar Schacht approved his *New Plan* (1934): heavy control of international trade and of foreign currency receipts, bilateralism, international barter, special contracts to foreign sellers, etc. Thus, between 1933-1939 Germans reduced their economic contact with the rest of the world, but they never reached autarky.
2. The Nazi Government strictly controlled the growth of the consumer demand by forcing saving creation (this will be explained later in more detail). Therefore, consumer demand did not increase too much during this period. Besides, during the Recovery the Government directed as many resources as it could towards investment industries because its aim was to increase the industrial power of Germany. Indeed, especially after 1936, almost all investment was channelled directly or indirectly towards military industries. This entire plan was carried out through credit control, taxes and public regulations.⁹
 3. In November 1936 there were inflationary problems and the Government reacted with a decree that established a massive price control. They also approved strong measures against the black market such as severe punishment and sometimes executions. According to Martin Wolfe, the Government struggle against the black market was especially successful during the war.¹⁰

In short, we can say that the Nazi recovery was a mix of Keynesianism (public works programs and tax incentives) and a detailed control over the economy (regulations, prices controls,

⁹ Wolfe (1955), pp. 396-399.

¹⁰ Wolfe (1955), pp. 395-396.

strong intervention in the industrial activity, etc.). Thus, the Nazis tried (and succeeded) to boost the economic activity and, at the same time, made sure that the expenditures went where they wanted. It is often said that the Nazi Recovery was a truly Keynesian Recovery and, therefore, it proved that Keynes' theories were right. For example, Joan Robinson even said that, «Hitler had found a cure against unemployment before Keynes had finished explaining it» and Michal Kalecki defended that the Nazi Recovery was a good example of «military Keynesianism». However, from my point of view these interpretations are false. The Nazi Recovery was not exactly Keynesian:

- Firstly, Keynes defended public investment but, according to him, at the same time the Government should discourage saving and promote consumption in order to increase the «multiplier effect» of the initial investments over the aggregate demand. However, the Nazis encouraged savings and discouraged consumption and they deliberately tried to maintain low multiplier effects.
- Secondly, Keynes' theory holds that the public expenditure has to be the initial push that would lead the economy towards recovery, but for the Nazis the public expenditures and the highly controlled «private» investment was essentially what the recovery consisted in (especially after 1935).
- Thirdly, Keynes defended public expenditure because he assumed that if there are idle resources, there will not be crowding out effects (as we shall explain later, this is not true); however, the Nazis deliberately restrained private investment in certain areas to increase public investment and redirected private investment towards strategic sectors.
- Finally, the strong control of the economy (prices, wages, industrial processes, etc.) that characterized the Nazi Recovery is not Keynesian.

In conclusion, the essence of the Nazi Recovery was not exactly Keynesian. This period is just a good illustration of how the State could transform a market economy in a planned economy without a communist expropriation as the means of production.

This is why Ludwig von Mises named this system *German's socialism*.

II THE AUSTRIAN ANALYSIS

After this description of the economic policies that were carried out in Germany, I am ready to analyze them. Thus, my aim is to evaluate to what extent these policies were responsible of the economic revival, if they were appropriated and sustainable and which were the costs (if any) that they implied. I would like to point out a few things about the Nazi Recovery:

1. It cannot be said that Hitler's policies were the only force behind the Recovery. Heinrich Brüning's Government (1930-1932) engaged in highly orthodox policies (reduction of public expenditure, deflation, non-devaluation of the Mark)¹¹ which helped to restructure the German economy. Crises are periods of error-correction and they are necessary for the arrival of the recovery. So, during 1930-1932 the German economy eliminated wrong investments and therefore «cleansed» its structure of production. For these reasons, these Brüning's policies were strictly correct. It is true that Brüning's Government also approved incorrect policies such as tax increments, foreign exchange control and subsidies that did not help the economic restructuration; however, I do agree with Professor Philipp Bagus that, despite of these wrong policies, «his *deflationary* policies mostly worked to speed up the recovery».¹² Therefore, I believe that the recovery would have been impossible without this period of mal-investment correction. Indeed, many historians have pointed out that there were signs of economic recovery in the fall of 1932 (i.e. before Hitler came to power). Thus, we should not forget that the German economy passed through a sharp process of economic reorganization before

¹¹ Overy (1991), pp. 21-27.

¹² Bagus (2007), p. CCLVI.

1933. In conclusion, in my opinion, the Nazis came to power when the economy was prepared for an economic recovery.¹³
2. Some of the measures that Hitler took were appropriate and, therefore, pushed the economic revival: the elimination of certain taxes and price stability. Also, the Government succeeded in eliminating strikes and labor-entrepreneur conflicts. Obviously both were good measures to facilitate the creation of wealth. Moreover, under Hitler's regimen there was more internal political stability and therefore this could have encouraged entrepreneurs to increase their investments during the first years. Finally, the Government froze salaries and as long as this measure helped to control costs, this was adequate; but at the same time this measure was inappropriate in the sense that it distorted the price formation process. Prices are signals to entrepreneurs (in a broad sense): when a work service is expensive, this means that a) the entrepreneurs would need to use other kind of workers and b) workers would have an incentive to improve their skills in this area. That is how the price system coordinates the actions of different individuals and permits a spontaneous and smooth process of development. So, from an economic point of view, it was an error to freeze salaries because this disturbed the efficient allocation of the labour force.
 3. The «economy of abundance». Keynes stated that when there are idle resources, more aggregate demand means more stable employment. In my opinion, in a normal situation, this statement is mistaken: an artificial increase in the demand in certain areas of the economy usually distorts the capital structure, misallocates employment by creating unnecessary and unstable jobs and could destroy a lot of employment in the most capital-intensive stages of production (Ricardo effect).¹⁴ But, as Hayek admitted,¹⁵ if the economy is in a situation of *full* unemployment (i.e. there are unemployed resources in all the stages of the capital structure and stocks of goods of all kinds, or in other words, there is a complete «abundance» of

¹³ Bresciani Turrone came to the same conclusion. See Turrone (1938), p. 76

¹⁴ Hayek (1958), pp. 220-244.

¹⁵ Hayek (2009), pp. 373-376.

idle means), the increment of the aggregate demand would create stable employment. Of course, according to Hayek, when this *full* unemployment is over, the Keynesian policies are once again dangerous. Taking into account this theoretical digression, it might be possible that in 1932-1933 the German economy was a situation of *full* unemployment: there was extremely high unemployment in all the branches of the economy (the unemployment rate was almost 30%) and there were lots of unused capital goods. So, if this was true, we could say that the public expenditure policies applied during the first year of the Nazi's Government were appropriate and this would explain the fast recovery of the economy during 1933-1934. However, it is very likely that at the end of 1934 German *full* employment was over, so after that Government's policies were probably completely inappropriate and they distorted once again the structure of production.

4. From a macroeconomic point of view, if there are increases in investment without any *ex ante* or *ex post* saving, these new investments would increase social income, which would increase final demand and, in turn, produce inflation (i.e., increases in the final *price level*). Inflation is the signal that there is a lack of coordination among producers and consumers and is the previous step of an economic crisis. Therefore, Friedrich Hayek defended that in order to avoid the apparition of this phenomenon there has to be a proportionate increase in real savings (either *ex ante* or *ex post*). This is the only way to create a stable capital structure. Thus, taking into account this reflection, it could be said that the absence of inflation until 1936 indicates that the German economy generated enough savings to finance its new investments during the first three years of Nazism. There were several sources of saving in those years:
 - a. Firstly, it is true that the State paid a huge part of the public investment with newly issued money (work-creation bills and Mefo bills), but also they forced people to save their incomes:¹⁶

¹⁶ Balogh (1938), pp. 470-472.

- i. The nominal rates of taxation remained at the very high levels established during the depression and especially taxes on consumptions remained high. In addition, some taxes were increased (for example, the tax on corporations was increased by 50%).
 - ii. The Nazi's Government imposed forced saving through a compulsory social insurance which had a huge surplus.
 - iii. As we said before, the Government froze salaries in 1933. We could interpret this as another measure to control final demand.
 - iv. Also, companies could only pay a limited amount of dividends to their shareholders. Again, this measure prevented consumers to increase their final demand.
- b. Secondly, at the same time, lots of Germans voluntarily saved a significant share of their incomes: in particular, most people repaid their debts and others used their new incomes to rebuild their cash balances.¹⁷
- c. Finally, private borrowing and share issuing was almost forbidden and most banks could only lend money to the Government. This was another way to control the increase of the social income and, therefore, consumption.

In short, during the first years of the Recovery, the German economy generated enough savings to cover the investments that were undertaken. Also, it is worth saying that these savings were mainly *ex post* savings as they were created in parallel with investments. For this reason, it could be said that at the beginning the Government succeeded in controlling consumption and that is why this new investments did not create inflation. However, in 1936 (and thereon) inflation appeared and this indicates that there were not enough savings to finance the current investments. Or, in other words, this phenomenon indicates in 1936 (and thereon) that the flow of money that arrived to the final markets was larger than the parallel flow of goods and final services that arrived at the

¹⁷ Turrone (1938), pp. 79-80.

same time to the final markets. This is why inflation tells us that there are not enough savings to maintain a harmonic economic development. In this situation, the Nazi Government tried to repress inflation through the imposition of a comprehensive price control (November 1936). Therefore, after this date, the Government eliminated the free market economy in Germany and substituted it with a sort of planned economy.

In short, at least during the first years, as Keynesians would say, the «multiplier» of the public investments was very low (which from an Austrian point of view was a good thing).¹⁸ Therefore, we have to recognize that in this respect the Nazis were really smart: during the first years they avoided inflation through a combination of forced and voluntary saving. Again, this proves that the Nazi recovery was not exactly of a Keynesian nature: the Keynesian theory defends that the objective of the public expenditures is to provoke further expenditures in the market, so this would create more demand and therefore more employment (multiplier effect). However, from an Austrian point of view this Keynesian snowballing of expenditure throughout the market is extremely dangerous because it would shorten the capital structure and therefore would impoverish the whole society.¹⁹ Therefore, we can conclude that until 1936 in this respect the Nazis chose their strategy wisely.

5. The German production increased in a spectacular way during the thirties, but this is not surprising because the only thing that happened was that almost six million workers started to produce things. But the Nazi recovery had some costs that are sometimes overlooked:

Lack of efficiency:

- a. Price control and wrong allocation of resources: the recovery was far from being efficient. The role of prices in the market was to transmit information to the entrepreneurs. If the raw material X is expensive, this means that this resource is

¹⁸ Turrone (1938), p. 80.

¹⁹ Huerta de Soto (2009), pp. 344 and following.

scarce and that it has to be economized, therefore, in this situation entrepreneurs would tend to use cheaper substitutes and the producers of this raw material would increase their production. But if the Government fixes prices and wages, it is impossible to know the real scarcities and, therefore, entrepreneurs would not be able to use inputs in an efficient way. Also, it is inconceivable that the State could know how to correctly allocate the scarce resources in a complex economy (*Austrian theorem of the impossibility of socialism*).²⁰

- b. The German policies brought about some capital consumption in the private sector at least during 1933-1936²¹ and probably during the rest of the period. Since entrepreneurs could not perform calculations without using real prices, they had no way of knowing if they were maintaining their capital or not. Besides, since the Government constrained private borrowing or share issuing, many private companies could not maintain their productive capacity.
- c. The autarkic tendency and the heavy control among the foreign transactions reduced the advantages of international exchange. This was another source of global inefficiency.
- d. The Government interfered in the entrepreneurial actions: the Nazis fixed their goals, the companies had quantitative restrictions for dividend distribution, lots of inputs were rationed and prices were fixed. Under these circumstances there were no incentives to economize and to produce with efficiency.
- e. Most of the plans of work creation were deliberately labour-intensive and, therefore, not very productive. As an example, in July 1933 the Government prohibited the tobacco industry to install new machinery just so that more employment would be created.²²
- f. Also, planning was sometimes incoherent and military officers without entrepreneurial formation interfered in the direction of the different companies.

²⁰ Mises (1990), Huerta de Soto (2010).

²¹ Klein (1948), p. 67.

²² Bärwald (1934), pp. 627-628.

In short, there was a great lack of efficiency in the German economy. According to Richard Overy, in 1938 the output per man-hour in Germany was lower than in the USA, France, UK or even Italy and Sweden.²³ So despite all these investments and the massive introduction of cars/lorries/tractors during the 1930s, the productivity increased very slowly during this period.

Also, it is well known that there was a significant and general reduction in the quality of the products.²⁴ For example, this was especially visible in the quality of clothes. Of course, the reduction in quality made exporting German products more difficult.

Misleading statistics:

If we look at the Nazi macroeconomic statistics, we have to admit that they are quite amazing. But the truth is that we cannot consider all the production of the 1930s as necessarily having a real value. Of course, if we take money in a coercive way (creating it, borrowing it with by the force, or taking it from the economy through taxation), we could hire workers and produce pyramids (for example), but should we consider this as an increase in the wealth of a community? The answer is negative. Unless there is a voluntary transaction, it cannot be said that there is wealth creation. So, in the case of Germany, it is extremely doubtful that we could consider that all the highways, houses and all the military products were as valuable for the Germans as the official statistics stated. It is very easy to fall into the trap of the GDP statistics, but we have to be careful with that: building submarines cannot be considered a wealth-creating activity for the average German. And the same can be applied to the civilian construction that was made by the Government: we do not know how much Germans valued the highways or the new houses. Of course, we are not saying that these projects were completely valueless, but

²³ Overy (1991), p. 11.

²⁴ Temin (1990), pp. 305-306.

we cannot agree that they were as valuable as the statistics are trying to show. Indeed, they were probably much less valuable.

Also, the statistics conceal the opportunity costs of public expenditure: as long as the public expenditure displaced private projects of more value (crowding out effect), we could say that those public projects were a net loss for society. For example, in order to build all these highways, there had to be an investment from many productive resources (labour, capital goods, raw materials) that could have been used to make other things like books, food, spectacles, better clothes, etc.; thus, all these goods and services that were forgone in order to build these highways meant a big opportunity cost for Germans. Therefore, we could say that many of the (inefficient) projects that the Nazis carried out were a net loss for society because of the opportunity costs that they implied.

Of course, from the point of view of the members of the Nazi Party, all these projects (military and non-military) were wealth production because they satisfied the subjective preferences of Hitler and his advisers. But, it would be extremely naïve to accept the GPD statistics as a measurement of the wealth-creation during 1930s. In short, a considerable part of the Nazi Recovery cannot be considered wealth creation in a general sense.

Unsound recovery:

At the end of the 1930s there were signals of the non economic sustainability of the Recovery in the medium and long term:

- a. Growing crowding out effects. In 1938 there was evidence that this growth strategy had reached its limits: full employment was achieved and the increment of military expenditures led to a growing diversion of resources away from the consumption sector; i.e., crowding out effect started probably in 1935, but at the end of the 1930s those effects were huge.
- b. Growing misallocation of resources: the elimination of price system made it impossible to allocate productive resources

- with economic criteria. It is doubtful that an economy could survive in the long run with this uneconomic strategy.
- c. Growing inflation: since 1936 there were several inflation problems. The Government replied with a strict enforcement of wage and price controls and repressing measures against the black market that appeared in consequence. In the long run, this inflation (i.e. this lack of savings) would have probably brought about a hyperinflation process.
 - d. Over-indebtedness tendency: in 1933 the public debt was 23,5 billion ReichMarks (aprox.) and in 1938 it was approximately 57,5 billion ReichMarks, i.e. it increased around 250% in six years.²⁵ However, the truth is that Germany was not too indebted in 1933 because the previous hyperinflation wiped out all the internal public debt generated until 1923; indeed, at the beginning of the Recovery Germany's public debt represented only 40% of its GDP. Besides, despite this absolute increment of 250% of the nominal debt, in relative terms the public indebtedness did not increase too much because the production boosted during the 1930s; thus, in 1938 the public debt only represented around 55% of the GDP. Therefore, it cannot be said that Germany was over-indebted in 1938. However, it is obvious that the Nazi strategy had an inherent tendency to over-borrow; thus, in the medium/long run, this financing strategy would have been unsustainable.

In short, in the long run there are several doubts about the sustainability of the Nazi economy because of the growing inflation, the misallocation of resources, the crowding out effect and the over-indebtedness tendency. However, it has to be said that the Nazi Recovery had good results in the short run: unemployment was reduced really quickly, Nazis maintained and increased the support of the population and the Government could raise a strong army in only six years. As we have seen, all these goals

²⁵ I calculated these figures combining Overy's estimation of the nominal GDP (see Table 1 of this article) and Albrecht Ritschl's estimation of public debt/GDP in those years (see Ritschl (2000), Figure 5).

were achieved through a Keynesian policy of deficit spending combined with a strict control of the economy (prices, wages, foreign trade, types of investment, consumption restriction, etc.). Therefore, this strategy worked very well for the achievement of their initial ends: maintaining and increasing the support of the population and rearmament. Let's analyze them in more detail:

- Support of the population. The massive work creation and the economic revival ensured a huge support among the population. But, what happened to the standard of living? We could say that probably the average German was better off in 1938 than in 1932 because at least everybody was employed. Nevertheless, it is not clear if this is true if we compare 1938's standard of living with 1927's. Here the historians have not reached an agreement. However, I think that it is likely that the standard of living was lower in 1938 than in 1927. Firstly let's take a look at the salaries: Brüning's Government cut nominal wages by decree in December 1931 to the height of January 1927, i.e. 10-15%.²⁶ Then, two years later (in 1933) the Nazi's Government froze salaries by decree. Therefore, nominal wages in 1938 were the same as in 1927 (more or less). Regarding consumer prices, it can be said that they were 20% lower in 1933 than in 1927²⁷ and that during the 1930s they increased 10% if we trust the official prices or 20% if we trust John Klein's estimations. Therefore, these imprecise calculations²⁸ tell us that real salaries could have been even higher in 1938 than in 1927 because nominal salaries were similar and consumer prices may have been lower; besides, in the worst case (i.e., accepting John Klein's price level estimations) real salaries could have been similar. However, there are four motives to question this statement:

²⁶ Bagus (2007), p. CCXLIV.

²⁷ Bagus (2007), p. CCXLI (see Chart 11).

²⁸ I am perfectly aware that the concept of price level is not accurate or even scientific. However, just for the sake of illustration, I decided to do this aggregate analysis.

- Firstly, during 1930s there was a significant reduction of the quality of the consumer good. Therefore, this factor reduced 1938's real wages.
- Secondly, consumption taxes were higher in 1938 than in 1927 because of the new taxes introduced by Brüning's Government. Therefore, *ceteris paribus*, Germans real disposable income would have been lower. Besides, Brüning's Government also drastically reduced the size of the German welfare state of the 1920s.²⁹
- Third, the productivity of the German economy did not increase significantly during the 1930s; this indicates that full employment production must have been more or less similar in 1938 and in 1927. However, in 1938 military expenditure was considerably (much) larger than in 1927 and, therefore, civil production had to be lower in 1938 than in 1927. Thus, German consumers had a greater supply of consumer goods in 1927 than in 1938 and, therefore, this would indicate that the standard of living was lower under the Nazis. It is true that workers were benefited by paid holidays and cheap facilities for the «approved» enjoyment of leisure. (According to Thomas Balogh this device was consciously used to shift consumption towards areas where the supply was, or could be made to be, elastic, and to avoid as much as possible the necessity for direct rationing action).³⁰ But, it is unlikely that these extra-salaries could be considered as a substitution of the extra consumer goods supply available during 1927.
- And finally, the Nazi's Government made a huge effort to restrain consumption and mainly favored the increases in the industrial capacity. In contrast, during the expansion of the late 1920s (1925-28) and in the post-war revival (1948) it was primarily the consumption industries that expanded (i.e. the opposite of the 1930s).

²⁹ Bagus (2007), p. CCXLIII

³⁰ For a discussion on this topic see Balogh (1938), pp. 482-483 and Turrone (1938), p. 85.

All of this makes me inclined to think that the real wages (and therefore the standard of living) were lower in 1938 than in 1927. Nevertheless, the Recovery was good enough to maintain and increase the support of the German population for the Nazi's Government. Therefore, we can conclude that this political aim was satisfied.

- Rearmament: the Nazi strategy worked very well as a way to rearm Germany. We have to remember that at the beginning of the 1930s the German army was tiny, unprepared and purely defensive. In just six years they built up a potent army that later proved to be strong enough to challenge the World. Even so there are a couple of points we need to take into account:
 - Firstly, the military success of the Nazis cannot be explained just by reference to the equipment of the soldiers and the quality of the weapons: the military strategy, the smart German generals and good officers are also part of the explanation.
 - Secondly, although the Nazi army was well prepared and organized, the German industry could not support it appropriately during the Second World War because all the economic inefficiencies of the German economy became evident. It could be said that this was one of the main reasons for the Nazi defeat. Also, it illustrates the non-sustainability of the Nazi economy in the medium/long run.

III CONCLUSIONS

We can draw three conclusions from the analysis of this experience:

- a. Firstly, we have to admit that the Nazi strategy was extremely appropriate for the Nazi's aims. Thus, the Nazi experiment is a good illustration to show the power of the State to control and redirect the economy towards certain goals in a short period

- of time. Besides, it is also a good example of how the State could eliminate a market economy and transform it into a planned economy without communist expropriations. But, at the same time, the German recovery is a good illustration of the impossibility of central planning and the limits of the State.
- b. Secondly, economists and policy makers should never ignore the social and political context of any economic crisis. We can say that Heinrich Brüning did not weight correctly all the social and political factors and, although he applied some correct economic policies, these measures brought about a huge increase in unemployment that lead people to vote other political options. Indeed, Hjalmar Schacht used to say that Hitler's secret formula for political success was just «poverty and unemployment».³¹
 - c. Thirdly, the Nazi economic recovery shows the importance of savings. Any economic recovery needs investment, but it is also needs a parallel increase of savings in order to prevent the apparition of inflation. Therefore, Keynesian recipes against recessions are extremely dangerous.

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³¹ Quoted by Weitz (1999), p. 131.

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