

Hein Klemann

Chapter 15: Production

15.1 Introduction

In 1939, the Utrecht machine factory Jaffa was almost bankrupt. According to its 1939 balance sheet, after the lasting depression of the thirties, the company was for 70% financed by debts. In fact, the situation was worse, for the company hardly had written down on its assets for years. Large parts of its machines and inventory, still on to the balance sheet for a considerable amount of money, were in fact worthless. The back depreciations amounted to about 850 thousand guilders, 50 thousand guilders more than the company's net value.¹ In 1939 government orders, resulting from the mobilisation of the Dutch army and military war preparation offered the fortunate opportunity to make profits again and depreciate the value of the assets considerably after a great number of years of losses. In May 1940, after the short war these military orders of the Dutch government were, however, frozen. Jaffa was not allowed to restart work on the most important part of its orders. For the machine factory the only solution seemed dismissing a substantial part of its workforce, but after the capitulation general H.G. Winkelman, the Dutch Commander in Chief who had order to administer the country in the name of the Dutch government in exile, prohibited such dismissals. While in 1939 the middle-sized company, with roundabout 300 employees and a balance sheet total of f 2.9 million seemed safe again, now a bankruptcy was almost unavoidable.

At May 10, 1940, Nazi-Germany invaded the Netherlands, Belgium and France. Five and a half week later even France – the country that only twenty-five years earlier offered the German army fierce resistance for four years – capitulated. The war was lost and those thinking that the United Kingdom still had a chance to win it, lived on another planet. Unless the chances of war would give Britain new allies – very unlikely at that moment – the best that could be expected for the UK after it was forced to withdraw its troops from France, was that it could keep dry feet itself. Four years later, in 1944, the British army would return to the continent, but only because it was backed by the Americans, and even that only after large Russian victories had decimated substantial parts of the German forces already and thousands of kilometres to the East, the Soviets kept the main body of the remains of this great army entangled. In 1940 only poor the German preparations saved the British islands from an invasion and a destiny not unlike that of France, Belgium or the Netherlands.² The five-time Dutch Prime Minister Hendrik Colijn therefore seldom was thus right as in June 1940, when

¹ HUA 92, Machinefabriek Jaffa, inventarisnr. 121-123 Accountantsrapporten over 1937-1940 en 1942. Nr. 121 rapport

² Richard Overy, *Why the won allies* (London 1995) 13

he wrote a brochure titled: 'On the border of two worlds.' Therein he made clear that it seemed unlikely that the United Kingdom would have any influence on the Dutch future anymore. Until the new century – so until roundabout the year 2000 – the Dutch had to accept that Berlin would decide about their future.³ Colijn, who died in 1944 in German imprisonment, was undoubtedly relieved to find that he proved wrong, but that history took another course did not mean that his predictions were unrealistic. In history too many factors are of importance to give any reliable predictions of what will happen for more than a very short period – and that is even more a fact when one's tries to foresee the outcome of large military conflicts. Nevertheless, it is the duty of policy makers as well as businessmen to anticipate on the most probable scenario. The Dutch Queen Wilhelmina, who, according to her biographer, only wanted to return to her country after Germany would have left, wrote after the fall of France that "in our point of view... little has changed [], because one ally has fallen out."⁴ In the tradition of the wartime historiography, Her Majesty's attitude is considered heroic. Without denying that there is some desperate heroism in it, it seemed more to the point to place question marks at her sense of reality and political insight.

Many historians still are inclined to describe the Second World War as a conflict that all over the world resulted in the most awful suffering of the civil population, the most disgusting bloodshed in battle, the use of terrible new arms also against civilians, not to speak of the racist murdering of those who were seen as inferiors, especially the Jews, but a war that in the end could only end in an allied victory. Probably, the idea of a German victory and the consequences of that surpass the imagination of most of them. Nevertheless, it is important for every historian to become conscious of the fact that in 1940 and 1941 and for non-economic specialists even in 1942, there were very little reasons to believe in the allied strength and a possible victory of that side. According to Joseph Goebbels' propaganda, Germany won on all fronts, and it seemed that Goebbels' men were right. It was therefore realistic to anticipate on a final victory for the Axis. In the occupied countries, this situation created the problem, how to cope with a possibly endless German domination over these countries.

In Dutch historiography some ministers of the exile-government of prime-minister D.J. de Geer, are condemned as defeatists, people who had no hope for an Allied victory anymore.⁵ In the light of modern research, realists would be a more appropriate qualification. The

³ H. Colijn, *Op de grens van Twee Werelden* (Amsterdam 1940) 51

⁴ In 'ons standpunt is' ... 'weinig veranderd, omdat één bondgenoot is afgevalen'. Cees Fassuer, *Wilhelmina. Krijgshaftig in een vormeloze jas* (Amsterdam 2003⁴) 293

⁵ See for instance: J.Th.M. Houwink ten Cate, 'Generaal Winkelman, secretaris-generaal Hirschfeld en de Duitse bezettingpolitiek in mei-juni 1940.' In: *BMGN* 105 (1990) 186-230.

Netherlands was conquered by Germany and all powers that could and would do anything against this were beaten as well. For the Utrecht machine factory Jaffa this had enormous consequences. It was faced with a fast approaching bankruptcy, which it only could turn off by restarting its production for the enemy, but an enemy of which every realist seemed to know – and all important pre-war authorities as the former prime-minister proclaimed – that it could not loose anymore and would rule over Europe for at least the next decades.

Companies, institutions and individuals therefore took a German victory into account. In London Queen Wilhelmina could heroically reject every compromise – and did she have an alternative? –, but those who lived in the occupied country, had to cope with the situation and had to find a *modus vivendi* in one form or the other. To this end economic production was necessary, and as in the first half of the 1940s all production on the continent was advantageous to Germany and its warfare – even when the occupied countries only produced civil products, the Germans could economize on this production and concentrate more on direct war needs – collaboration was inevitable. For that reason, as the only alternative for collaboration was collective suicide, in economic history the term collaboration is meaningless. Anyway, as Germany had won the war, producing for its armed forces hardly seemed to matter anymore. By using the term collaboration the historian is condemning the people he is writing about, instead of asking why they behaved as they did as he should. Here the central should not even be that. Here the question to what extend the production of occupied Europe was actually going on?

It is clear that the idea that during the occupation economic activity collapsed never to recover is not true. All over Europe production went on. A clear indication for this is the fact that Berlin obtained a quarter of all goods and services it needed for its warfare, from the countries it occupied. Directly after the start of the occupation, German officials and army officers demanded the reopening of workshops and factories to repair motor vehicles, planes and ships, build horse-drawn carts, repair shoes or make uniforms. To understand this, it is essential to conceptualize two different forms of economy in occupied Europe: a war economy, centring on strategic resources, and a warfare economy, dedicated to the direct support of the armies in the field or soldiers doing duty in the rear. Everywhere in Europe where German armies arrived, a warfare economy immediately restarted production, while after consolidation, war production was stimulated where and when the local use of resources seemed more efficient than taking these to Germany. Apart from this, everywhere in Europe remained some production for local use as is obvious from the fact that the greater part of the population survived, even in the most severely hit countries.

The historiography on World War II focuses on subjects typical for this period: repression, resistance, violence and above all, the Holocaust. If anything is written on the economy, it is on exploitation, impoverishment and hunger. All over Europe one can read that in those years companies were closed, machinery and raw material taken, labourers sent to Germany and that there was barely enough left to survive. After the liberation, former occupied Europe was impoverished, its people starving and its economies smashed, so was the general opinion, or as a Dutch official said to an American newspaper: ‘If I had to describe Holland as it is today in a phrase, I would say that it is empty. There is almost nothing left.’⁶ New calculations on macroeconomic statistics show, however, that it is simply not true, at least not in the Western part of the continent. For the Dutch the first years of the occupation were economically the best in a decade resulting in such massive investments that in 1945, notwithstanding the confiscations by the occupier, the industrial capacity was bigger than in 1939, and there are indications that this was hardly different in most other Western occupied countries.⁷

This chapter focuses on the development of production. Recent publications on occupied Western Europe suggest that decline is not all to tell on economic life and that in some countries and some periods growth was more characteristic.⁸ Nevertheless, in popular publications and the international literature, the opinion persists that the economies of occupied Europe slumped, and there is hardly any doubt that this was true in the Eastern parts of the continent and in the Balkans. In Byelorussia for instance, between 1.6 and 1.7 million of the 9 million inhabitants fell victim to aggression or hunger, 2 million were forced to relocate, while everyone suffered from famine and destruction. The situation in the Ukraine was more or less the same.⁹ In the two and half year of the occupation of this Soviet republic, in this middle-sized country with little more than 30 million inhabitants, excess mortality caused by warfare, the murdering of Jews and Communist party officials and hunger was 6.7 million, while on balance 3.5 million people migrated out of the country.¹⁰ As even in these extremely abused countries millions of people survived, it is clear, however, that even there some production went on. In Western Europe consumption – and therefore production for local use – was higher than in the Eastern parts of Europe, while the countries there were

⁶ Cited in: Nehemiah Robertson, ‘Problems of European Reconstruction.’ In: *Quarterly Journal of Economics*, 60, (1945) 1-55, there 10.

⁷ Klemann, *Nederland 1938-1948*, 284 c.q.

⁸ Karel Davds, ‘De Tweede Wereldoorlog: een breuk in de economische ontwikkeling in de wereld?’, in *Tijdschrift voor Geschiedenis*, (122) 2009, 464-475; Klemann, *Nederland 1938-1948*, passim; Per Hansen, ‘Business as Usual? The Danish economy and business during the German occupation.’ In: Jacob Tanner and Harold James, *Enterprise in the Period of Fascism in Europe* (Aldershot 2002) 115-143, there 119; Hervé Joly, ‘The Economy of Occupied and Vichy France: Constraints and Opportunities.’ In: Joachim Lund (ed.) *Working for the new Order. European business under German Domination 1939-1945* (Copenhagen 2006) 93-103.

⁹ Paul Sanders, ‘Population Policy and Economic Exploitation. The German Occupation of Byelorussia (1941-44)’ in, Joachim Lund (ed.) *Working for the new Order. European business under German Domination 1939-1945* (Copenhagen 2006) 157-174, 157-158.

¹⁰ Jacques Vallin, France Mesle, Serguei Adamets, Serhii Pyrozhev, ‘A New Estimate of Ukrainian Population Losses during the Crises of the 1930s and 1940s,’ *Population Studies*, 56 (2002) 249-264, there 261.

important suppliers of the German war apparatus as well. Consequently, Adam Tooze was wrong when he wrote that in ... 'Belgium, the Netherlands and above all France, [...] economic activity collapsed in 1940, never to recover.'¹¹ Here the questions should be what production went on and what differences there were in production between the diverse parts of the occupied continent.

Before making estimates on production, it should be emphasized however, that there are enormous differences between production, welfare and the accessibility of consumption goods. That in Eastern Europe and the Balkans, German purchases were limited and production collapsed more severely than elsewhere in the suppressed countries of Europe, in itself did not necessarily mean that war-time consumption was as well lower than in the West. Actually it was, but it should be clear that when an educated guess of the size of production is made, and the outcome was much higher than expected and than suggested by official statistics used until now, as the Germans took substantial parts of the production, this does not mean that the consumption of the locals was so much higher than described in the historiography. The main difference between the known statistics and actual production resulted from the shadow economy that partly compensated the setback in registered production. Generally, one can presume that the more severe official production declined, the higher the illegal production was. Here the focus is on production, not on distribution.

15.2 The problems of statistics and clandestine production

Although black markets were no typical wartime phenomenon, during the war these markets became important. Increased taxation, regulation and a declining understanding between rulers and ruled motivates business communities as well as the general public to transfer parts of the production to clandestine corners of society, out of the grip of greedy governmental organizations.¹² When prices are kept low in the official sector, while these would be much higher when these could find their own level in an illegal sector, it is evident that the temptation to transfer supplies to clandestine markets will not only be great, but will even become greater as the scarcity in the legal markets resulting from black market activities drives up clandestine prices only further. The economists Friedrich Schneider and Dominik Enste are of the opinion that a 'growing shadow economy can be seen as the reaction of individuals who feel overburdened by the state and who choose the 'exit option' rather than

¹¹ Adam Tooze, *The wages of destruction. The making and breaking of the Nazi economy* (London 2007²) 420.

¹² M.M.G. Fase, 'Informeconomie en geldomloop. Meting en interpretatie.' in, M.M.G. Fase, *Geld in het fin de siècle* (Amsterdam 1999) 81-113, there 81; See also: Louis Baudin, 'An Outline of Economic Conditions in France Under the German Occupation,' *The Economic Journal*, 55 (1945) 326-345, there 337.

the ‘voice option.’¹³ The occupation was a period of increased taxation and growing regulation and of waning trust between rulers and ruled. As by circumventing regulation, incomes and consumption increased, it is understandable that not only in the occupied countries, but also in the USA, Britain or Germany itself, black markets were growing, while in that last country as well as in occupied Europe there was no ‘voice option,’ i.e. the German regime did violently suppress all opposition in Germany itself as well as in occupied Europe. Therefore, all over the continent but especially in Eastern European and the Balkan countries, where economic pressure became most severe, the shadow economy became of overwhelmingly importance.

During periods of severe shortages clandestine production could even outstrip legal production and then it was impossible to suppress such markets any longer without using an enormous police force. For that reason, from 1943 on, in the occupied USSR and some other Eastern territories, the occupier more or less accepted clandestine markets and clandestine production.¹⁴ In these parts of Europe, such markets became the main exit route for a population that would otherwise starve to death as the rations were far below the minimum needed to survive.¹⁵ A similar development was seen in the severe, but less dramatic French circumstances as early as 1941, when a *préfet* – a local French official – actually opposed measures against clandestine economic activities because ‘one should not attack the small scale black market that actually literally feeds the population, as long as rationing and distribution are insufficient and badly organized.’¹⁶ During the occupation as a whole, the French authorities were not just incompetent to control markets, but sometimes even unwilling, as by clandestine production the ‘agricultural sector catered to the population’s desperate need to supplement their wholly inadequate food rations, ensuring that many products remained among French.’¹⁷ Of course, this distribution by clandestine markets resulted in a very unequal allocation as regulation aimed at limiting high profits and the abundant consumption of the happy few, to accomplish a fair and even distribution against reasonable prices of the small amount of goods available for all. That Vichy proved incapable to achieve such an equalizing policy, severely undermined the political authority of the regime of *Maréchal* Philippe Pétain.¹⁸ As Kenneth Mouré and Fabrice Grenard wrote:

¹³ Friedrich Schneider and Dominik H. Enste ‘Shadow Economies: Size, Causes, and Consequences.’ In: *Journal of Economic Literature*, 38, (2000), 77-114, there 77.

¹⁴ Alexander Dallin, *German rule in Russia, 1941-1945* (New York 1957) 394-395.

¹⁵ Sanders, ‘Population Policy and Economic Exploitation,’ 171.

¹⁶ Vichy Y: Internationale vol.71. Synthèse zone occupée 15 Octobre 1941. <http://www.ihtp.cnrs.fr/prefets/fr/fzo151041dsa.html>

¹⁷ Sanders, ‘Economic draining,’ 156.

¹⁸ Fabrice Grenard, ‘Les implication politiques du ravitaillement en France sous l’Occupation.’ in, *Vingtième Siècle. Revue d’histoire*, 94 (2007), 199-215.

‘Shortages of food, clothing and fuel, of industrial raw materials and energy, and of basic supplies for commerce, produced a culture of widespread illicit activity that made most citizens - producers as well as consumers – rule-breakers in order to survive.’ This was not a typically French development.¹⁹

The shadow economy enclosed every economic activity not registered, i.e. real crime as well as in itself legal, but unregistered activities. According to Edward Smithies, British black markets were supplied from unregistered agrarian production, theft and unrecorded industrial production.²⁰ He is right, but although during the war economic criminality substantially increased, most black market activities were in themselves not illegal. The clandestine element was not in crime but in ignoring regulation and taxation. In official markets, prices were kept low to give the urban population the opportunity to buy its rations without raising wages, but as a consequence it often hardly provided an income to the producers. As these could ask almost everything on illegal markets and had a hard time in the nineteen thirties, the temptation to encroachment, i.e. transferring supplies from low-priced official markets to high-priced clandestine, was enormous.²¹ In France, it was common knowledge that farmers producing for legal markets were washed over with regulations and not even got reasonable prices, while producing for clandestine, free and real French markets, was highly profitable, and liberated them from an awkward bureaucracy.²² Besides, new officials collecting the crops against official prices were mistrusted and seen by the farmers as ‘suspect profiteers enriching themselves from their labour.’ Accordingly, official crops were higher in parts of France where pre-war wholesale buyers bought the output than where such mistrusted new officials did the job.²³ Black marketing not only resulted from differences in legal and illegal prices, but also from lack of confidence in the bureaucracy and the motives behind the regulation.²⁴

When regulation was new, implemented by unknown institutions only setup during the occupation, the public thought that the rules were German motivated and there were no indications that the interests of the producers were bore in mind, black markets easily went out of hands. In Greece, farmers refused to obey the decrees of the *deutschfreundliche* – German sympathizing – government, not only because they hoped to get higher profits, but

¹⁹ Kenneth Mouré and Fabrice Grenard, ‘Traitors, Trafiquants, and the confiscation of ‘illicit profits’ in France, 1944-1945’, in, *The Historical Journal*, 51(2008) 969–990, there 973.

²⁰ Edward Smithies, *Crime in wartime. A social history of crime in World War II* (Londen 1982) 71

²¹ Nationaal Archief, The Hague, phrased from: K.E. Boulding, ‘Note on the Theory of the Black Market.’ In: *The Canadian Journal of Economics and Political Science* (1947) 115-118, there 118.

²² Taylor, ‘The black market in occupied Northern France,’ 160

²³ Sanders, *Histoire du marché noir*, 69, also 39 c.q.

²⁴ Boulding, ‘Note on the Theory,’ 118; Hein A.M. Klemann, ‘Waarom honger in Europa in de Tweede Wereldoorlog?.’ In: Hein A.M. Klemann en Dirk Luyten (red.), *Thuisfront. Economie en oorlog in Europa in de 20^e eeuw. Niod-Jaarboek 14* (Zutphen 2003) 113-125.

also because they were convinced, just as many officials responsible for the collection of the wheat harvest, that they were committing an act of resistance by keeping wheat out of German hands, as a substantial part of the official production would be shipped to the army of General Rommel in North Africa. Consequently, the collection of the crops was unsuccessful. The Athens Government lacked the authority to enforce it, while sky-rocketing inflation further stimulated black markets.²⁵ As a result, only 10% of what was needed to sustain the urban population was secured. Taxation of peasants in kind –10% of their gross output – and later of threshing – 8-9% – neither was successful.²⁶ In 1942 taxes *in natura* only yielded 40 thousand tons.²⁷ Now it became clear that black-marketeering was more motivated by speculation than by patriotism and the urban population grew resentful to the peasants.²⁸

A similar development is seen in Serbia, where penalties were imposed on peasants and provinces not fulfilling their delivery quotas, while products discovered in storage rooms were sequestered. Nevertheless, the greater part of production was sold at black markets for prices much higher than the official or was bartered for clothing, shoes etc. To increase the part of output obtained, a register of producers was compiled and during the threshing it was decided how much everyone of these could keep for consumption. According to Franz Neuhausen – German plenipotentiary for the Serbian economy and from 1943 chief of the military administration on top of that – this was most successful. In 1943 62% more grain and legumes was collected than in the previous year. By March 1944, however, although 90% of the wheat quota from the Banat – an autonomous Serbian region ruled by the German minority – had been fulfilled, only 49% of that of the rest of Serbia was collected.²⁹ Therefore, in the spring of 1944, recognizing their limited successes, the occupier tried to motivate peasants to cooperate by offering them consumer goods in exchange. These examples make clear that in countries as different as Serbia, Greece and France, illegal economic activities were significant. Therefore, data on production not raised for clandestine production, give a completely wrong impression of the actual output.

In illegal production, margins were the crux. In normal times, the input of labour and raw materials, gives a good indication of the output, especially in industry. For that reason, and not only because food was most wanted, everywhere black industrial production was comparably small to black agrarian production, as it was in agriculture easier to keep a part of

²⁵ As Thomadakis points out: 'the capacity of any state appNationalea Archief, The Hague, tus to requisition commodities from a producer is limited by the latter's ability to waste, sabotage, conceal, or misrepresent production; Thomadakis, 'Black Markets,' 62.

²⁶ Delivanis and Cleveland, *Greek Monetary Developments*, 70; report of 15 July 1942 by the board of directors of the *Ella-Turk* trading company: A.Y.E./1944/KC/19.

²⁷ Report of 5 December 1943 by Sandström: A.Y.E./1943-44/KC/Food Supply.

²⁸ Mazower, *Inside Hitler's Greece*, p. 57.

²⁹ Jozo Tomasevich, *War and revolution in Yugoslavia, 1941-1945: occupation and collaboration* (Stanford 2001) 650-651.

the output out of the records than in industry. Nevertheless, clandestine industrial production was possible as well. For ideological reasons, but also because they were the only specialists, businessmen had substantial influence in the organizations setup in the occupied countries to regulate the use of raw materials – *Rijksbureaus*, *Warencentralen*, *OCRPI*, etc. These interest groups could try to keep the input-output-ratio on such levels that efficient producers could obtain some unregistered margins.³⁰ By further limiting waste, reusing it when unavoidable, doing research on surrogates and using old-fashion techniques less efficient with labour – as many were in hiding, especially after 1942, there were a substantial number of unregistered labourers – but more efficient with materials, it became possible to obtain interesting margins. Concealing such margins to use in clandestine production or sell in black markets was everywhere. By a more careful measuring, it was possible to cut more shoes from a skin, while being less critical on the quality and shininess increased such margins to roundabout 10% in each step in the production column. The clandestine production of raw materials – in the example illegal butchered cows and pigs resulting in clandestine leather – stimulated illegal production only further.

In the last decennia before the war, Dutch shoe making transformed into factory production but most labourers still were trained craftsmen, quite capable to make shoes in their back garden shed. As wages and prices of shoes on legal markets were frozen and raw materials scarce, factory production was under pressure. Illegal butchering resulted however in considerable quantities of illegal hides. As tanning was only partly industrialized as well and still often done in small scale vat tanneries, illegal leather became widely available. The 1942-1943 German policy of centralizing industrial production to get labourers for the *Arbeitseinsatz* and economize on raw materials, resulting in the closing of small scale factories, drove labourers into hiding, only to restart production again as small craftsmen. This was quite profitable, not only because in this branch economies of scale were small anyway, but also because black market prices were 5 to 15 times as high as the official prices.³¹ In the same way as more shoes could be made from a hide, more clothes could be cut out of cloth, while the wool from illegally butchered sheep, as well as margins in the flax production resulted in some extra materials. Thus in every step in the production process, unregistered margins could be created, as input was often used as an indication for the output, and the authorities based their calculations on pre-war experiences. Above that, when locally

³⁰ Louis Baudin, 'An Outline of Economic Conditions in France Under the German Occupation,' in, *The Economic Journal*, 55 (1945) 326-345, there 339; Henry Rousso and Michel Margairaz, 'Vichy, la guerre et les entreprises,' in, *Histoire, économie et société*, 11 (1992) 337-367, there 341-342 ; Klemann, *Nederland 1938-1948*, passim.

³¹ Klemann, *Nederland 1938-1948*, 251-254.

produced raw materials were involved, the input had already a substantial unregistered margin.³²

Producers of raw materials – agriculture – including tobacco and wool production, mines, woodcutters etc. could obtain raw materials for clandestine production as long as they had reasonable arguments to explain the low level of official production. Agriculture is mostly seen as the main source of black market production, but as this was caused by difficulties to calculate the output from the input, other primary branches as well as secondary branches processing locally produced raw materials and companies with unregistered pre-war stocks also had good opportunities to operate on black markets. Food processing is a good example. According to Jean-Christophe Fichou, in the region Pas-de-Calais a third of the fish catch was disembarked illegally. This was however limited compared to the clandestine share of production in Bretagne, where many people had a small ship of their own and the coast was sprinkled with uncontrolled and uncontrollable little ports. In such isolated places, fish canning factories could easily obtain clandestine fish. Accordingly, even the Chamber of Commerce of Quimper concluded that the canning industry was involved in black markets. ‘For that reason the figures concerning the period 1939-1946 should only be used with the highest suspicion,’ it wrote on wartime production.³³

Even in mining margins were important as it is striking that during the occupation, all Dutch mining companies employed more labourers, who were working longer hours than before the war, to get less coal. The excuse the Dutch State Mines (*DSM*) gave was that just before the war started, the decision was taken to exploit less wide coal layers, but this can not explain the waning production of the other companies. Nevertheless, coal production was disappointing everywhere in Europe. In France, the German authorities complained that keeping this production at the low 1941 level was only possible by regular Sunday shifts. Here the reason for low productivity should have been that problems with the food distribution affected the energy of the miners, while delivery problems of auxiliary materials further undermined production. It should, however, be kept in mind that everywhere in Europe in black markets coal was available.³⁴

Apart from margins, materials that were useless in normal periods now became valuable raw materials used in legal as well as illegal production. In mining districts coal mud and coals found in mine rubbish were used, while rye straw was used to make sandals and bags in

³² Klemann, *Nederland 1938-1948*, passim.

³³ J.-C. Fichou, ‘La conserverie de poisson, 1939-1945: une activité sinistrée?’ in, *Guerres mondiales et conflits contemporains*, 2002/3 (207) 61-75, there 72.

³⁴ See for instance: Der Militärbefehlshaber in Frankreich, Paris, den 27. Januar 1943: Lagebericht über Verwaltung und Wirtschaft Oktober/Dezember 1942; Klemann, *Nederland 1938-1948*, 263.

clandestine factories using people in hiding as labourers, but also to make board used in construction in perfectly legal factories, while more or less clandestine peak production was used in factories out of fuel. In barber shops even human hair was collected to be used in textiles or in the furniture industry. Branches or illegally cut wood were used in clandestine as well as legal industrial companies, and clandestine building and construction used remains from buildings destroyed by bombardments or other war activities. As in those years many farmers earned a lot, but also gave hiding to young man who tried to avoid to be sent to Germany, by the use of their labour and clandestinely bought building materials, many farms illegally got new sheds or stables, while shops were often redecorated.

Apart from all this, scarcity influenced the attitude of the public. Customers became less critical on the quality and the shining appearance of final products, especially in legal markets where the rationing system caused that everything that was available was sold anyway. Consequently, raw materials that would have been rejected before the war now were used, but only in legal production. Nobody bothered when a piece of wood, used for a cabinet was full of knots or a piece of cloth for a dress slightly discoloured. ‘Serious was the deterioration of the quality of commodities: what was the point of taking care of products sold under tax which the customer would be forced to buy? Windfalls went to the legal market, but the apple-crop went to the black market,’ Louis Baudin wrote on France just after the war.³⁵ In other words during this period of shortages, producers got the opportunity to participate in the shadow economy by producing substantially more with the same amount of raw materials and by not bothering about the quality of their output.

As clandestine markets were for a major part based on clandestine agrarian and industrial production, and illegal markets could in periods of hunger absorb more than half the agrarian production while in this sector a 20-25% clandestine production became perfectly normal even in the most well-organized societies, to get an idea of the size of wartime production it is necessary to get an indication of the shadow economy. After all, even in countries with reliable statistics in normal times, wartime macroeconomic series hardly gave a realistic impression of production as for instance in France clandestine transactions absorbed roundabout 35% or more of the food production.³⁶ Therefore, educated guesses of the size of the shadow economy have to be made. Calculating these is however no easy job, as the most common methods can not be used.

³⁵ Baudin, ‘An Outline of Economic Conditions in France Under the German Occupation,’ 340.

³⁶ Institut National de la Statistique et des Études Économiques, *Enquêtes diverses sur les prix et la consommation de 1942 à 1944* (Paris 1947) cited in: Mouré and Grenard, ‘Traitors, Trafiquants, and the confiscation of ‘illicit profits’’ 973.

Clandestine production is no wartime phenomenon. Even nowadays it is still important to get an impression of clandestine production, especially when comparing between countries. To do that, the easiest way is to use discrepancies between aggregated production, income and spending are used as indicators for black production. For the wartime period, however, nowhere complete national accounts are available. Further, there are monetary methods to calculate the size of illegal activities, using discrepancies between financial statistics and registered production, but that not only demands reliable macroeconomic statistics, but also some kind of stability in monetary and financial developments.³⁷ The way Germany financed its purchases, however, made such a mess of finances all over Europe that this method can not be used either. The same is true, *mutatis mutandis*, for methods calculating output from the input.³⁸ Not only is it impossible to calculate the size of the input, but even if that would have been possible, it would not give a clear indication of production. People in hiding were often working on farms or doing some hardly efficient industrial production – spinning or knitting, producing straw sandals or decorative tiles – while others were seriously employed in, in itself not illegal factories, farms, in construction or shops. Although rare, even some completely illegal factories, after the war developing in legal firms, existed. A Dutch smithy developed into a farm machine factory by using Amsterdam labourers, in normal times working in urban machine factories but now in hiding in the countryside. They repaired, later built farm machines that before the war came from the USA. In other words, in clandestine production, productivity differed from a more or less normal level to far below the average. Therefore, information on labour input, if it would be possible to calculate, should have been of limited value anyway. Indications of the input of raw materials or semi-finished products, at the other hand, gave other problems as such materials were handled with much more care than before the war, resulting in a higher output with the same amount of material. On top of that new, sometimes unregistered sources of materials were used as well. As input can only be an indication of the output when it seems reasonable to suppose that the relation between in- and output is more or less stable, these methods can not be used either. Consequently, the only way to get an indication of the shadow economy is by using all kind of available, odd information.

From such information it is clear that in Eastern European and the Balkan countries – where the occupier was hardly interested in the survival of the population – the shadow economy

³⁷ M.M.G. Fase, 'Informeel economie en geldomloop. Meting en interpretatie.' In: M.M.G. Fase, *Geld in het fin de siècle* (Amsterdam 1999) 81-113, 84-86.

³⁸ Friedrich Schneider and Dominik H. Enste, 'Shadow Economies: Size, Causes, and Consequences,' *Journal of Economic Literature*, 38 (2000) 77-114, there, 80.

was more important than in Western countries. In the *General-Gouvernement* for instance, legal distribution only covered 35 to 50% of daily consumption that dropped to the barest necessities. In other words, 50 to 65% of all the Polish population needed to survive, was obtained clandestinely. The Polish historian Czesław Madajczyk concluded that black markets were partly supplied by unregistered, mainly small scale production, while mass products, like corn or fuels, were brought to black markets by corrupt officials or German soldiers from already gathered stocks.³⁹ As enormous quantities of mass goods were needed to supply the 12 million people of the *General-Gouvernement* with 50-65% of all they needed, this would imply that major parts of the already registered commodities for a substantial part obtained to be sent to Germany, disappeared into clandestine circuits without alarming Berlin. This is not only contrary to the experience elsewhere in Europe, it also seems most unlikely. Probably here, just as elsewhere, not just trade, but also substantial parts of production were clandestine.

In the Netherlands and France, countries where black markets were most of the time much less important than in Poland or occupied parts of the USSR, farmers hid 20-35% of their crops, milk or animals, before any official could register these. Governmental measures could do little against it. When in 1942 Berlin in Germany itself tried to suppress the clandestine butter trade by all over countryside confiscating butter-making apparatuses, it only made public that black marketeering had become a serious problem.⁴⁰ The measure, however, was seems not just extreme, but also hardly effective and seemed primarily born out of the frustration of bureaucrats wanting to control everything and ever less managing to do so. In mid-twentieth century Europe, churns were at every farm all over the countryside. Milk for clandestine butter or cheese production could be obtained in the same way as in the Netherlands, where farmers made quite clear to the authorities that their cows gave less milk as a result of declining availability of concentrates, but did not tell the authorities that the average quality of their livestock improved as, to adapt to wartime circumstances, many animals were slaughtered and all farmers, of course, sent their least productive animals to the abattoir. It resulted in a Dutch black milk production of 25-35%, of which most was used for butter.⁴¹ That controlling agrarian production was ineffective, even in Germany, also became

³⁹ Czesław Madajczyk, *Die Okkupationspolitik Nazideutschlands in Polen* (Cologne 1988) 596.

⁴⁰ H. W. Singer, 'The German War Economy in the Light of Economic Periodicals,' *The Economic Journal*, 51, (1941) 400-421, there 416.

⁴¹ 'De legale en illegale landbouwproductie in de jaren 1938-1948.' In: *Neha-jaarboek voor economische, bedrijfs- en techniekgeschiedenis*, 60 (1997) 307-338, there 322-324; Trienekens, *Tussen ons volk en de honger*, 262-266.

public when butchers were nabbed weighting light pigs and slaughtering heavy ones, thus obtaining nice margins.⁴²

In this chapter production will be the central theme. The main question is on what level production went on. As substantial parts of total production were unregistered, official statistics give a totally wrong impression. In the Netherlands, however, the 1938-1948 macroeconomic series are recalculated, including a cautious guess of black market production.⁴³ From these calculations it becomes not just clear that in some countries economic decline was limited, but also what went wrong with statistics. With that knowledge, it is possible to make an educated guess of the production in other countries as far as there are macroeconomic series on legal production. In Eastern Europe and the Balkans Berlin, however, created administrative units like *Ostland* or the *General-Gouvernement*, countries without any independent history or future whatsoever. As after 1945, the Second World War everywhere became subject of a patriotic historiography, the history of such units is not written, nor has there ever been any attempt to calculate macroeconomic series for these territories.⁴⁴ Berlin redrew almost all borders in these parts of Europe with Greece, although occupied by no less than three Axis powers – Germany, Italy and Bulgaria – as the sole exception. Consequently, Greece is the only occupied country in Central, Eastern and Southeastern Europe with macroeconomic series on the period and it therefore was possible to make an educated guess of the Greek wartime GDP. It gives a limited impression of the differences between macroeconomic developments in highly developed Western economies and in the less developed Eastern and Southeastern economies. To make the guesses of the clandestine production possible needed to calculate total production, the Dutch calculations will first be explained.

15.3 *The Dutch case*

In the summer of 1940, Europe's future seemed in the hands of the *Führer*. Therefore, adventurous young men from all over Europe were ready to back the German horse and accepted work in the country of the enemy.⁴⁵ In the end, however, the 1940 economic development proved not to be bad at all and before August industrial employment in 1941 grew to reach an all time height, while profitability peaked as it had not done since the late 1920s (Table 15.1). Between 1938 and 1941, in industry alone 131 thousand jobs were

⁴² H. W. Singer, 'The German War Economy, XI,' *The Economic Journal*, 54, (1944) 62-74, there 70.

⁴³ Klemann, *Nederland 1938-1948*, passim.

⁴⁴ See: A.E. Cohen, 'Problemen der geschiedschrijving van de Tweede Wereldoorlog (1952).' In: J.H.C. Blom, *A.E. Cohen als geschiedschrijver van zijn tijd* (Amsterdam 2005) 77-110.

⁴⁵ Klemann, *Nederland 1938-1948*, 432-433.

created. When agriculture, services and cross-border work are included, dependent employment grew by 24% from 1.6 to 2.0 million fulltime jobs.⁴⁶ At the end of 1940, Reich Commissioner Seyss-Inquart therefore had good reasons to boast that he solved the unemployment problem.⁴⁷ After the war this was forgotten. Historians considered it to be propaganda, especially because the official Dutch Statistical Office *CBS* reported that the occupier had solved the unemployment by deportations.⁴⁸ In fact, of the 393 thousand new jobs, only a third was located in Germany, half of these were normal cross-border jobs (table 15.1).⁴⁹ Growing employment was not the only indication that the economy was booming. In 1940, a year the country lost a war and with that its independence, many companies paid higher dividends, and although profits were slightly down again in 1941, they were still substantially higher than ever since 1929.⁵⁰

Table 15.1: *Dutch industrial development 1938-1948*

	Industrial employment		Profitability of industry	Legal industrial production	Clandestine industrial production	Total industrial production	Index industrial production 1938=100	
	1000 full-time jobs	1938=100					New	CBS
			1938 = 100	In millions of 1938 guilders				
1938	856	100	100	1584	0	1584	100	100
1939	908	106	123	1780	0	1780	112	113
1940	904	106	144	1679	18	1697	107	104
1941	987	115	138	1623	168	1790	113	81
1942	915	107	95	1263	219	1482	94	61
1943	830	97	65	1128	193	1321	83	53
1944	759	89	16	790	256	1046	66	36
1945	689	80	16	794	266	1061	67	27
1946	968	113	132	1209	166	1375	87	76
1947	1103	129	134	1606	188	1794	113	97
1948	1227	143	144	1805	143	1948	123	115

Sources: CBS, *Sociale en economische kroniek der oorlogsjaren 1940-1945* (Utrecht 1947); CBS, *Jaarcijfers voor Nederland 1947-1950* (Utrecht 1951); Hein A.M. Klemann, *Nederland 1938-1948. Economie en samenleving in jaren van oorlog en bezetting* (Amsterdam 2002)

Nevertheless, wartime macroeconomic series of the official *CBS* (table 15.1 last column) suggest that industrial production slumped from 1940 on.⁵¹ Apart from the economic setback, this was caused by the fact that the public no longer trusted official institutes and only reluctantly gave information to the governmental *CBS*. Already before the liberation, The Hague concluded that the statistical office lacked the information to produce reliable statistics any longer.⁵² For that reason, the new calculations are based on the fact that production equals

⁴⁶ I.e. not including self-employed. Klemann, *Nederland 1938-1948*, 433.

⁴⁷ Ernst Ermann, "'VB'-Gespräch mit Seyss-Inquart. Wie steht es in den Niederlande,' *Völkischer Beobachter*, 1. Dezember 1940.

⁴⁸ CBS, *Sociale en Economische Kroniek der Oorlogsjaren, 1940-1945* (Utrecht 1947) 300.

⁴⁹ Klemann, *Nederland 1938-1948*, 431 c.q.

⁵⁰ 'Nederlandsche economie in Oorlogstijd,' *Keesings Historisch Archief*, 11-17 Mei 1941, 4675.

⁵¹ Hein A.M. Klemann, 'Waarom honger in Europa in de Tweede Wereldoorlog?.' In: Hein A.M. Klemann en Dirk Luyten (red.), *Thuisfront. Economie en oorlog in Europa in de 20^e eeuw. Niod-Jaarboek 14* (Zutphen 2003) 113-125.

⁵² Klemann, *Nederland 1938-1948*, 231-232; NIOD (Archive of the Netherlands Institute of War Documentation) 212a, 5e: Afd. Economisch

the sum of labour and capital incomes before taxation. Social security statistics provided information on the numbers of employees and the sum of wages in each sector of Dutch industry. Consequently, the calculations can be too low, but would only be too high in the unlikely case that employers paid more social premiums than they had to. Additionally, the profitability of each industrial sector was reconstructed from annual reports of hundreds of companies spread over all industrial branches. For each company data on profits, reserves and depreciations were standardized and per sector an average profitability was calculated. As the pre-war Netherlands had no taxes on profits, companies had no reason to hide these, what makes it unlikely that pre-war data are too low. It is however possible that from 1940 on, when all kind of new taxes were introduced, companies tried to conceal some returns. Therefore the outcome of wartime calculations are more likely to be too low than too high. To link the series of capital and wage incomes, *CBS* data on the 1938 labour share in enterprise income per sector were used and real production was computed with a newly calculated Paasche price index.⁵³

All these calculations resulted in the conclusion that between 1938 and 1944-1945 legal industrial production slumped with an in itself dramatically 50%, but not with the even worse 73% the *CBS* calculated. The new series – the legal industrial production series in table 15.1 – does however not solve the problem that official statistics – whether from the *CBS*, social security organizations, or calculated from the annual reports of companies – never includes clandestine transactions. During the occupation, all over occupied Europe black markets flourished however, while such markets in Germany, although before 1945 far from unknown, only boomed after the fall of the *Reich*. In Eastern Europe during certain periods, there were even hardly any legal markets left and almost all production for local use was clandestine. In an international perspective, until the 1944-1945 Hunger Winter, therefore Dutch black markets were very limited. As all over Europe black market grew, even if all data on legal production had been reliable, macroeconomic series for the period would not only be too low, but what is more important, the economic setback that seemed to be reflected by the series was not just caused by any real decline, but also by the transfer of growing parts of production to the shadow economy and therefore an exaggerated the real decline in production. For the same reason, post-war growth would appear too high as post-war macroeconomic series reflects a mix of real growth and a renewed registration of until then unregistered production. Such developments could be seen all over Europe after 1945 and in Germany after 1948,

onderzoek: De omvang van de Duitse opdrachten in de industrie in Nederland, Augustus 1944.

⁵³ Klemann, *Nederland 1938-1948*, 265-300. Also: Hein A.M. Klemann, “Belangrijke gebeurtenissen vonden niet plaats...” *De Nederlandse industrie 1938-1948*. In: *BMGN*, 114 (1999) 4, 506-552.

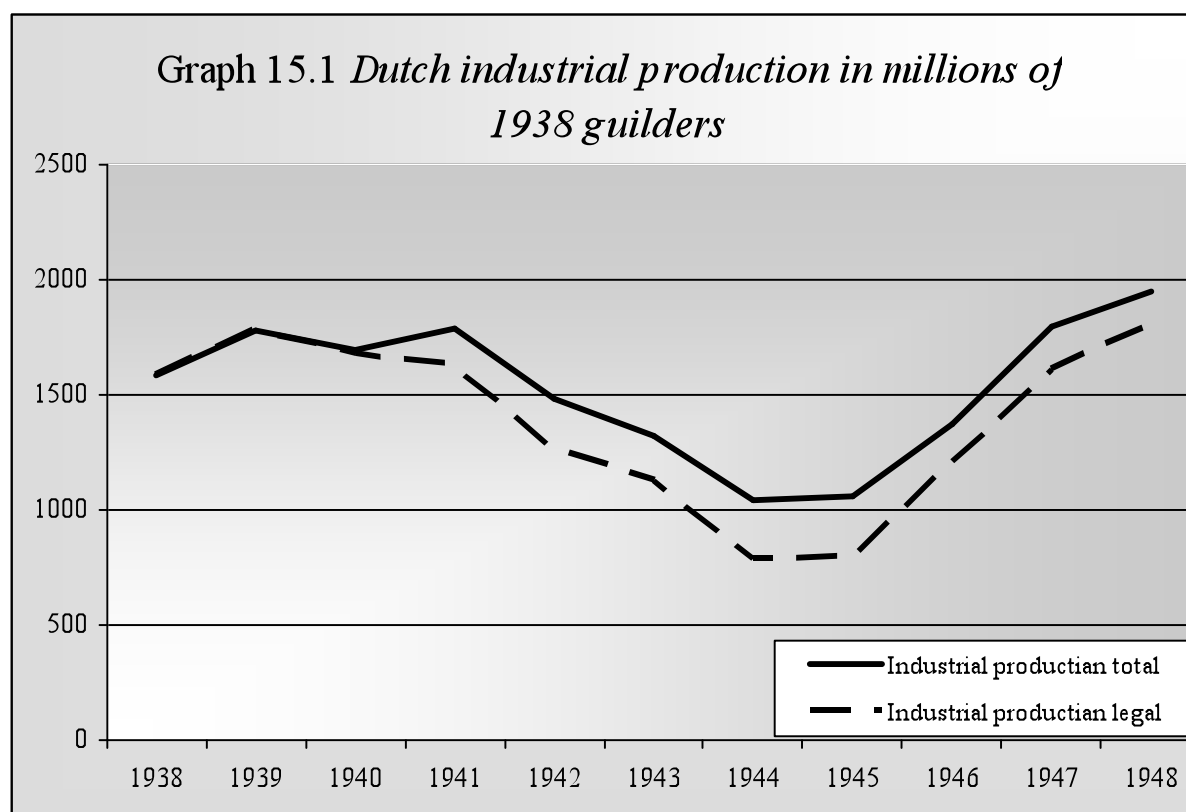
when most black marketing gradually disappeared again.⁵⁴ When Barry Eichengreen called post-1948 German growth ‘nothing short of miraculous’ – according to official statistics industrial production grew by 50% in only half a year time – he used series reflecting growth as well as the legalisation of black market production.⁵⁵ Series without any surcharge for the shadow economy gives such false impressions, suggesting that wartime economies slumped more dramatically than they actually did, while after the war, when markets were liberated from wartime regulation again, economic growth seems miraculous because it reflected not only growth, but also the legalising of clandestine production. Most post-war economic miracles were no miracles at all, but statistical mistakes.

To make a cautious, and probably too low estimate of Dutch clandestine industrial production, information per sector was gathered for 1942 and 1943. These years were selected because by that time the first unsteady period of the occupation was over and economic regulation was fully developed, while the collapse of the Third *Reich*, crushing all that was left of organized society all over Europe, still had to come. Dutch information shows that in branches using locally produced raw materials (mining, shoemaking, textiles, food and wood processing), it is a cautious guess that 15% of all production was clandestine. In branches where it was easier to control production as these processed raw materials from elsewhere, 10% seems a reasonable guess. It should, however, be emphasized that these margins could be accomplished in every step in the production column again. In textiles, for instance, it was possible to win a 10% in spinning and weaving by reusing waste, while tailors could, by cutting the cloths more carefully, win another 10%. As before 1940, neither taxation nor regulation made clandestine production interesting, apart from some illegal production of gin, it did not exist. How black markets developed through time, was reconstructed in agriculture where a system existed that allowed calculating important parts of production in two different ways, one based on official registration and thus not including any illegal production; one on guesses by agrarian specialists spread over the country, who based their estimates on the amount of land used for the different crops and the condition of each crops a few days before the harvest. As these specialists made their estimates already for 25 years and there was a systematic relation between registered production and these estimates, it seems clear that the

⁵⁴ John Gillingham, ‘How Belgium survived. The food supply problem of an occupied nation.’ In: B. Martin and A.S. Milward, *Agriculture and food supply in the second world war* (Ostfildern 1985) 69-88; Lynne Taylor, ‘The Black Market in Occupied Northern France 1940-4.’ In: *CEH* 6, 2 (1997) 153-176; Paul W. Sanders, ‘Prélèvement économique, les activités allemandes de marché noir en France 1940- 1943.’ In: Olivier Dard, Jean-Claude Daumas et François Marcot, *L’occupation l’état Français et les entreprises* (Parijs 2000) 37-67; Paul Sanders, *Histoire du marché noir, 1940-1946* (Parijs 2001); R. Miry, *Zwarte handel in levensmiddelen* (Brussel 1946); Claus Bundgård Christensen and Ralf Futselaar, ‘Zwarte markten in de Tweede Wereldoorlog. Een vergelijking tussen Nederland and Denemarken’, in Hein A.M. Klemann en Dirk Luyten, *Thuisfront. Oorlog en economie in de twintigste eeuw* (Zutphen 2003) 89-110.

⁵⁵ Barry Eichengreen, *The European Economy Since 1945. Coordinated Capitalism and Beyond* (Princeton 2007) 72.

deviations between these series starting only during the occupation, indicates that parts of production were held behind.⁵⁶ By taking in account the general development of clandestine production, the level of black production in each sector in 1942 and 1943, and the fluctuation between the sectors, it was possible to make reasonable guesses of the development of industrial black market production and thus to reconstruct a probably still rather low, but more realistic industrial production index. Together with series on agriculture and services even a GDP index including clandestine production could be calculated.⁵⁷ The outcome provides a completely new impression of wartime economic development in the Netherlands.



Source: Hein A.M. Klemann, *Nederland 1938-1948. Economie en samenleving in jaren van oorlog en bezetting* (Amsterdam 2002)

In this country, after the first months of occupation, production boomed and only started to give way, as a result of new forms of exploitation introduced by Paul Pleiger, from late 1941 on. The economic decline during the occupation as a whole, i.e. the setback of national income respectively GDP – according to the *CBS* between 1938 and 1944 respectively 1945 almost 50% – was in fact less than 20%. Industrial production, according to the *CBS* slumping

⁵⁶ Trienekens, *Tussen ons volk en de honger*, 239 s.q.

⁵⁷ See: Trienekens, *Tussen ons volk en de honger*; Hein A.M. Klemann, “Die koren onthoudt, wordt gevloekt onder het volk...” De zwarte markt in voedingswaren, 1940-1948.’ In: *BMGN*, 115 (2000) 4, 532-560. Attempts to calculate the black markets from the monetary development failed because of the suppression of normal inflation. The monetary overhang (which was enormous) could not be calculated as long as the size of and prices on the black market are unknown.

with 73, dwindled in fact with just 34%, and the worst years were only the dramatic years 1944 and 1945, when the country was split by the front in a liberated South and a still occupied North-Western part, that was almost completely cut off of normal supplies for a nine month period.⁵⁸

Although before the end of 1940 employment and profitability grew to unknown levels, directly after the German invasion production declined as a result of uncertainty and the scrapping of governmental orders.⁵⁹ When business quickly recovered again, an increasing part of production was kept out of the books. Frozen prices, prohibitions of certain transactions, new taxes and mistrust between the Dutch business community and the German occupier – who was seen as the cause of all this regulation – were reasons to sell more and more in black markets. That regulation was seen as a form of inimical interference aiming at higher withdrawals, gave a moral justification to such clandestine activities. In the diary of a daughter of a black trader it says: ‘Illegal butchering, that is in fact sabotage. You are keeping meat out of the hands of the *Wehrmacht*,’ but only a few lines below, when she becomes enthusiastic about profits made, her real motivation became clear.⁶⁰ Graph 15.1 shows that after the 1939 peak, the decline in industrial production was limited and until 1941 completely compensated by clandestine production. Including that, industry decline slightly in 1940 to peak in 1941, but in the last months of that year Pleiger’s policy, in fact an advance on Speer’s 1942 policy, resulted already in scarcity of coal causing a slowing down of Dutch production. Now the discrepancy between legal and total production grew, only to disappear again after the war. Even then this took long, as it was not the military liberation, but economic deregulation and the liberalisation of markets that made black marketing less profitable.

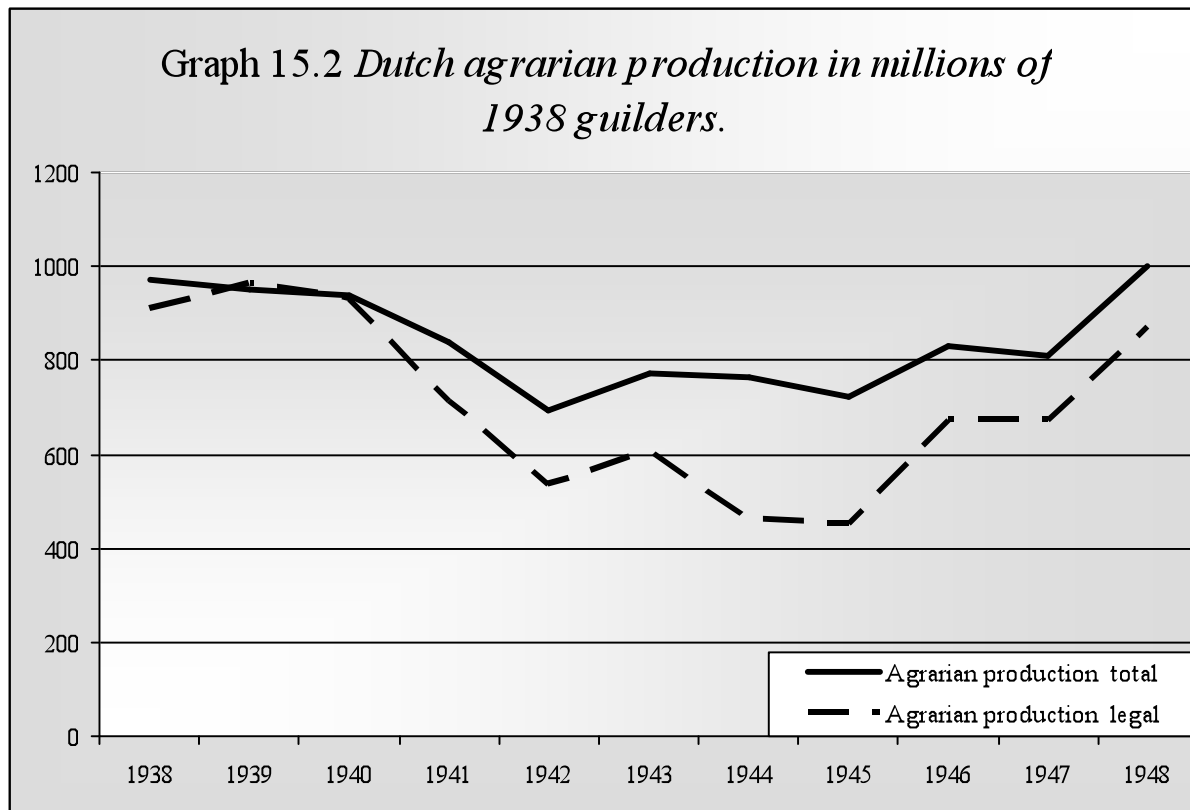
In graph 15.2 the same is done for agriculture. As a result of the cutting off of overseas imports and an increased consumption by soldiers, all over Europe civil consumption was under pressure. As everyone felt food shortages as a threat, even if only a single product was short, black food markets became common. In the Netherlands, even long before the 1944-1945 famine, when almost everybody was still fed well, black markets absorbed 22-23% of the gross agrarian production. Seeds were taken from the legal production, thus resulting in an even higher clandestine share of the net production. This was not typically Dutch. All over Europe farmers kept substantial parts of their production out of the books and when asked

⁵⁸ Klemann, *Nederland 1938-1948*, 299 and 438; CBS, *Sociale en Economische Kroniek der Oorlogsjaren*, 24. The CBS only gives a national income series. Klemann calculated national income as well as GDP series, the last declining a less% more than the latter, as in the national income also the loss of colonial incomes had influence. More than a few% these were not, however.

⁵⁹ Real wages declined as wages were frozen, while prices were slightly more flexible.

⁶⁰ ‘Vrouwelijke kantoorbediende, 19 jaar- Amsterdam, 10 Mei 1942.’ In: *Dagboekfragmenten 1940-1945* (The Hague 1954) 167-169.

why harvests were so much lower than before the occupation, pointed out, that shortages made their work hard. There was no rope, not enough fertilisers, no shoes, no flower pots, too few horses, no fuel for tractors and in some countries even lack of labour. In a way, they were right. Such shortages made their work hard, but did it influence the output?⁶¹



Source: Hein A.M. Klemann, *Nederland 1938-1948. Economie en samenleving in jaren van oorlog en bezetting* (Amsterdam 2002)

Although, France was still overwhelmingly agrarian, before 1940, it imported 20% of the food it needed. Therefore it seemed threatening that during the war, according to official data, not just imports fell away, but agrarian production slumped as well with no less than 30%. On top of that the occupier took another 10 to 20% of the French food production.⁶² These figures, however, suggests that the diet of the average Frenchmen fell with something like 50%, what appears most unlikely. As all over Europe agrarian families hardly adapted their food consumption, and still more than half of the Frenchmen lived in the countryside, with these data it is unexplainable that there were any Parisians left to greet General De Gaulle and his Free French when they triumphantly returned to their capital city. The only explanation is that the production in fact never fell that dramatically and that the League of Nations was

⁶¹ G.M.T. Trienekens, *Tussen ons volk en de honger. De voedselvoorziening 1940-1945* (Utrecht 1985) passim.

⁶² Alfred Sauvy, *La vie économique des Français de 1939 à 1945* (s.l. 1978) 145- 148.

right: French clandestine agrarian production was 35% or more of the food production that consequently only decreased with 5%.⁶³ When it is presupposed that this is right and French food production hardly fell, the declining imports and confiscations could have been solved by adopting a more vegetarian diet as was done everywhere in Europe. Agrarian production, just as the production of other sectors, is always measured in real money value, but a concentration of production on arable farming results in a lower money value of the production, but a higher nutritional value. When clandestine production really was roundabout a third, it is interesting to look again at the reasons given for the reduction of the official production.

When lack of tractor fuels is used as an explanation for the decline of the food production, it should be kept in mind that less than one percent of the French farmers had a tractor, while, although French agriculture already before the war used fertilizers, traditional ways of fertilizing with dung, spurrey, chalk or scrapings from the wood were still common all over Europe, and in a country with many smallholders as France this was even rather general.⁶⁴ Most used as an explanation for the fall of the French agrarian output is lack of labour caused by the fact that in 1940 many farmers were sent to Germany as prisoners of war. It is a fact that in 1939 and 1940 many French farmers and farm labourers defended their country. The Germans captured no less than 630 thousand of them.⁶⁵ After some releases, the reduction in men power was 400 thousand or 6% of the farm labour.⁶⁶ This was dramatic, but was it enough to explain a decline of production with 30% and reason to plant only 45 of the 50 million acre (18.2 of the 20.2 million hectare) available? Is it not more plausible that French farmers were using the fact that the use of land is hard to control without exact knowledge of local circumstances and that claiming 10% was fallow for lack of labour, was the easiest way to keep a substantial part of the output unregistered?⁶⁷ Just after the Great Depression, in France lasting until the late 1930s, there were, however, still substantial numbers of hidden unemployed in the countryside and during the occupation the traditional migration of youngsters to the cities – shrunken during the 1930s already – came to a halt.⁶⁸ In the 1930s there were no jobs. Now there was hardly enough food in the urban centres. Young men stayed in their villages, while others even went back if not because the Vichy regime,

⁶³ Lindberg, *Food*, 21 and 54.

⁶⁴ Milward, *The new order and the French economy*, 261-262.

⁶⁵ Milward, *The new order and the French economy*, 254 c.q.; Pierre Barral, "Agriculture and food supply in France during the Second World War" In, Martin and Milward, *Agriculture and Food Supply in the Second World War*, 89-102 there, 89-90.

⁶⁶ Sauvy, *La vie économique des Français*, 140-146; Milward, *The new order and the French economy*, 260 c.q. According to Milward the loss of agrarian labour in France was little higher than according to Sauvy.

⁶⁷ Milward, *The new order and the French economy*, 267

⁶⁸ Robert Salais, 'Why Was French Unemployment So Low During the 1930s?' in, Barry J. Eichengreen, T. J. Hatton, *Interwar Unemployment in International Perspective* (Dordrecht 1988); Milward, *The new order and the French economy*, 261; Milward, *The new order and the French economy*, 261.

motivated by romantic ideas on a nation of small farmers, stimulated this,⁶⁹ than because in the villages the food situation was better or because the countryside provided a good hiding place for the *Arbeitseinsatz*.⁷⁰ Given these circumstances, it should have been possible to solve the loss of 6% of the farm labour. In other words, there neither is any doubt that the fact that a substantial number of farmers were taken POW, nor that this gave serious problems if not practical than at least emotional, but there is no reason to think that this, together with some shortages, can explain a decline of production of 30%.⁷¹

As in the Netherlands, where even Berlin thought the rationing system was all but perfect, before the hunger period at least 25% of the net food production was never counted for in official statistics, one can imagine what percentages were unregistered in less quite and well organized occupied countries. Probably of all German controlled Europe, only in a few countries with high rations and a good organization – Germany, Denmark and the Protectorate of Bohemia and Moravia – black markets were as small as the Dutch.⁷² Such a limited black market was more or less accepted as an outlet for the frustrations of overregulation and low official prices. In 1942, even Hitler said that the ‘professional black marketeers must be pursued and punished with the utmost rigour, but there is no need to stop trains, hold up motor-cars and badger people because they have bought a couple of eggs off the record. And the peasant who, after having fulfilled the obligations put on him, helps a friend out with a bit from his surplus, need not have the police put on his tracks.’⁷³ Black markets were however not limited to such grey activities and in 1942 in Germany death sentences were publicized for illegal slaughtering, hoarding and the like.⁷⁴

According to the League of Nations, in France, Belgium, Poland or Italy – countries with small legal rations and a bureaucracy hardly capable for the job – agrarian clandestine production was much higher than the 20-25% in the Netherlands. 35% or more were common, while John Gillingham thought it in Belgium even 50% and according to the Polish historian Czesław Madajczyk – at least in the *General-Gouvernement* – 50 to 65% of what the Polish

⁶⁹ Barral, ‘Agriculture and food supply in France’, 94

⁷⁰ Milward, *The new order and the French economy*, 261

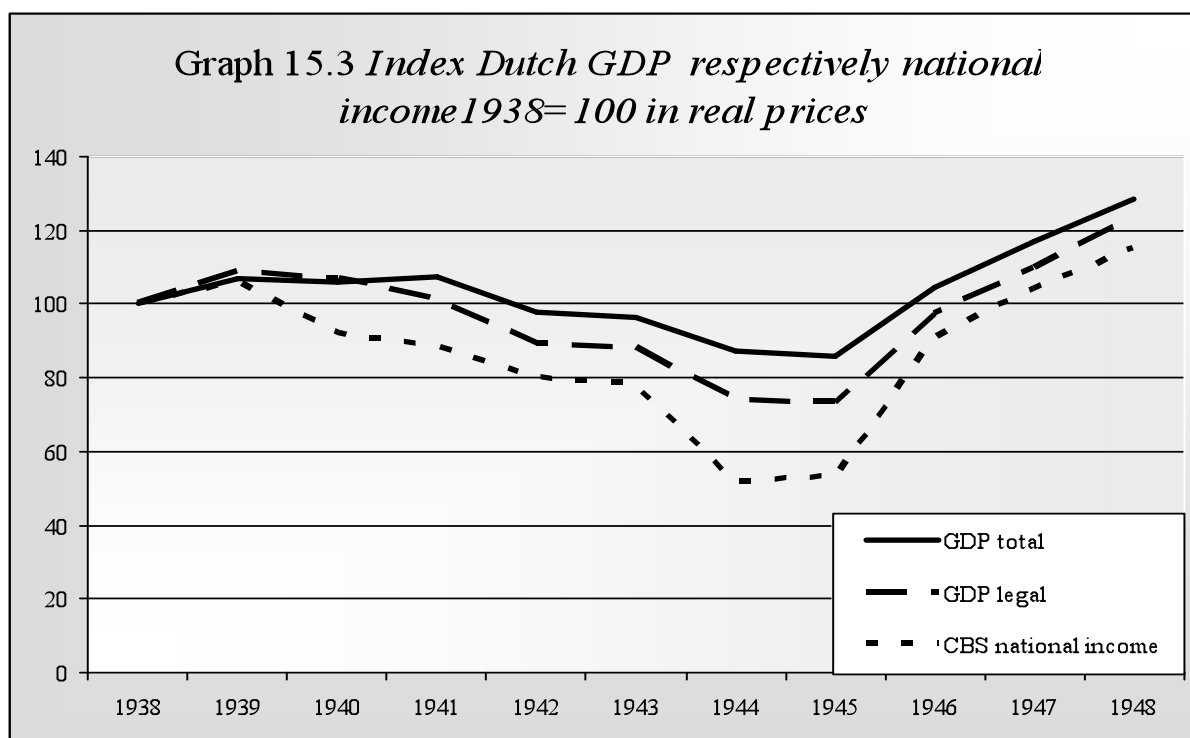
⁷¹ Sauvy, *La vie économique des Français*, 140-146; Milward, *The new order and the French economy*, 260 e.v. Also: Sanders, *Histoire du marché noir 1940-1946*, 39.

⁷² Lindberg, *Food, famine and relief*, passim; Joachim Lehmann, ‘Agrarpolitik und Landwirtschaft in Deutschland 1939 bis 1945,’ in, B. Martin and A.S. Milward, *Agriculture and food supply in the second world war* (Ostfildern 1985) 129-50; John E. Farquharson, ‘The management of agriculture and food supplies in Germany, 1944-1947.’ In: Martin and Milward, *Agriculture*, 50-68; Peter Maurer, ‘Landwirtschaft und Landwirtschaftspolitik der Schweiz im Zeiten Weltkrieg.’ In: Martin and Milward, *Agriculture*, 103-116; David F. Smith and Jim Philips, ‘Food policy and regulation: a multiplicity of actors and experts.’ In: David F. Smith and Jim Philips, *Food, science, policy and regulation in the Twentieth Century. International and compNationaal Archief, The Hague, five perspectives* (Londen 2000) 1-16, there 13.

⁷³ Hitler’s table talks, 1941-1944. *His Private Conversations* (New York 2000) 23rd June 1942, midday, 529.

⁷⁴ H. W. Singer, ‘The German War Economy, VI,’ *The Economic Journal*, 52 (1942) 186-205, there 200.

population needed to survive was obtained illegally.⁷⁵ That this is quite well possible became clear in the Netherlands, when from September 1944 on, the still occupied parts of the country, now isolated from the outside world, were hit by a severe famine. Black marketing boomed, absorbing in 1944 and 1945 as a whole roundabout 40% of all food production in the Netherlands. As the period of starvation only started in September 1944, however, to end again in May 1945, black markets peaked only in this restricted period and that even only in the part of the country that became hit by the famine. Consequently, there and then at least 75% of all food was obtained clandestinely.



Source: Hein A.M. Klemann, *Nederland 1938-1948. Economie en samenleving in jaren van oorlog en bezetting* (Amsterdam)

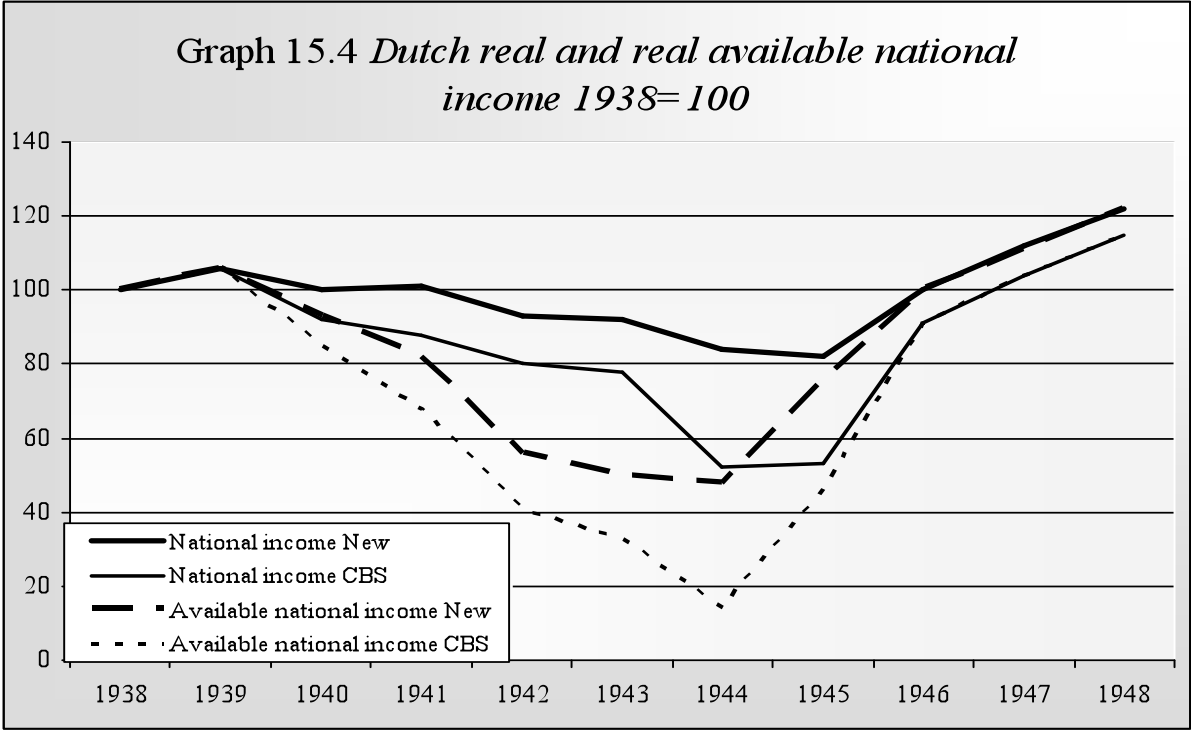
In graph 15.3 the low dotted line is the Dutch national income as shortly after the war calculated by the CBS.⁷⁶ The patterned middle line is a new production series,⁷⁷ but only in the straight line clandestine production is included. From this it is clear that between 1938 and the wartime low of 1944, production did not slump with 50%, but legal production fell with little more than 25%, while if an educated, probably too low guess of clandestine production is included, production only decreased with 15% and even that 15% was only reached in the

⁷⁵ Lindberg, *Food*, 21; John Gillingham, 'How Belgium survived. The food supply problem of an occupied nation.' In: Martin and Milward, *Agriculture*, 69-88, there 84.

⁷⁶ As a consequence of the loss of colonial contacts, national income fell slightly faster than GDP, but the effect is too limited to explain the sharp decline of the CBS series.

⁷⁷ See also: H.J. de Jong, *De Nederlandse industrie*; Herman J. de Jong, *Catching up twice. The nature of Dutch industrial growths during the 20th century in a comp*Nationaal Archief, *The Hague, five perspective* (Berlin 2003). H.J. de Jong is not related to L. de Jong.

hunger years 1944-1945,; when half of the country was liberated and the still occupied, urban Holland and Utrecht became isolated. Until this period, economic decline was less than 5% compared with 1938 and 10% compared with the 1941 all time peak.



Source: Hein A.M. Klemann, *Nederland 1938-1948. Economie en samenleving in jaren van oorlog en bezetting* (Amsterdam)

In graph 15.4, the solid line represents the newly calculated national income and the dashed line the available national income after the occupier took what it thought his. It shows that from 1943 on, although the decline in production was limited, the country had to survive on less than 50% of what it was used to before May 1940. This was caused by German acquisitions that were only paid for by administrative and monetary tricks, not by a dramatically slumping production. When the same calculations are made with *CBS* national income series – the thinner lines – the available national income (the thin dashed line) would have been only 17% of the 1938 level in 1944. As most Dutch survived the war – the population actually grew – this seems impossible. Although from 1942 on, an economic setback is undeniable, it is clear that the poverty everyone felt resulted only to a very limited extent from the decrease of production. Compared with 1938, total production (GDP) fell with 14% at the most, national income by 18%. Even in 1944 and 1945 national income was roundabout 80% of its pre-war level. From 1942 on, however, at least 40% of the production

was taken by the occupier. Consequently, German extractions, not the slumping production, caused wartime poverty in the Netherlands.⁷⁸

That in essence the same story can apply to for instance France becomes clear from the fact that the occupier took for 35.1 billion RM, or 702 billion francs goods and services out of that country. The 1938 French GDP was roundabout 395 billion francs,⁷⁹ but according to the *CEPII*, between 1938 and 1943, production slumped with 51%, while Agnus Maddison thinks the trough was only reached in 1944 on a level of 50% of 1938.⁸⁰ In 1940 and 1941, France was hardly exploited in a regular way. The *Wehrmacht* did gather enormous sums from the French tribute, but could not spend these. The French were, however, liberated already in 1944. Accordingly, most of the 702 billion francs was spend in 1942 and 1943. When all data would be correct, however, the French had to survive on something like 20% of their pre-war consumption in 1943. Although between 1938 and 1945, the population decreased with an annual average of 0.8%,⁸¹ with these data it is impossible to explain that so many nevertheless survived.⁸² Paul Sanders thinks, however, that in France black markets developed from the start of the occupation on and it seems plausible that this is the crux of the problem. Only an educated guess of the clandestine production, making clear that production was much higher then registered in official statistics, can explain that the occupier could take substantial quantities of agricultural and industrial products, while the population, although enduring all kind of hardships, managed to survive.

15.4 *Production statistics.*

Table 15.2 shows indices of the gross domestic production in 1990 Geary-Khamis dollar on a number of occupied countries as published by Agnus Maddison.⁸³ These series differ in some aspects from other macroeconomic series, but nevertheless are the best accepted as far as statistics on war time European history are accepted at all.⁸⁴ The differences in these series are enormous. According to Maddison, in France production slumped from the start of the occupation to just 50% of the 1938 level in 1944, while in this country post-war recovery was

⁷⁸ See on that: Hein A.M. Klemann, 'Did the German Occupation (1940–1945) Ruin Dutch Industry?' in, *Contemporary European History*, 17, 4 (2008) 457–481.

⁷⁹ Paul Beaudry and Franck Portier, 'The French Depression in the 1930s.' In: *Review of Economic Dynamics* 5, (2002) 73–99, there 75.

⁸⁰ CEPII, *Séries longues macro-économiques, Comptes nationaux en base 1938*, <http://www.cepii.fr/francgraph/bdd/villa/mode.htm>; Agnus Maddison, *Dynamic forces in capitalist development. A long-run comp*Nationaal Archief, *The Hague, tive view* (Oxford 1991) 213; Agnus Maddison, *The World Economy: Historical Statistics* (Paris 2003) 50; see also: Robert J. Barro and José F. Ursúa, 'Macroeconomic Crises since 1870', *BPEA*, 2008: Online Appendix: www.economics.harvard.edu/faculty/barro/files/MacroCrisesSince1870_08_0614.xls.

⁸¹ Maddison, *The World Economy: Historical Statistics*, 38.

⁸² Sanders, 'Economic draining - German black market operations in France, 1940-1944', 139 et seq.

⁸³ Maddison, *Dynamic forces* 213; Maddison, *The World Economy*, 45-54.

⁸⁴ CEPII, *Séries longues macro-économiques, Comptes nationaux en base 1938*, <http://www.cepii.fr/francgraph/bdd/villa/mode.htm>; Hansen, 'Business as usual?' 115-143; Barro and Ursúa, 'Macroeconomic Crises since 1870', *BPEA*, 2008: Online: www.economics.harvard.edu/faculty/barro/files/MacroCrisesSince1870_08_0614.xls; Klemann, *Nederland 1938-1948*.

slow. In Denmark not only the decline was smaller – 19% at most – but recovery started already in 1942 and in 1944 production was almost on its pre-war level again. Another extreme was Greece, the only non-western occupied country with macroeconomic statistics for those years. Here until 1945, production slumped to little more than a third.

Table 15.2: *Indices of the GDP, clandestine production not included, 1938-1948.*

	Western Europe					Southeastern Europe	
	Belgium	Denmark	France	Nether-lands	Norway	Greece	Yugo-slavia
1938	100	100	100	100	100	100	100
1939	107	105	107	107	107	100	106
1940	94	90	88	94	98	86	
1941	89	81	70	89	100	73	
1942	81	86	63	81	96	61	
1943	80	92	60	79	94	51	
1944	84	102	50	53	89	43	
1945	89	94	55	55	100	36	
1946	95	109	83	92	111	54	
1947	100	115	90	107	124	70	94
1948	106	118	96	118	134	74	112

Sources: Agnus Maddison, *The World Economy: Historical Statistics* (Paris 2003) 48-54.

Black market production was higher the more dramatic the circumstances. A collapsing economy and a severe nutritional situation, as for instance in Greece, the occupied Soviet territories or Poland, caused a sizable clandestine production.⁸⁵ In the Netherlands or Denmark, however, the legal availability of essentials was thus good that, although there were black markets, their main function was to adopt rations to the taste of the consumers and to provide the producers an opportunity to vent their frustrations on the over-regulation of markets and low official prices.⁸⁶ As a result, the decline in production seen in official macroeconomic statistics is not only an exaggeration, but the overstatement of this decline is worse the more dramatic the development. As it is the intension to get an impression of real production in occupied Europe, an indication of clandestine production is not only necessary because the existing macroeconomic series overestimate the wartime economic setback, but also because these overrate the differences between the countries. Black market estimates should however be cautious approximations as debunking should not degenerate in trivializing wartime hardships. Therefore, Dutch developments are a good starting point, as in that country the shadow economy was relatively small. With Dutch black markets as a basis,

⁸⁵ Mazower, *Inside Hitler's Greece*, 59 c.q.; Dallin, *German rule in Russia*, 394-395; Andrew Ezergailis, *The German occupation of Latvia. 1941-1945. What did America know?* (Riga 2002) 55;

⁸⁶ Claus Bundgård Christensen en Ralf Futselaar, 'Zwarte markten in de Tweede Wereldoorlog.' In: Hein Klemann and Dirk Luyten, *Thuisfront. Oorlog en economie in de twintigste eeuw* (Zutphen 2003) 89-112, there 109-110.

the bias will be low, probably in some countries too low. At the end of the occupation, the Dutch situation became extreme however, and in 1944-1945 ten thousands of people starved to death. Therefore, these estimates also provide indications of the consequences of the more extreme developments.

The first thing becoming clear from the Dutch shadow economy, is that clandestine production differed per sector. Consequently, to get an impression of total production all over Europe by using Dutch data on clandestine production, these data should be corrected for the share of each sector in the economy of every occupied country. Especially the share of agriculture is important, as illegal production in Dutch agriculture was in relatively normal years as 1942 and 1943 already 22-23% – net 25% –, while it was only 15% in industry and in trade, transports etcetera just 10%.⁸⁷ In industry black production was higher the less the input could be controlled. From 1942 on, when many young men were in hiding for the German forced labour policy, and military destructions as well as evacuations provided second hand building materials, clandestine construction grew. The same is true for other industries: if there is black labour and unregistered or locally produced raw materials, the shadow production will grow far beyond the mentioned 15%. Above that, black market production is easier in small scale than in large scale industries.

On black markets, foodstuffs were decisive. At the one hand there was no production so difficult to control as agrarian production as the relation between input and output is most uncertain, while at the other hand almost all consumers were interested in higher shares in the available food, or at least in some specific foodstuffs. As long as the diet was adequate from a nutrition point of view but the relatively vegetarian diet seen as dull and boring, many asked for more butter, cheese, eggs or meat on black markets, while when rations were lean or outright inadequate, demand was concentrated on potatoes, corn or even sugar roots. At any time cigarettes, alcohol, coffee, tea and other luxury foodstuffs were highly demanded, but, as the official rations were in some countries too middle-class to the taste of working class consumers, selling butter to get lard or margarine, or vegetables to get more potatoes also was quite common. Anyway, demand on illegal food markets was substantial from the moment the first product was rationed.

Of all occupied countries, only in Denmark, the Protectorate and the Netherlands clandestine production could be kept limited, as in these countries, farmers and peasant were willing to participate in governmental distribution and they trusted the organizers would held an eye on their interests, while on the other hand pressure on markets were limited as the

⁸⁷ Klemann, *Nederland 1938-1948*, passim.

nutrition problems were kept in hand. In such circumstances it was possible to keep the clandestine food production between 20 and 25%.

Table 15.3: *Some characteristics of the occupation period influencing the size of the shadow economy in diverse German occupied European countries, 1939-1945.*

	Western Europe					Eastern, South-Eastern and Central Europe			
	Bel-gium	Den-Mark	France	Nether-lands	Norway	Greece	Yugo-slavia	Poland	Czecho-slovakia
Share of each sector in the 1938 GDP									
Agriculture	8	19	20	16	12	55	51	39	24
Industry	39	32	39	28	59	9	13	32	35
Other sectors	53	50	41	56	29	36	36	29	41
Occupation period									
Occupied	June 40	April 40	June 40	May 40	April 40	April 41	April 41	Sept. 39	March 39
Liberated	Sept 44	May 45	Aug. 44	May 45	May 45	Oct. 44	April 45	Early 45	May 45
Further indications									
Serious Shortages	40-42	--	In towns	From Sept. 44	--	--	41-45	39-45	--
Famine	--	--	--	44-45	--	41-44	Regu-larly	--	--
Market regulation	Not acc.	Accep-ted	Not acc.	Accep-ted	Accep-ted	Not acc.	Not Acc.	Not Acc.	Accep-ted

Share of sectors in the GDP: Denmark 1939. Czechoslovakia 1937.

Sources: CEPII, *Séries longues macro-économiques, Comptes nationaux en base 1938*, <http://www.cepii.fr/francgraph/bdd/villa/mode.htm>; Frederic L. Pryor, Zora P. Pryor, Milos Stadnik, George J. Staller, 'Czechoslovak aggregate production in the interwar period, *Review of Income and Wealth*, (17) 1971, 35-59; Ivan T. Berend, 'The Failure of Economic Nationalism. Central and Eastern Europe Before World War II,' *Revue économique*, (51) 2000, 315 – 322; Socrates Petmezas, 'Agriculture and economic growth in Greece, 1870-1973,' paper presented in the IEHC 2006 IEHC 2006 Helsinki conference, Session 60, 4, www.helsinki.fi/iehc2006/papers2/Petmezas.pdf; Ingrid Henriksen, 'Agriculture in Denmark, 1870-1939. From asset to liability?' Paper presented in the IEHC 2006 IEHC 2006 Helsinki conference, Session 60, 3, www.helsinki.fi/iehc2006/papers2/Henriksen.pdf; Ivo Vinski, 'The distribution of Yugoslavia's national income by social classes in 1938', www.roiw.org/1967/259.pdf; Hein A.M. Klemann, *Nederland 1938-1948. Economie en samenleving in jaren van oorlog en bezetting* (Amsterdam 2002).

In the Netherlands, where agriculture was good for 16% of the GDP (table 15.3), or Denmark where this was 19%, a black food market of that size meant that official GDP series should be raised by 4-5%. In Eastern Europe or the Balkan, where agriculture provided 50% or more of the GDP, even when black food production would have been held within such limits, it would mean a 10-12% raise of the GDP, while in Poland, with an agrarian share of 39% in the GDP, this would have been 8-10%. In the Polish *General-Gouvernement*, however, not 20-25, but 50-65% of all food was obtained in black markets.⁸⁸ So, if there would have been any official macroeconomic series, these should be raised with 20 to 25% only for clandestine agricultural production. In occupied Soviet territories, where just as elsewhere in the east the overwhelming majority lived in the countryside and worked in agriculture, the situation was comparable. An enormous part of the economy was agrarian and as a consequence the

⁸⁸ Madajczyk, *Die Okkupationspolitik Nazideutschlands in Polen*, 596.

unregistered corners of the economy were substantial. Only for that reason clandestine activities were already much more important than in the Western parts of Europe.

Table 15.3 provides indications of some important factors influencing the size of the shadow economy in a number of occupied countries. Of major importance is the share of each sector in the GDP. Another factor of influence was the extend to which governmental regulation was accepted as a legitimate solution of wartime problems. When the regulation was seen as just another German attempt to increase its withdrawals at the expense of the occupied country, clandestine production was much higher than when it was seen as an attempt to spread shortages evenly over the population. The answer to the question how it was experienced was greatly influenced by the question whether the authorities managed to provide the population with reasonable rations. In the Protectorate, Denmark or the Netherlands rations were passable – although in the last country only until September 1944. Here it was possible to survive without any threat to one’s health on the official rations, with only very limited clandestine added extras. Nevertheless, even in these countries, in a from a distribution point of view normal year, clandestine agrarian production was 20-25. In countries where the public saw market regulation as an instrument to exploit the country – all of Eastern and Southeastern Europe, France and Belgium – agrarian black production was in normal years 35%, industrial 20% and in other sectors at least 12-15.

Table 15.4 *Educated guesses of the clandestine production in percentages of the total production, 1939-1948*

	France	Belgium	Nether-lands	Den-mark	Norway	Greece	Yugo-slavia	Poland	Czecho-slovakia
1939	0	0	0	0	0	0	0	7	1
1940	11	8	1	1	1	0	0	24	8
1941	19	17	8	8	8	10	16	24	13
1942	25	19	17	12	13	23	34	39	13
1943	26	16	18	12	13	36	38	37	13
1944	17	13	29	11	12	39	38	39	13
1945	11	12	17	9	12	27	27	22	10
1946	9	9	8	7	11	15	15	13	7
1947	7	7	7	3	9	10	10	11	7
1948	3	3	5	1	7	6	6	5	3

Sources: CEPII, *Séries longues macro-économiques, Comptes nationaux en base 1938*, <http://www.cepii.fr/francgraph/bdd/villa/mode.htm>; Frederic L. Pryor, Zora P. Pryor, Milos Stadnik, George J. Staller, ‘Czechoslovak aggregate production in the interwar period,’ *Review of Income and Wealth*, (17) 1971, 35-59; Ivan T. Berend, ‘The Failure of Economic Nationalism. Central and Eastern Europe Before World War II,’ *Revue économique*, (51) 2000, 315–322; Socrates Petmezas, ‘Agriculture and economic growth in Greece, 1870-1973.’ Paper IEHC 2006 2006 Helsinki, Session 60, 4, www.helsinki.fi/iehc2006/papers2/Petmezas.pdf; Ingrid Henriksen, ‘Agriculture in Denmark, 1870-1939. From asset to liability?’ Paper IEHC 2006 2006 Helsinki, Session 60, 3, www.helsinki.fi/iehc2006/papers2/Henriksen.pdf; Ivo Vinski, ‘The distribution of Yugoslavia’s national income by social classes in 1938’, www.roiw.org/1967/259.pdf; Hein A.M. Klemann, *Nederland 1938-1948. Economie en samenleving in jaren van oorlog en bezetting* (Amsterdam 2002); Own calculations.

During the Dutch famine of 1944-1945 all over the economy clandestine production peaked and in agriculture rose to no less than 75%. Therefore, a last indication of the size of the shadow economy is scarcity. Consequently, in table 15.3, periods of severe shortages – when black agrarian production was roundabout 50% – and real famines – when clandestine food production was even up to 75% – are indicated as well. If one presumes that the Dutch case provides reasonable indications of the relation between circumstances and black market production and that it takes one full year of occupation for clandestine markets to develop, one can calculate the educated guesses of black market production as presented in table 15.4. It shows that all over Europe the shadow economy was important and that in some years in a number of countries – including France, the most important occupied economy – official statistics underestimate production with 25% or more. In 1942 and 1943, when French clandestine production was 25% according to these calculations, it was only half that high in Denmark or Norway, far below the French level or even that in the Netherlands or Belgium, but in Greece, where the occupation started only in 1941, and black markets developed later, clandestine production already reached a level of 39%, substantially higher than in France.

Table 15.5: *Indices of the GDP, clandestine production included, 1938-1948.*

	Western Europe					South-Eastern Europe
	Belgium	Denmark	France	Netherlands	Norway	Greece
1938	100	100	100	100	100	100
1939	107	105	107	107	107	100
1940	103	91	99	106	99	86
1941	107	88	86	107	109	82
1942	101	94	84	98	111	80
1943	95	105	80	96	109	80
1944	97	114	66	87	102	71
1945	101	104	65	86	114	50
1946	104	117	89	104	124	64
1947	108	119	93	117	136	78
1948	110	120	98	128	143	79

Sources: Agnus Maddison, *The World Economy: Historical Statistics* (Paris 2003) 48-54; CEPII, *Séries longues macro-économiques, Comptes nationaux en base 1938*, <http://www.cepii.fr/francgraph/bdd/villa/mode.htm>; Frederic L. Pryor, Zora P. Pryor, Milos Stadnik, George J. Staller, 'Czechoslovak aggregate production in the interwar period,' *Review of Income and Wealth*, (17) 1971, 35-59; Ivan T. Berend, 'The Failure of Economic Nationalism. Central and Eastern Europe Before World War II,' *Revue économique*, (51) 2000, 315-322; Socrates Petmezas, 'Agriculture and economic growth in Greece, 1870-1973.' Paper IEHC 2006 2006 Helsinki, Session 60, 4, www.helsinki.fi/iehc2006/papers2/Petmezas.pdf; Ingrid Henriksen, 'Agriculture in Denmark, 1870-1939. From asset to liability?' Paper IEHC 2006 2006 Helsinki, Session 60, 3, www.helsinki.fi/iehc2006/papers2/Henriksen.pdf; Ivo Vinski, 'The distribution of Yugoslavia's national income by social classes in 1938', www.roiw.org/1967/259.pdf; Hein A.M. Klemann, *Nederland 1938-1948. Economie en samenleving in jaren van oorlog en bezetting* (Amsterdam 2002); Own calculations.

In Eastern European countries without wartime macroeconomic series like Poland and Yugoslavia, clandestine production was comparable with that of Greece, while the level in Czechoslovakia was, just as the way of exploitation, comparable to the less severe

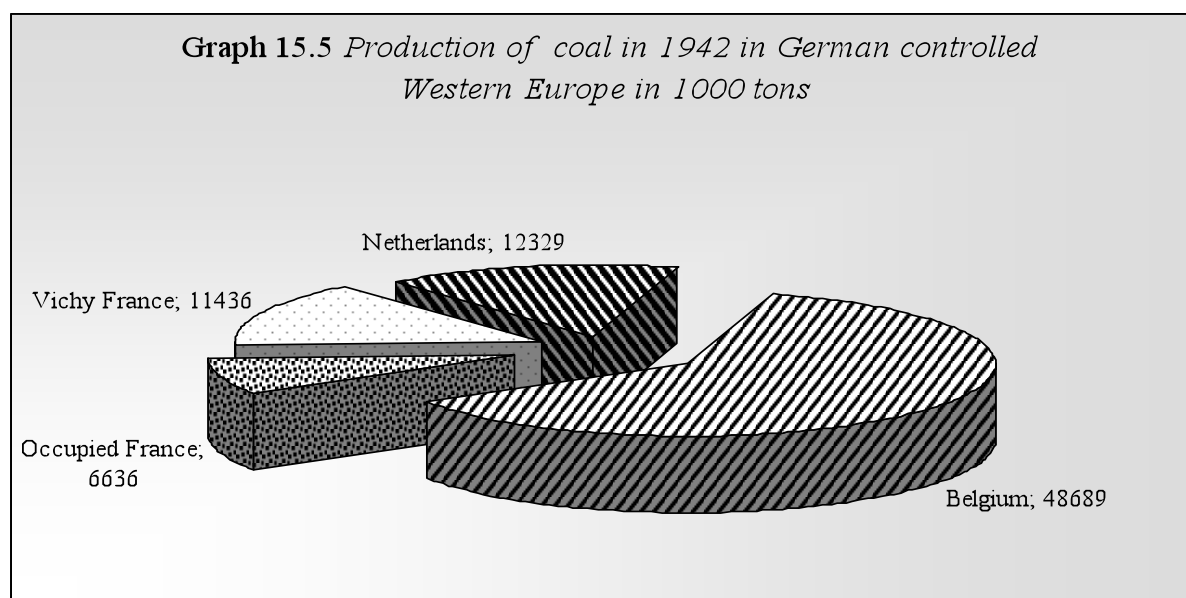
developments in the Western occupied countries (table 15.4). In other words, there where the economy was severely hit by wartime circumstances, in isolated or war-stricken areas, countries neglected by the Germans as the economies seemed not interesting from the perspective of the Nazis and countries maltreated for racist reasons, the shadow economy was most important. There, the decline in macroeconomic series without corrections for black markets was most severe, but also extremely overestimated the wartime slump.

Table 15.2 shows the real GDP according to official statistics in a number of countries, while in table 15.5 these series are corrected for the estimated clandestine production. The all over impression is that as long as the shadow economy is not taken into account, from the start until the end of the occupation, production in occupied Europe declined to recover only after 1945. Nevertheless, in most Western European countries, the percentages of decline of official production were compared with 1938 limited to less than 20%, but when the clandestine production is included, 5-10% is more general. Only in France the setback was worse, while in the Netherlands the military situation caused a more serious setback during the last nine months of the occupation, in the Hunger Winter of 1944-1945. As the military situation caused the Dutch problems, the French case is most interesting, as it was caused by the fact that from the second half of 1941 on the occupier had severe problems in exploiting this economy. Lack of fuels, raw materials and transport facilities (chapter 9) caused these, resulting in a relatively mild exploitation of the French production capacity. The ongoing struggle for power in Berlin made it impossible to send products that were scarce in Germany itself to an occupied country, even when that would have been rational from a war-economic point of view. Consequently, although the French share in the population of occupied Western Europe was 64%, and in the 1938 GDP 61%, as a result of lack of coal and transport facilities, its contribution to the German war economy was only 53%. This was compensated, however, by a share of 71% in the labour that was sent to Germany from Western Europe.⁸⁹ When the occupier could not exploit a country efficiently by taking the output of production, it took the factors of production. The result was a much worse decline of production.

In 1942, Berlin wanted France to produce at full speed, but as the needed raw materials were also badly needed in Germany itself, the policy of Pleiger to get as much coal as possible from occupied Europe undermined this. That Berlin, although from 1942 capable to limit the use of raw materials and fuels inside each occupied country, never organized a

⁸⁹ Sources: RGVIA, 1458-3-77, P. 109; Willi A. Boelcke, *Die Kosten von Hitlers Krieg. Kriegsfinanzierung und finanzielles Kriegserbe in Deutschland 1933-19848* (Paderborn 1985) 108-114; Mark Harrison, 'The economics of World War II, an overview.' Mark Harrison, *The economics of World War II. Six great powers in international comparison* (Cambridge 1998) 1-42, there 3 and 7-8; Mark Spoerer and Joachim Fleischhacker, 'Forced Labourers in Nazi Germany: Categories, Numbers and Survivors' in, *Journal of interdisciplinary History* (33) 2002, 169-204; own calculations.

regulated, really European wide raw materials economy, and did not manage to order deliveries from one occupied country to another – raw materials leaving an occupied country went to Germany – was one of the main problems for French production. Graph 15.5 shows that in 1942, of all coal produced in occupied Western Europe, 16% produced was Dutch, making the Netherlands almost self-supporting. In this country, in 1942 German withdrawals of coal became a problem, but as these proved to be against the German interests, it was possible to maximize such deliveries in later years. France, however, with almost 5 times the Dutch population and more than 4 times the Dutch 1938 GDP, only produced slightly more and the planned coal deliveries from Belgium to France, a country with a smaller population and GDP than the Netherlands, producing more than 60% of all Western European coal, never came through.⁹⁰



Sources: RGVIA, Collection number 1458,3, File 77.

The more rational economic planners in Berlin were powerful enough to prevent deliveries from occupied countries when these were against the German interests, but not powerful enough to organize deliveries to occupied countries, when products scarce in Germany as well were needed there. That it was not just Speer's or Pleiger's policy that undermined French production, is clear from the fact that already in June 1941 full-scale production was impossible for lack of coal and even factories and building activities essential for German warfare, had to be closed temporarily.⁹¹ On top of these problems, the 1944 allied invasion in

⁹⁰ Harrison, 'The economics of World War II,' 7.

⁹¹ Der Militärbefehlshaber in Frankreich Kommandostab Abteilung Ia. Paris, den 31. Juli 1941: Lagebericht Juni/Juli 1941 <http://www.ihtp.cnrs.fr/prefets/de/d060741mbf.html>

Normandy and the Battle of France resulted in serious military destructions and a further collapse of the economy. The French economy was so severely damaged that post-war recovery, although spectacular according to all available data, was not strong enough for a fast complete recovery. Here possibly the fact that clandestine markets and production are linked in the model with political occupation, and it therefore is presumed that black markets are disappearing again after the liberation, results in a distortion. Nevertheless it seems clear that the French economic setback is worse than in any other Western European country.

To make sure that no mistakes are made for this most important occupied economy, the French series are recalculated by using the so-called *Séries longues macro-économiques* of the *Centre d'études prospectives et d'informations internationales (CEPII)* as well as the series of Robert J. Barro and José F. Ursúa, but none of these calculation, although giving slightly higher figures than Madisson, result in a different overall impression.⁹² As a result of German confiscations and an inadequate supply of raw materials (chapter 9),⁹³ the French economy slumped more than any other in Western Europe and this was worsened by battle damage in 1944.⁹⁴ The fact that it was the other way round in the Czech protectorate, makes clear that racism – although important –, does not explain everything in occupied Europe. Here again it becomes clear that, as the Czech heavy industry was important, notwithstanding the low rank of the Slavic Czechs in the Nazi racist hierarchy, to keep this production going, these presumed inferiors were fed better than all other occupied countries, and its society organized well. As a consequence, clandestine markets were small. In France, where the population was high-ranked according to Nazi standards, but where it proved almost impossible to get the economy going, food was taken, notwithstanding relatively low rations and the economy exploited in a relatively destructive way. Consequently, food rations were low, clandestine markets high and resistance growing in scale as well as in violence. On top of that, the French recovery was dramatically slow for Western standards and according to the official data even the 1946 51% growth could not raise the production n to pre-war levels again (table 15.2). It is another indication that in this country the clandestine production has been high, and the estimates too low, as even when corrected for black market production,

⁹² Maddison, *Dynamic forces in capitalist development*. 213; Madisson, *The World Economy: Historical Statistics*, 50; CEPII, *Séries longues macro-économiques, Comptes nationaux en base 1938*, <http://www.cepii.fr/francgraph/bdd/villa/mode.htm>; Robert J. Barro and José F. Ursúa, 'Macroeconomic Crises since 1870', *BPEA*, 2008: Online Appendix: www.economics.harvard.edu/faculty/barro/files/MacroCrisesSince1870_08_0614.xls.

⁹³ Der Militärbefehlshaber in Frankreich. Paris, den 27. Januar 1943: Lagebericht Oktober/Dezember 1942 <http://www.ihtp.cnrs.fr/prefets/de/d101242mbf.html>; Der Militärbefehlshaber in Frankreich Kommandostab Abteilung Ia. Paris, den 30. September 1941: Lagebericht Augustus-September 1941. <http://www.ihtp.cnrs.fr/prefets/>

⁹⁴ Der Militärbefehlshaber in Frankreich Kommandostab Abteilung Ia. Paris, den 30. September 1941: Lagebericht Augustus-September 1941. <http://www.ihtp.cnrs.fr/prefets/>

according to the data in table 15.5, French production grew with an unbelievable 37% in 1946. Even this did not result in a complete recovery, however.

The French economy was less stimulated by German orders than the Belgian, Dutch or the Norwegian. In the Scandinavian occupied countries – Denmark and Norway – where the *Arbeitseinsatz* never was implemented, the economic setback was small anyway. Until 1942 Berlin seemed hardly interested in Denmark, and in 1940 and 1941 a setback was undeniable. When Berlin became interested in the Danish output in 1942, however, the recovery was fast and from 1943 on, Danish production exceeded all pre-war levels (table 15.5). In this country, extremely important for its high quality food production, recovery started at the same time as the German forced labour programme began to undercut production in most other occupied countries in the Western part of the continent. The insatiable German need for foodstuffs, caused by the same developments as its demand for forced labour it took from other parts of the occupied continent, in that year became more pressing than ever. It resulted in increasing Danish exports of butter, cheese, pork, bacon and lard.

From the new data it also becomes clear that the German order to Norway to build gigantic fortifications along the endless Norwegian coast, kept the production of this smallest occupied economy in the West on such a level that there was actually hardly any economic setback (table 15.5). In 1940 after the lost war, production slightly decreased, to recover already again from the end of 1940 on. Although falling back a little again in 1944 and 1945, it never decreased once more below the 1938 level. The situation in Belgium and the Netherlands was more or less the same, apart from the fact that from 1942 on, these countries became victim of the destructive German forced labour policy. Nevertheless, only the Dutch were severely confronted with wartime realities and that only in 1944 and 1945.

German exploitation kept the economies in Western Europe going, just as according to all indications in the Czech protectorate. In these parts of Europe, France was the only exception. In all other of these countries the economies were incorporated in the German war economy, with all negative and positive consequences of this. As up to 50% of the production of these countries was taken by the occupier without any real payments, the fact that production was going on, on a level above or only slightly below its pre-war level, did not mean that no impoverishment was felt. Production was kept going, however, keeping the economies in a relatively good shape. After these countries were liberated, it made a quick post-war recovery possible. Only the financial problems caused by the occupation and some protectionism partly resulting from these financial and monetary problems hindered such a recovery. Here vthe

American aid would bring a solution. In France the situation was worse, but really devastating was the situation only in the sole non-Western European country we have data on: Greece.

As only German demand kept the economies of occupied Europe going – for a spontaneous economic recovery hardly any fuels, labour or raw materials were available, especially not from 1942 on. Therefore, the setback could be most destructive in parts of Europe where Berlin was less interested in local production or where the economy was difficult to exploit. For that reason, the Greek macroeconomic setback was incomparably worse than in any Western European country, although the occupation started later in Greece. Nevertheless, as table 15.3 and 15.4 made clear, although black markets were found all over occupied Europe, these were more important in countries and periods where and when the economic setback was worse. Therefore, in table 15.5, the differences in the GDP – clandestine production included – are smaller than in table 15.2, but nevertheless dramatic.

While between 1938 and 1943 the registered French production decreased with 50%, in Greece, where the occupation started a year later and went on until 1945, the overall decline of registered production was then already almost two third. In this maltreated country, the economy simply seemed to collapse and even so clandestine production was sizeable, this only corrects this impression for a small part. The Greek economy slumped dramatically. When corrected for the shadow economy, the French economic decline, the worse in Western Europe, was 35%, while the Greek was 50%. As Greece also suffered from hyperinflation, corruption, unscrupulous Italian and German confiscations and was split up in three separate occupation zones, the people were endlessly worse off than the population of any Western European country. Of no other countries of Eastern Europe or the Balkan production series are available. All that is known is that there are good reasons to believe that in these countries, the economic setback was much worse and the clandestine production much higher than in Western Europe.

Table 15.4 shows that in no Western European country, the shadow economy was of a level comparable to that in Poland, Yugoslavia or Greece, not even in the Netherlands during the Hunger Winter. The occupier, who stimulated economic activity in the Western part of the continent as it was interested in the production of these countries, only was interested in food and some raw materials from Eastern and Southeastern Europe. Notwithstanding this, in Greece even the mineral production – highly important for Germany's war economy – was adversely effected by lack of machinery and construction tools, electric wiring and welding

solder.⁹⁵ Just as in France, the fact that Berlin was interested in the production of an occupied country hardly resulted in any supplies to keep it going. Even in the Speer years, there never was a real efficient European wide economy, in only because the ongoing struggles in the German leadership made this impossible. Just as some Germans thought it better to get forced labourers from occupied Europe than to send their own women to the factories, delivering raw materials or fuels in short supply from one occupied country or from Germany itself, to an occupied country was complicated and resulted in fierce opposition. As a result, in the last two years of the occupation, lack of liquid assets, raw materials, labour and transport facilities unprofitable rendered the continuation of production, especially in the Eastern parts of the continent, where during the first period – and that foremost in Poland and occupied Soviet territories – destruction had been extremely severe, not only as a consequence of the massive military operations, but also because of Nazi plans to get rid of superfluous people living their – the so-called useless eaters – and to destroy the economy of these countries. Thus, these territories should be made ready for a Germanic colonization after the expected quick victory. Nevertheless, even in these countries production went on, as is clear from the fact that, notwithstanding the Hunger Plan and extreme low food rations making the situation for the local people far worse than in the West, even in these parts of Europe most people survived. In some for the occupier important branches, production even flourished. Here the in the introduction already made distinction between a war economy and a warfare economy is essential.

15.5 *Production in Eastern and Southeastern Europe*

In retrospect it is remarkable that, after the massive destructions the German attack against the USSR started with, it was possible to restore any production in the occupied Soviet territories at all. Here, in line with Hitler's idea to create living space for German colonization by eliminating the local economy and even substantial part of the population, destruction and starvation were everywhere, only made worse by the extreme fierce warfare and the Soviet scorched earth policy. Locally, however, already directly after the start of the occupation, economic officials as well as *Wehrmacht* officers demanded the reopening of workshops and small-scale industries to repair motor vehicles, build horse-drawn carts or to make and repair shoes. Therefore it is necessary to use the concepts of a war economy contrary to that of a warfare economy, an economy dedicated to the direct support of the army. The warfare economy immediately restarted production where ever the armed forces arrived. In 1957,

⁹⁵ ,Lagebericht vom 8.7.-14.7.42': BA-MA, RW 29/108.

Alexander Dallin concluded already that in the occupied Soviets territories ‘Military utility won out on the spot, at the expense of Nazi theory,’ meaning that Nazi racism demanding a war of destruction to make space for future Germanic settlements was in many cases ignored when the army needed local production.⁹⁶ As a result, especially in wood processing, brick and peat work, pottery or leather processing, workshops that needed little capital or raw materials recovered. The Russian *Kustar system* – the peasant-workers engaged in cottage industry – was mobilized for the needs of the *Wehrmacht*. Much of the demand of consumer goods for the army was satisfied from such cottage industries or from patchwork repaired factories with relatively few workers. Of course this German demand as good as annihilated industrial consumer production for the civil population in the occupied Soviet Union and severely reduced this production in occupied Poland. The army in these territories obtained for instance millions pairs of shoes produced by local craftsmen, who thus lacked the capacity to produce for local people.⁹⁷ Local industrial production adapted to the German needs. A macabre indication of this reorientation of erstwhile consumer production can be found in a 1942 entry in the war diary of a German military economic section in Eastern Byelorussia – the *Wirtschaftskommando Mogilew* –, when the diarist announced that ‘the musical instruments factory as of today will no longer make musical instruments. Henceforth it will produce coffins.’ It was indeed a product the German army in these parts of Europe would need.

A warfare economy sprang to life everywhere the German army arrived. Cars, tanks or wagons had to be repaired, horses needed new horseshoes, soldiers food, beer, boots, blankets, shoe-repairs or leisure and their officers all kind of products any office in the world needs. Although in the long run, Berlin only wanted land for settlers in Eastern Europe, at least from 1942 on it became clear that it was necessary to harness Eastern resources to relieve pressure on German production, just as Berlin had to mobilize available resources everywhere on the continent. Therefore, from that year on, formal restrictions on certain types of production, implemented to make sure that the Soviet economy would not survive, one by one were lifted and even something of a coherent plan emerged as a consensus across all German military staffs for the entirety of Eastern Europe. This plan was primarily determined by the availability of appropriate raw material as well as surviving fixed capital at the one hand, and the German demand – i.e. everyday needs of the armies fighting in those parts of Europe – on the other. It became the primary objective to fulfil the so-called *Truppenbedarf*–

⁹⁶ Dallin, *German rule in Russia*, 377.

⁹⁷ Dallin, *German rule in Russia*, 380.

the direct needs of the armed forces. After their first terrible Russian winter, German soldiers required textiles, leather goods, shoes, sleighs, clothing etcetera, and given their number all was needed on a large scale. Therefore the entire gamut of military needs was brought under a General Quarter-Master Program. This procurement program henceforth brought the entire depth of occupied Eastern Europe, from the Warthegau – a part of pre-war Poland directly incorporated into the *Reich* – to Orel under one umbrella. Symbol of this program as well as its flagship artefact was the *Panjewagen*, the East European horse-drawn cart, making clear already that this programme exploited in the first place small-scale industries, and that the German expectations of this production were not very high. Germany could, however, no longer ignore any production capacity.

The most productive region in producing *Panjewagens* was the Polish *General-Gouvernement*, where almost 70 thousands of such horse-drawn carts were produced. Even with the loss of the eastern most territories by the beginning of 1944, the Quartermaster-General still planned on a monthly production of 10 thousand of such wagons. Given the dependence of the *Wehrmacht* on horse-drawn transport, the production of altogether more than 200 thousand *Panjewagens* represented a significant boost to the limited mobility of frontline divisions. The economics staffs were right in supervising this production. That conditions were such that labour and raw materials could scarcely have been put to a better use is, however, an indication that the rewards of exploiting these in the first period of the occupation badly maltreated countries, whose productivity was low anyway, were fairly restricted. Nonetheless, not just Western, also Eastern and Southeastern parts of Europe were to produce for the occupier.

On the 12th of November 1941 – fighting in the Soviet Union was in a decisive phase, but only a month later it became clear that the *Wehrmacht* could not destroy the USSR in one stroke – Hitler said in one of his tiresome table talks that, ‘we have in Europe highly civilized peoples who are reduced to breaking their stones for themselves. On the other side, we have at our disposal those stupid masses in the East. It’s for these masses to perform our humbler tasks.’⁹⁸ Thus the German dictator made clear that it was his intension to use the people in these parts of Europe – not only in Poland and the parts of the Soviet Union he conquered, but also in the Balkan – as slave labourers. In other words, he in the first place wanted factors, not the output of production from these countries. Nonetheless, the direct needs of the armies had to be satisfied and as the war was not, as expected, decided in a few weeks, but took years, this became of major influence.

⁹⁸ *Hitler’s table talks, 1941-1944*. 12th November 1941, evening, 128.

Although Hitler wanted in the first place factors of productions, also from the Balkan, in 1941 some Germans had great plans with the newly occupied countries in the Balkan, which were already closely linked with the German economy during the interwar years. After the 1941 Balkan wars, the *Reichsgruppe Industrie* even established a Committee for Southeastern Europe headed by Max Ilgner, member of the board of *IG-Farben* and vice-president of a lobby club for economic interests in Southeastern and central Europe. His ideas on industrialization of these regions, improving communication and transport networks to strengthen the backbone of these economies, thus creating a setting for an intensification of mining and agriculture, although contrary to the *Führer's* ideas, were shared by a number of major industrialists with ambitions in these parts of the continent.⁹⁹ Ilgner could present such ideas as *Reich* policy nonetheless, because the position of Berlin was not unambiguous in this period. In fact, the political elite of the *Reich* just wanted nothing but imports from these countries, but did not want to make that public to prevent quarrels with their Italian ally. Consequently, although they were not open on it, Berlin officials only allowed investments directly reinforcing exports of foodstuffs and raw materials to Germany. Berlin opposed investments directed to a general improvement of the economies of Southeastern Europe. They feared that increased local production would result in higher local consumption instead of exports. Consequently, investments to improve the Hungarian oil industry were backed, just as attempts to adapt the food production in that country to the German needs. Plans for a general improvement of the Hungarian infrastructure were, however— although Hungary was an ally, not an occupied country —, not seen as a direct German interest and prevented.¹⁰⁰ The economies in dependent parts of Europe — occupied or not — were only backed in as far as this had direct positive consequences for the German war production. If they did or some industries did, especially from 1942 on, some recovery was possible even in Eastern Europe — Poland and the USSR — where according to the ideology the population was damned to do the lowest jobs or to perish. As long as fighting went on, German demand for almost everything grew, however, also in these regions.

Apart from the army, the garrison requirements of the military organization behind the Front — headquarters, hospitals, training bases and so forth — created a sizeable demand for all kinds

⁹⁹ *Exportsteigerung durch Einschaltung in die Industrialisierung der Welt* (Jena 1938), quoted in H-E. Volkmann, 'NS-Aussenhandel im „geschlossenen“ Kriegswirtschaftsraum.' F. Forstmeier and H-E. Volkmann (eds.), *Kriegswirtschaft und Rüstung 1939-1945* (Düsseldorf 1977) 92-130, there 109; Gerhart Hass and Wolfgang Schumann (Hg.) *Anatomie der Aggression. Neue Dokumente zu den Kriegszielen des faschistischen deutschen Imperialismus im zweiten Weltkrieg* (Berlin 1972) 91-99. See: W. Schumann (ed.) *Griff nach Südosteuropa. Neue Dokumente über die Politik des deutschen Imperialismus und Militarismus gegenüber Südosteuropa im zweiten Weltkrieg* (Berlin 1973) 9. Ulrich von Hassell, German Ambassador to Italy until February 1938, held Balkan industrialization as inevitable, and defended the view that the Reich should try to direct this development; See: 'Die Neuordnung im Südostraum.' *Berliner Monatshefte*, 19 September 1941, 601-611.

¹⁰⁰ Hans-Erich Volkmann, *Ökonomie und Expansion. Grundzüge der NS-Wirtschaftspolitik* (Oldenburg 2003) 37.

of products. Erstwhile consumer goods, from nails to tables, from chairs to glass windows, from wallpaper to bandages and from uniforms and uniform parts to paint and soap, the German army and administration needed them. Further, local workshops and factories were ordered to repair vehicles, build fortifications, repair buildings or deliver shoes and uniform parts. Racism could not stop that. Alongside the production of army equipment, the warfare economy of occupied Eastern Europe was most strikingly characterised by the diversion of considerable resources towards what must be considered purely logistic ends. Contrary to the often-repeated assertions, the *Wehrmacht* placed great emphasis on logistics. ‘Supply’ – so ran the manual – ‘is a part of warfare.’¹⁰¹ Virtually the entirety of industrial production outside the key strategic sectors was orientated towards transport facilities. In much of the occupied USSR, metalworkers no longer found themselves engaged in manufacturing, but were employed on maintenance. Repair workshops sprang up across the entire region. Railway repair facilities tended to exploit Soviet depots, so that the establishment of a number of large-scale repair workshops of German Rail did not detract from other production. The *Werlin-Werke* – set up as tank repair facilities in early 1942 by a director of Daimler-Benz – however did, just as the *Zentralkraft Ost*, an army maintenance organization for motor vehicles established in preparation for Operation Barbarossa, afterwards leapfrogging forward to support the advancing troops.¹⁰² Of even more logistic importance were the railway and construction sectors.

In the territory of the *Heeresgruppe Mitte* – Army Group Centre, the biggest occupied Soviet territories not yet under civil administration – the two largest single employers were the railways and the *Organisation Todt (OT)* – the *Reich* organization that build fortifications and roads all over Europe. Their combined workforces outnumbered employment in industry by two to one. At the end of 1942, the military and civilian railway authorities in central Russia and Belorussia employed 118 thousand personnel of whom just over a quarter – almost 32 thousand – were German. A few months earlier, the *OT* employed almost 15 thousand Germans, 36 thousand local civilians and 11 thousand prisoners, while in July 1943 it disposed of 57 thousand local civilians and prisoners. Direct employment of Soviet citizens by the *Wehrmacht* was no less extensive. In October 1942, 70 thousand civilians worked inside the complex network of supply dumps, hospitals, barracks and repair services. Consequently, at this date, in these territories directly behind the front, only 65 out of 220 thousand non-agricultural workers were employed in forestry or industry narrowly defined,

¹⁰¹ Where Terry got this from?

¹⁰² Erhard Haak, *Die Geschichte der deutschen Instandsetzungstruppe. Organisationsgeschichtlicher Überblick von Beginn des 19. Jahrhunderts bis zur Gegenwart.* (Osnabrück 1986)

while over 150 thousand worked in lieu of German soldiers, replacing German workers sent out as replacements for combat arms.

Apart from a warfare economy dedicated to the direct support of the army, even in the East a war economy, centring on strategic resources, was of some importance. Contrary to the warfare economy that was, just as agriculture, essential from the start and based on small-scale local companies, the war economy only became of some importance from 1942 on. As in this part of the economy large-scale production was central, now Berlin was confronted with the problem how to exploit state-owned Soviet companies. All over Europe, exploiting big companies was a problem that could be solved in three ways (Chapter 9): Germany itself could organize production by taken over the ownership or at least the control of private companies or by incorporating these in state-owned companies; it could try to persuade pre-war owners to produce for Germany; or it could buy all it needed on free markets.¹⁰³ In August 1940, when Göring decided that looting was no solution anymore in occupied Western Europe, he expressed the opinion that the German victories should be used to get permanent economic control over these interesting economies by *Verflechtung* – interweaving – i.e. by purchasing shares in Western companies to get a dominant position.¹⁰⁴ Taking over vital companies gave trouble, however, with the financial authorities in occupied Europe as well as with these companies, who were most of the time already producing for the occupier. Therefore it never was successful. In the West the pre-war owners became conscious of the fact that cooperating was in their best interests, and for Berlin more and more output was all that mattered. Therefore the Germans accepted that these companies refused to accept forced take-overs or merges with German competitors, as long as these did not refuse to produce for the occupier.

In Soviet territories including the by Moscow in 1939 occupied parts of Poland and the Baltic states, a plan system as Speer tried to implement all over German ruled Europe was built-in already, and, although there was some discussion in Berlin on re-privatization, it was never seriously considered to do so on a large scale, not even in territories that were only in 1939 or 1940 incorporated in the USSR – the Baltic States and parts of pre-war Poland – and where the expropriations were very recently.¹⁰⁵ For instance, specially founded German state companies took over enterprises recently expropriated by the Soviets in the Baltic States. Thus, the *Landbewirtschaftungsgesellschafts-Ost* – the Land exploitation Company East –

¹⁰³ RGVA, 1458-3-77, P. 65-2.

¹⁰⁴ Niod Amsterdam 47 Defisenreferat 40-44 R 81: Monetaire zaken 1/3/41

¹⁰⁵ Dallin, *German rule in Russia*, 389; Andrew Ezergailis, *The German occupation of Latvia. 1941-1945. What did America know?* (Riga 2002) 38-39;

took over the control of the land expropriated by Moscow only a few months before, while food processing fell into hands of the *Zentralhandelsgesellschaft Ost* – the Central Trading Company East. Smaller companies were managed by German *Verwalter* – administrators. Only in 1943, when the occupier tried to regain some popularity, as part of a propaganda campaign, some minor privatizations took place in Lithuania, but even then only something like fifty farms returned to their pre-1940 owners.¹⁰⁶ In other parts of the Soviet territories there were no previous owners anymore. Consequently, in all former Soviet territories – including those that were only in 1939 or 1940 occupied by the Red Army, manipulating owners to produce for Germany was no option. Here, the *Reich* had to organize the production itself.¹⁰⁷

As in these parts of Europe most territories were only occupied in 1941 and became only incorporated in the German war economy from 1942 on, from the start, the crisis managers of the Third Reich played a significant role in planning and exploitation in these parts of Europe. Paul Pleiger – a key figure within the Four Year Plan, and in this period already anticipating the systematic exploitation in the literature identified with Albert Speer – probably was the most prominent of these.¹⁰⁸ Until 1942, the economy of the Polish *General-Gouvernement* was almost neglected. It was in fact nothing but a dumping place for people seen by the Nazis as racial inferiors who could not be usefully exploited as cheap labour anywhere in the *Reich*. Until then, i.e. in the first months of the war in the Soviet Union when Berlin was optimistic on a fast victory, occupied Soviet territories were only used in the warfare economy, hardly in the war economy. This was not only for ideological reasons, but also because most of the production capacity was destroyed anyway. Consequently, the system to transfer orders – *Auftragverlagerung* – in the West resulting in more or less normal orders from German companies and organizations to local companies, never was implemented in these countries. Soviet resources were only exploited by the army, demanding food and industrial products for direct use. Apart from agriculture, major parts of production were for that reason directed by uniformed military personnel. Only construction was organized under the umbrella of the *OT* utilizing state officials from the German motor ways to supervise private contract firms. In a similar fashion, state-owned East Companies – *Ostgesellschaften* – issued concessions to private firms in trade, textiles and other branches to exploit Soviet State-companies. According to Göring's July 1941 decree establishing these *Gesellschaften*, during the

¹⁰⁶ Ezergailis, *The German occupation of Latvia*, 39; Rein Taagepera and Romuald J. Misiunas, *The Baltic states: Years of dependence, 1940-1990* (London 1993 Expanded and updated edition) 53.

¹⁰⁷ RGVA, 1458-3-77, P. 73-2.

¹⁰⁸ Matthias Riedel, *Eisen und Kohle für das Dritte Reich. Paul Pleigers Stellung in der NS-Wirtschaft* (Göttingen 1973) passim;

transition period these state-owned companies should organize the administration of important economic branches in occupied Soviet territories by letting German firms operate as trustees.¹⁰⁹

Only from 1942 on, when Berlin tried to restart war – not just warfare – production, what in the USSR meant production of heavy industries and mining, this mixture of state ownership under the aegis of the *Reichswerke Hermann Göring* and penetration of private capital was used to control local production. As a consequence, the role of the army and civil authorities, like the *Reich* Commissionaires of the Ukraine and *Ostland* was cut down by the Berlin authorities, just as it had done with the local German authorities in the West from the end of 1941 on. Pleiger and Speer played key roles in minimizing the position of the Army's Economic Staff East, the *Reich* Commissioners, but also of Alfred Rosenberg's *Reich* Ministry for the Occupied Eastern Territories. In mining, the imperialistic Pleiger took over the authority to decide which German company got control as foster-parent – *Paten* – over former Soviet state-companies, while Speer took over these decisions on armament production.¹¹⁰ This centralizing policy resulted, however, only partly from co-operative actions by these two potentates of the new planned German economy, and resulted also, as was normal in the *Reich*, in a severe struggle of power between the two.

Just as in 1940, when Göring and his organization proved incapable to exploit the newly won territories in the West during the first months of occupation, in Soviet territories the organization jointly set up by Walter Funk's *Reich* Ministry of Economics and Alfred Rosenberg's *Reich* Ministry for the Occupied Eastern Territories demonstrated it's incompetence to get the resources that fell into German hands producing again. Thereupon, *Reich* Minister Speer decided that private German companies as well as the *Reichsverband der deutsche Industrie* – the *Reich* Union of Industrialists – should be brought into action.¹¹¹ Thus he created a conflict with Pleiger. This Director-general of the state-owned *Reichswerke Hermann Göring*, led an enterprise with aggressive acquisition targets, and because he was, as director of the *Reichswerke*, also in charge of the *Berg- und Hüttenbaugesellschaft Ost* – the Mining and Steel Company East – i.e. a company only founded to take over control of Soviet mines, blast-furnaces and steel factories, he wanted that the exploitation of important Soviet companies was handed over to German state companies.¹¹² Because Göring officially obtained command of the exploitation of Soviet state property, he could smooth Pleiger's

¹⁰⁹ Dallin, *German rule in Russia*, 384.

¹¹⁰ Dallin, *German rule in Russia*, 384-386.

¹¹¹ Bernhard R. Kroener, Rolf-Dieter Müller, Hans Umbreit, *Germany and the Second World War, Volume V/II. Organization and Mobilization in the German Sphere of Power: Wartime Administration, Economy, and Manpower Resources 1942-1944/5* (Oxford 2003) 312

¹¹² Hermann Kaienburg, *Die Wirtschaft der SS* (Berlin 2003) 370

path, and thus fortify the position of the *Reichswerke*.¹¹³ Although on paper of a much lower rank, Speer had met his match in Pleiger.

Before going on, it should be emphasized that in these parts of Europe, especially in occupied Soviet territories, military and guerrilla violence made normal business, as during most of the occupation in West and Central Europe went on, hypothetical anyway. Normal society, as it more or less survived in the West, was destroyed and therefore normal production was impossible. Consequently, while investments in the Western Europe were most of the time initiated and financed by local companies taking advantage of the new opportunities the situation offered, in Eastern Europe only German capital could exploit such chances. As seen, in these parts of Europe, just as in the Balkans, apart from branches that produced for the army direct needs, the German policy focused on strategic branches that could only produce locally – especially agriculture and extracting industries. Industrial investments in Poland and former Soviet territories were therefore concentrated in mining and heavy industry. The fact that the *Reichswerke* became so important thus resulted not only from Göring's and Pleiger's political skills, but also from the fact that private companies hardly wanted to invest to exploit companies in conquered Soviet territory as long as the war was not won. When Speer wanted to push private enterprises in these territories, he was not defending private interests, but fighting his own war with Göring. Speer in the first place wanted to reduce the undermining conflicts between private heavy industry and Göring's states conglomerates. Only in 1943 the resulting struggle between these Nazi-leaders would end in a compromise, when Pleiger – Göring's man – became plenipotentiary for the Eastern Economy, but in a subordinated position to the ministry of Speer.¹¹⁴ Then it was too late already, however. The advancing Red Army prevented that Pleiger actually became in charge of anything.

¹¹³ Alfred Sulik, 'Die Eigentumsverhältnisse und die Verwaltungsstruktur der oberschlesischen Industrie', *Studia Historiae Oeconomicae* 14 (1979) 273-281; Werner Röhr, 'Zur Rolle der Schwerindustrie im annektierten polnischen Oberschlesien für die Kriegswirtschaft Deutschlands vom 1939 bis 1949', *Jahrbuch für Wirtschaftsgeschichte* 4 (1991) 9-58; Matthias Riedel, 'Bergbau und Eisenhüttenindustrie in der Ukraine unter deutscher Besatzung,' *VfZ* 23/1 (1973) 245-284.

¹¹⁴ Kroener, Müller, Umbreit, *Germany and the Second World War, Volume V/II*, 312-313

Table 15.6 *Heavy industry (arms and metals) in the occupied Soviet territories in 1942.*

	<i>Location</i>	<i>Name of the enterprise, concern</i>	<i>Production 1942</i>	<i>Staff in numbers</i>
1	Mariupol	Iljich factory	Munition including ammunition	11 870
2	Kamenskoye	Carriage factory Pravda	Locomotives and carriages	
3	Dunamunde	Shipyard "Bolderaa" of the Riga carriage factory Vairogs	Construction of new freight cars Barges, ships and ice-breaker	148
4	Riga	Muhlgraben shipyard	Schiffe / ships	330
5	Davidgrodek	Shipyard Davidgrodak	Wooden coasters.	170
6	Dombrovitsa	Shipyard for wooden ships	Barges	170
7	Gorodishche	Shipyard for wooden ships	Barges	170
8	Petrikov	Shipyard for wooden ships	Tow-boats, tugboats	170
9	Pinsk	State shipyard	Barges and wooden ships	1 500
10	Comel	Shipyard Comel	Barges	281
11	Riechitsa upon Dnepr	Barge shipyard	Barges	139
12	Shatsilki	Shipyard Shatsilki	River boats	
13	Vietka	Shipyard Vietka	Barges	86
14	Kiew / Kiev	USMA shipyard factories	Steam vessels, motorships	4 000
15	Nikolaev	North shipyard	Tankers, freighters.	3 700
16	Nikolaev	South shipyard	Transporters and carriers	6 200
17	Kherson	Concrete shipyard	Building of 93 000 t tankers	1 200
18	Kherson	Shipyard Nikolaev-North and Kherson ltd.	Fishcutter	1 000
19	Mariupol	Asov steel factory	Motor torpedo-boat	
20	Yalta	Shipbuilding yard Yalta	50 tons wooden ships	90
Total members of staff as far as known:				30 024
Blast-furnaces and steel factories				
21	Libau (Latvia)	Libau's metallurgical factories	20 437 ton crude steel.	1 707
22	Mariupol by Stalino	Metallurgical factory Asovsteel I and II		18 400
23	Stalino	Metallurgical factory Stalin		2 400
24	Kramatorskaya	Metallurgical factory Kuybishev		720
25	Makajewka / Makayevka	Metallurgical factory Kirov		2 600
26	Rykovo	Metallurgical Fact. Rykovo		2 400
27	Dnepropetrovsk	Petrovski factory	Circa 3 500 ton rude steel	3 427
28	Dnepropetrovsk	Lenin		608
29	Dnepropetrovsk	D.S.M.O.		1 786
30	Dnepropetrovsk	Komintern I-III		1 783
31	Dnepropetrovsk	Liebknecht		1 167
32	Dnepropetrovsk	Artem		920
33	Kamenskoye	Metallurgical factory Kamensk		5 658
34	Krivoy Rog	Factory Krivoy Rog		1 039
35	Zaporozh'ye	Metallurgical factory Zaporozh'ye		1 800
36	Konstantinovka	Metallurgical factory Konstantin		726
Aluminium factory				
37	Saporoshje / Zaporozh'ye	Aluminium factory		720
Total members of staff working in blast-furnaces and metal factories				47 141
Total members of staff working in heavy industry in occupied Soviet territories (as far as known):				77 165

Sources: Russian Archives Moscow.

As seen already in the chapter on exploitation, the production of the Soviet heavy industry seems of minor importance. According to table 15.6, on a population of more than 68 million in all occupied Soviet territories – including the Baltic States – only something between 75-80 thousand were active in such branches, many of them in companies that were still under construction or in repair. According to the numbers of labourers, the extraction industries were even of less importance (table 15.7 appendix). Here only 20-25 thousand people worked in all of the occupied Soviet territories. The German economic policy nevertheless focused on strategic branches that could only produce locally – i.e. agriculture and extracting industries. Therefore, industrial investments in Poland and former Soviet territories were concentrated in mining and heavy industries. As these territories were not definitively secured private business hardly were interested to invest the enormous amounts of money needed to exploit companies in such branches.¹¹⁵ Therefore, in Eastern Europe, only in chemicals and in the oil sector important opportunities were found to mobilize the private capital needed. Large-scale chemical companies were in occupied Eastern Europe, however, only found in parts of Poland annexed by the Reich in 1939 already. At the end of 1942, across the entirety of the occupied territories east of the September 1939 Reich border, a minuscule total of just 15 thousand workers were counted under the rubric of chemical industry.¹¹⁶ A phosphorous mine in Mstislavl represented a rare strategic contribution from military-administered eastern Belorussia, but it was typical that it was a mine.¹¹⁷ By contrast, the expansion of chemical plants – old and new – of Polish Eastern Upper Silesia, *Reich's* territory before 1914 and incorporated into the *Reich* again in 1939, represented one of the single greatest wartime investment programs undertaken by the Third Reich. These investments were concentrated at the *IG Farben* plant at Monowitz – Auschwitz III – with an attached network of satellite mines within the Auschwitz camp complex.¹¹⁸ Outside the annexed territories, only the production of some strategic raw materials and food, and especially oil was important in the eyes of the Nazi-leaders. It was an unspoken aim of Operation Barbarossa to obtain oil resources. The foundation of *Kontinentale Öl AG* – Continental Oil Ltd. – a few months before the invasion in the USSR was however never followed by the seizure of the Caucasus oil fields.¹¹⁹ Only some substantial oil fields in the North Caucasus were reached, and even

¹¹⁵ Kroener, Müller, Umbreit, *Germany and the Second World War, Volume V/II*, 312-313

¹¹⁶ Tanja Penter, p.71

¹¹⁷ Gerlach, *Kalkulierte Morde*

¹¹⁸ Peter Hayes, *Industry and Ideology. IG Farben in the Nazi Era* (Cambridge 1987); Franciszek Piper, *Arbeitseinsatz der Häftlinge aus dem KL Auschwitz*. Oswiecim, 1995 (Polish: 1981); Wagner, Bernd C., *IG Auschwitz. Zwangsarbeit und Vernichtung von Häftlingen des Lagers Monowitz 1941-1945*. Munich, 2000; Steinbacher, Sybille, *'Musterstadt' Auschwitz: Germanisierungspolitik und Judenmord in Ostoberschlesien*. Munich, 2000.

¹¹⁹ Dietrich Eichholtz, *Krieg um Öl. Ein Erdölimperium als deutsches Kriegsziel 1938-1943* (Leipzig 2006); Rolf-Dieter Müller, *Der Wettlauf um das Erdöl. Mitteilungen der Gemeinsamen Kommission für die Erforschung der jüngeren Geschichte der deutsch-russischen*

these were destroyed beyond repair before the Nazis could lay their hands on them. Anyway, the *Wehrmacht* could not hold the obtained territories long enough to restart production.¹²⁰ Berlin had only won the by central European standards not inconsiderable fields of Galicia as well as Estonia. In 1942, the *Karpathen Öl AG* – Carpathian Oil Ltd. – was established to oversee an investment program in the oil fields in the Ukraine. For 1943, Carl Krauch – an *IG-Farben* director who combined this position with a high-ranked place in the Four Years Plan organization – approved of investments in these fields worth 59 million *RM*. It was Krauch’s duty to make sure that *IG-Farben* got a central position in the war economy. He therefore obtained a seat in the board of Continental Oil and overoptimistically even for 1944 still projected a new investment program of 92 million *RM*.¹²¹ All together the results were disappointing.¹²² As the *Wehrmacht* never conquered the Caucasus, most oil produced in Eastern Europe, came from the *General-Gouvernement* (table 15.8).

Table 15.8 *Galician (Polish) crude oil production in 1000 tons.*

	For Germany	For the USSR	Total
1938	--	--	505
1939	34	--	475
1940	125	350	475
1941	242	183	425
1942	378	--	378
1943	401	--	401
1944	201	74	274

Rainer Karlsch, ‘Ein vergessenes Großunternehmen. Die Geschichte der Karpaten Öl-AG.’ *Jahrbuch für Wirtschaftsgeschichte*, 2004/1 95-138, there 107.

Between 1939 and 1944 Germany extracted altogether 1.4 million tons of crude Polish oil, just 2.6% of the 53 million tons of oil extracted, imported or synthesised for the benefit of the German warfare.¹²³ As the total amount of oil Germany produced during the war anywhere in Europe, never covered its wartime needs, this was important. Lack of oil was for instance prohibitive for an active participation of the navy in the war and limited Air Force actions. When the *Luftwaffe* Field-Marshal Erhard Milch, by the summer of 1942 decided to increase aircrafts production, it meant that this branch of the armed forces alone would need two million extra tons of fuel a year. The Galician oil, the most important wells won by the German armies in Eastern Europe, was not even good for a quarter of that (table 15.5). Even

Beziehungen (München 2005) 35-44

¹²⁰ Dallin, *German rule in Russia*, 379.

¹²¹ Hanns-Heinz Kasper, ‘Die Ausplünderung polnischer und sowjetischer Erdöllagerstätten im Gebiet der Vorkarpaten durch den deutschen Imperialismus im zweiten Weltkrieg.’ *Jahrbuch für Wirtschaftsgeschichte*, 1978/II, 41-64; Rainer Karlsch, ‘Ein vergessenes Großunternehmen. Die Geschichte der Karpaten Oel-AG’, *Jahrbuch für Wirtschaftsgeschichte*, 2004/1 95-138, esp. 114.

¹²² Tooze, *The wages of destruction*, 451-452.

¹²³ Eichholz, *Kriegswirtschaft*, Bd.2, 354; DRZW 5/2; USSBS Oil Division Report

the conquest of the Caucasus – if the Germans would have managed to get the oil production going and to transport the output to Germany – would only have resulted in an extra production of a million ton of crude oil a year.¹²⁴ Lack of fuels – oil as well as coal – limited Germany's production all over the continent and even its military possibilities. Therefore, even when Operation Barbarossa would have been a complete success, these problems would only partially have been solved. The best to say of the Polish production is that it was not completely insignificant.

Nonetheless, the extractive industries of Eastern Europe were vital. Primary were the heavy industrial regions in Upper Silesia – in pre-1914 German and again annexed parts of Poland – with its enormous coal and steel production. Further heavy industry along the Dnieper river in the Ukraine, manganese ore mining in Nikopol and coal mining in the Donets were of major importance. Therefore, not only in the reintegrated parts of Poland, but also in the Ukraine investment programs ranging from modest to quite gargantuan, were started.¹²⁵ The successes differed widely. In the Nikopol manganese ore mines – almost completely destroyed by the withdrawing Soviets – production started again at the end of 1941, but until mid-1942 it was difficult to keep it going. From then on, production grew to reach even higher levels than in the pre-war period. Already by early 1943 the military situation held production back, however. Nevertheless, the *Reich* obtained more manganese from these sources than it needed for its production of panzer steel. Attempts to restore iron and steel production became a complete failure on the other hand. At Krivoi Rog the ore mines just as the iron and steel mills were thus badly damaged, that these were only producing again by the end of 1942. Lack of power and machinery undermined this production, however. Nevertheless, in 1943 steel production in the Donets area recovered, but the few thousand tons of raw steel a month the Germans obtained were far short of the five millions a year the Soviets produced.¹²⁶ As in January 1943 the Red Army tried to liberate this industrial centre again and Germans troops had to withdraw in the course of the year, production never reached the levels Berlin had hoped for. When the *Wehrmacht* arrived in the Donets coal mining district, the situation seemed as hopeless as in Nikopol. 25 out of 178 mines were usable, but lack of electricity and labour even made exploitation of these problematic. As reconstruction of these mines was essential for the Ukrainian economy, in June 1942 60 thousand Soviet POW's were sent to the mines. It was not enough. Mining recovered a little, but to keep the Ukrainian economy going

¹²⁴ Tooze, *The wages of destruction*, 451-452.

¹²⁵ Jerzy Jaros, 'Der Steinkohlebergbau im oberschlesischen Becken während des Zweiten Weltkrieges', *Studia Historiae Oeconomicae* 14 (1979) 239-242; Dietrich Eichholtz, 'Wirtschaftspolitik und Strategie des faschistischen deutschen Imperialismus im Dnjepr-Donetz-Industriegebiet 1941-1943', *Militärgeschichte* 18 (1979) 281-296.

¹²⁶ Dallin, *German rule in Russia*, 378-379.

coal had to be imported from Silesia.¹²⁷ Nonetheless, it is a fact that the raw material production was probably the most important contribution of the occupied Soviet economy to the German war economy. In these territories especially some non-ferrous metals were won, the German badly needed and could not obtain elsewhere.

Just as the Eastern European production of raw materials was useful, but seldom satisfactory, the Eastern European contribution to armament and production of army equipment was disappointing. According to the Ivan-Program – a plan to produce arms for the Eastern front in the Ukraine – the production of ammunition was to be centred in the Donets area and the Polish Radom district.¹²⁸ In the western USSR, the prime arms factories – the Kharkov's tank or the Tula's arms factories – located on the edge of the occupation zone, were of course invariably evacuated, demolished or successfully defended by the Soviets, just as essential power stations. Therefore, to get production going, it was necessary to get machinery and raw materials from Germany or Western parts of occupied Europe. This resulted in investments in Poland and occupied Soviet territories of, altogether one billion RM.¹²⁹ Planning for the Ivan- and Ordnance-Program – a supplementary plan to produce other army needs – began however only in 1942, when the exploitation became more systematic. Only then electric power production was restored at 20% of its pre-war level.¹³⁰ It is therefore hardly surprising that these investments failed to deliver a single round of ammunition before the region had to be evacuated in the wake of the Soviet summer offensive of 1943. This failure makes clear that a greater effort to expand the marginal armament sector in the occupied Soviet Union would have been a waste of resources.¹³¹

By contrast, the Hugo Schneider plants (HASAG) in Radom, in the *General-Gouvernement*, proved extremely productive. The Nazi forced labour program as well as absenteeism caused by foraging on black markets, were however, threatening these results. Therefore in 1942, HASAG insisted on the use of Jewish forced labour from Auschwitz at its Skarzysko-Kamienna plant. It became the largest forced labour camp outside camps of the SS *Wirtschaftsverwaltungshauptamt* (WVHA) – the SS economic Head Office. In this plant HASAG had at any time up to seven thousand Jewish forced workers at its disposal,¹³² hence, substantially increasing the armament production in the *General-Gouvernement*. Until the

¹²⁷ Dallin, *German rule in Russia*, 378.

¹²⁸ Stanislaw Meducki, *Przemysł i klasa robotnicza w dystrykcie radomskim w okresie okupacji hitlerowskiej*. (Warszawa/Kraków 1981)

¹²⁹ Kroener, Müller, Umbreit, *Germany and the Second World War, Volume V/II*, 209.

¹³⁰ Willi Boelcke (ed.), *Deutschlands Rüstung im Zweiten Weltkrieg. Hitlers Konferenzen mit Albert Speer 1942-1945* (Frankfurt am Main 1969) 244 e.v.; Dallin, *German rule in Russia*, 379.

¹³¹ On Austria see: Norbert Schausberger, *Rüstung in Oesterreich 1938-1945: eine Studie über die Wechselwirkung von Wirtschaft, Politik und Kriegführung* (Vienna, 1970)

¹³² Felicja KNational Archief, The Hague, j, *Death Comes in Yellow. Skarzysko-Kamienna Slave Labor Camp*. (Amsterdam 1996); Robert Seidel, *Deutsche Besatzungspolitik in Polen. Der Distrikt Radom 1939-1945*. (Paderborn 2006)

Warsaw Uprising of August 1944, the *Wespe* self-propelled gun – a light tank – was even exclusively manufactured in a Warsaw branch of a German machine factory. Nevertheless, the little evidence there is indicates that in key sectors as weaponry, ammunition and vehicles production, the *General-Gouvernement* contributed at the very best a few percents of the total German armaments production. As prior to 1939, Poland lacked any significant armaments industry it seems unlikely that it could have been more.

Table 15.9 *Supplies of the occupied Soviet territories until 31.3.1944 to the Army and the Reich on the quantitative and value basis calculated on average German wholesale prices.*

Products	Supplies in 1 000 tons			Costs of the supplies in million RM		
	To the army	To the Reich	Total	To the army	To the Reich	Total
Bread grain	2.453	818	3.271			
Corn for fodder	2.609	944	3.553			
Grain total	5.062	1.762	6.824	987	344	1.331
Legumes	93	77	170	32	27	59
Potatoes	2.803	16	2.819	148	1	149
Hay and straw	3.756	-	3.756	147	-	147
Oils and seeds	146	757	903	319	318	637
Animal products	625	72	697	958	113	1071
Sugar	162	62	224	80	26	106
Other products	642	97	739	161	26	186
Total				2832	855	3686

Sources: Russian Archives Moscow.

While armaments in a narrow sense remained the preserve of Central and Western Europe, in line with the guidelines issued to the Economics Staff East that the primary objective was to fulfil the direct army needs, the demand for equipment and logistic support was satisfied from local sources across the whole of Eastern Europe. It resulted in an enormous pressure on agriculture and food resources, while all kind of other products the armed forces needed were also obtained locally. Although it is a fact that this severely undermined local consumption levels, according to table 15.4 Polish clandestine production was up to 40% of total production, in these part of the continent, it is nonsense to conclude that the production collapsed completely, but it is clear that the economy had a hard to repair setback. Of major importance for the Germans was the Soviet economy only as a supplier of some raw materials and food. As is clear from table 15.9 more than three quarter of this was, however, needed by the German army itself. The production of the occupied Soviet economy for the Germans was primarily warfare production. Heavy industry was too badly damaged and too shortly maintained by the Germans to become of major importance, while the occupier was hardly

interested in other sectors. The remaining production was needed to keep the population going. As even in these parts, notwithstanding extremely high death rates which are just statistical expressions of the most severe sufferance by the local population, most of these survived, it is clear that this production was still of importance.

In 1941, when in occupied Soviet territories production locally restarted to serve direct army needs, production in the Balkans collapsed. The limited occupation army did not need much, and just as in the USSR, Berlin saw these countries only as suppliers of raw materials and food. Only after the 1941 Soviet Winter Offensive, Berlin became conscious of the fact that here as well the need for sustained support of its war effort could not be satisfied by indiscriminate seizures of all it could use. As a result of seizing raw materials, by 1942 official Greek industrial production had decreased already with between eighty and ninety percent of its 1939 level. The Greek economy was just plundered. Although probably a substantial part of production was not reflected in official statistics, the situation was most dramatic nonetheless.¹³³ By 1942, when a new team of economic managers decided to use the economies of occupied Europe in a different way, it proved too late to repair the dislocations resulting from it. Isolation of the diverse parts of Greece and Yugoslavia from each other – German occupied parts of these countries from non-occupied or from parts occupied by Italy or Bulgaria –, as well as the allied blockade cutting off normal supplies, caused a sharp decline in production and in Greece even a deadly famine. Mistrust, bordering on active resistance therefore became a problem not easily alleviated.

That Greece and Yugoslavia were divided among the Axis-powers did not prevent the *Reich* from taking control over all important production facilities, even in areas ruled by its allies.¹³⁴ In the more important cases, German banks or industrial companies even took over a majority ownership.¹³⁵ To bring that about, already in the earliest stages of German expansion, German business – including the inevitable *Reichswerke* – all over Europe, but especially in Austria, obtained significant quantities of shares in the heavy industry in the Balkan. Apart from confiscations, control over industrial production was obtained by leasing, blackmail purchasing or aryanizations – expropriating Jewish owners.¹³⁶ Apart from that, ownership was

¹³³ Stavros Thomadakis, 'Black Markets, Inflation, and Force in the Economy of Occupied Greece, in', John O. Iatrides (ed.), *Greece in the 1940s. A Nation in Crisis* (Hanover 1981). 68; 'Abschlußbericht über die Tätigkeit der Militärverwaltung,' p. 118.

¹³⁴ The iron ore mines of Ljubija in northern Bosnia, the steel, coal, and chemical plants in northeast Bosnia, and the bauxite mines produced for the Reich.

¹³⁵ Lampe and Jackson, *Balkan Economic History*, pp. 569f.

¹³⁶ See: 'Ausarbeitung der Volkswirtschaftlichen Abteilung der IG Farbenindustrie AG', 14. Mai 1941, in, Wolfgang Schumann (ed.), *Griff nach Südosteuropa. Neue Dokumente über die Politik des deutschen Imperialismus und Militarismus gegenüber Südosteuropa im zweiten Weltkrieg* (Berlin 1973) 127ff.

taken over by tricks and manipulation. An exposé on the fortune of the most important Greece firm allows a glimpse into such business.

In the 1930s, Prodromos Bodosakis-Athanasiadis created a huge industrial empire with arms factories, mines and industrial plants in all kind of branches.¹³⁷ In arms production the company covered domestic needs, leaving some surplus for exports. Then already, Bodosakis' contacts with the Greek National Bank and German companies gave the firm the opportunity to broker direct deals with *Rheinmetall-Borsig*, a *Reichswerke* company.¹³⁸ A majority of Bodosaki's shares were kept by the National Bank of Greece as a security for the firms debts. In May 1941, this proved fatal when the occupation authorities pressed this bank to auction the shares, what resulted in a take-over by Second-Lieutenant W. Deter, not only a representative of General Thomas' Economy Office of the *Wehrmacht* (*WiRüAmt*), but also director of the *Reichswerke* company, *Rheinmetall-Borsig*.¹³⁹ The price not even covered the value of the machinery, but that was exactly all the Germans were interested in.¹⁴⁰ Directly after the take-over, the *WiRüAmt* decided to dismantle the factories and ship their machinery to Germany. At that time, many Berlin officials thought the period of transferred orders was over and only wanted the factors of productions of the occupied countries, but the German authorities in the occupied countries had other interests. As was to be expected, local German authorities – in this case Hitler's plenipotentiary for Greece Günther Altenburg – asked the *Oberkommando der Wehrmacht* – the High Command of the Armed Forces – to rethink the laying off of some 15 thousand workers,¹⁴¹ whereupon Berlin agreed to shift some orders to Greece if the Greek government paid the wages of the Greek workers producing spoils of war, immediately confiscated by the Germans as war booty. This absurd arrangement worked smoothly for some months, but in September 1941 Deter informed Altenburg that unless Athens provided another 200 million drachmas, some 12 thousand workers would be fired anyway.¹⁴² Indeed, to keep Greek-paid labour producing arms in confiscated factories, Athens paid another 100 million drachmas.¹⁴³ Low productivity and transport problems nonetheless prompted the *WiRüAmt*, to reconsider the future of the concern again.¹⁴⁴ Now, part of the

¹³⁷ Christos Chatziiosif, *He giraia selini: he viomichania stin helliniki oikonomia 1830-1940* (Athens 1993) 301.

¹³⁸ Mogens Pelt, *Tobacco, Arms, and Politics: Greece and Germany from World Crisis to World War, 1929-1941* (Copenhagen 1998) 124-126.

¹³⁹ Colonel Wendt, 'Bericht über die Tätigkeit der Abteilung Rohstoff-Allgemein, Unterabteilung Immobilien, Übernahme wichtiger Betriebe in Besitz und Eigentum', AOK 12/IV Wi, no. 2297 of 31 May 1941: PA-AA, *HaPol Clodius, Griechenland*, 4, 468966f; K. Papapanaos, 'Juristisches Gutachten,' 30 July 1941: BA-MA, RW 29/32.

¹⁴⁰ AOK 12/IV Wi no. 314/41 g. of 22 June 1941 to Ic/AO: BA-MA, Wi/IC1. 39..

¹⁴¹ Telegram no. 68 of 4 May 1941, from Altenburg: PA-AA, *Büro St.S., Griechenland*, vol. 2..

¹⁴² Aktennotiz für *KTB*, 14 September 1941: BA MA, RW 29/32.

¹⁴³ *KTB/WBfH. Südost* - V.St. Athen, entry for 19 September 1941: BA MA, RW 29/94, see decree no. 1202 of 9 April 1942: *Government Bulletin*, 1942, 1, no. 82, pp. 401f.

¹⁴⁴ Report no. 35/42 g. of 17 February 1942, WO Athen to the W.Stb. Südosten: BA MA, RW 29/97; 'Die Bedeutung Südosteuropas für die deutsche Rüstungsindustrie, 8 October 1942: BA MA, RW 19/736.

plants was sold to another German company, which should hand over 80% of the machinery to the German aviation industry. Payments could be dealt with after the war, i.e., the machines were confiscated.¹⁴⁵ Until the end of 1943 the remaining plants were used to carry out repair works on behalf of the *Luftwaffe*, but then – as a result of the North African military developments – the Greek position changed from a forward supply base to a potential battlefield, reason to transfer the bulk of the machinery of these enterprises to Belgrade.¹⁴⁶ Some suggested to use Serbian occupation costs for compensation, but hard pressed for food, Hermann Neubacher – special plenipotentiary envoy in the Balkans – proposed to send Serbian food exports to Greece in exchange. The *Wehrmacht*, that needed the food itself, rejected this however.¹⁴⁷

That the take over of companies easily resulted in their dismantling became clear already in 1941. Then in agreement with the new ideas on economic planning and exploitation spread through the Third Reich's bureaucracy in 1941, in Serbia and Croatia alone 500 ammunition, armament, and chemistry plants, were taken apart and shipped to Germany. Confiscating factors of production seemed rational in countries with low productivity and substantial war damage. Although pre-war Greece was not extremely poor or low productive, lack of coal and raw materials, which were only supplied more or less regular again in 1943, severely diluted productivity, while Yugoslavia was one of the poorest and lowest productive countries of Europe anyway. In both countries, production was substantially undermined by mobilization and war and the resulting lack of labour. Many labourers became soldiers, and were after the lost war taken POW or became guerrilla fighters. Consequently, it seemed rational to Berlin to use these parts of Europe in the first place as sources of food and raw materials. In Yugoslavia industrial production was limited anyway. In Serbia, Sartin with one thousand workers and Jesenica with 315 were the most important plants of the country.¹⁴⁸

Although industry was hardly important, raw materials production was, and to be ready to defend the German interests against Italian claims, Berlin setup a list of companies active in these branches before the invasion started already. These companies should operate under German control.¹⁴⁹ Therefore, directly upon the combined German, Italian and Bulgarian

¹⁴⁵ Letter of 19 May 1942 from the Chief of Staff: BA MA, Wi/IC1. 1B, part 1.

¹⁴⁶ Mazower, *Inside Hitler's Greece*, 71; Report no. 41653/44 geh. of 2 August 1944, the Wehrmachtintendant Griechenland to the OKW/Ag WV: BA, R 7/2274.

¹⁴⁷ Letter no. 1374/44 geh. of 14 August 1944, from the Chefintendant/WBfH. Südost to the OKW/Ag WV: *ibid*.

¹⁴⁸ Živković, Nikola, 'The Exploitation of Yugoslav Industry by the Third Reich during World War II,' in *Studia Historiae Oeconomicae*, 14 (1979), p. 217.

¹⁴⁹ Report of 15 May 1941 from Sohl, in Dietrich Eichholtz und Wolfgang Schumann (Hg.) *Anatomie des Krieges. Neue Dokumente über die Rolle des deutschen Monopolkapitals bei der Vorbereitung und Durchführung des zweiten Weltkrieges* (Berlin 1969) 330; Georgiades, Muriki, 'Soc. Financière de Grèce, Soc. Internationale des Mines et de Commerce de minerais. See enclosure to AOK 12/IV Wi no. 2298 of 31 May 1941: BA-MA, Wi/IC1. 39, pp. 178f. For a list of the contracts signed between *Krupp* and Greek mineral companies see enclosure to letter no. 480/41 g. of 27 September 1941, from the WBfH. Südost-IV Wi to the OKW/WiRüAmt/Qu III d: BA-MA, Wi/IC1. 7A.

occupation of Greece, German enterprises were eager to place orders with Greek mines. In this part of Europe, already seen as part of the German informal empire before the war, the hesitation private firms had with investing in the USSR, was absent. For instance, Hans-Günther Sohl, director of *Friedrich Krupp AG*, secured long-term deliveries – up to 25 years – of the entire production of materials like chrome, bauxite and nickel.¹⁵⁰ In Yugoslavia – i.e. in Serbia as well as in Bulgarian-annexed territories – German companies also took control of mining of antimony, coal, copper, lead, pyrites, chrome and zinc. Production of raw materials, for instance mining of iron-ore and non-ferrous metals, became important again because German companies invested a total of 308 million *RM*,¹⁵¹ although the occupied countries themselves had to supply the needed local currency (Chapter 13).¹⁵² Notwithstanding German investments, however, mineral production was adversely effected by lack of machinery, construction tools, electric wiring and welding solder,¹⁵³ while in the last two years of the occupation lack of materials and labour as well as transport problems rendered the continuation of production unprofitable. In that period many mines even fell in the hands of the partisans.

15.5 Conclusion

All over Europe production went on, but only in the Western occupied countries and the Protectorate production hardly declined. Here, the setback seen in the official macroeconomic series was for a major part compensated by the clandestine production for black markets. When corrected for that, total production in these countries only sharply declined during short periods as a result of the military situation. France was the only exception, what makes clear that the intensity and way of German exploitation was decisive. Wherever the Germans concentrated their exploitation on taking the output of production, they kept the economy going and thus the production capacity intact. In parts of Europe where the occupier concentrated on destruction – the USSR – or the taking of factors of production, – the Balkan and Poland, the production collapsed, the production capacity was undermined and in the Soviet case even the economic infrastructure was destroyed. As always when Nazis were involved, racism played a role, but as the case of the Czech protectorate made clear, it is too easy to conclude that Western countries were treated well, while Slavic countries were undermined.

¹⁵⁰ Report of 15 May 1941 from Sohl, In: Eichholtz and Schumann, *Anatomie des Krieges*, 330.

¹⁵¹ Erzeugungsplan der Trepča Mines Ltd. Für 1942/43, BA Berlin, R 7 VIII/94, 246.

¹⁵² Abschlußbericht des Generalbevollmächtigten für den Metallergbergbau Südost, p. 11ff: BA Koblenz, Ost Dok 18 II/1a.

¹⁵³ „Lagebericht vom 8.7.-14.7.42“: BA-MA, RW 29/108.

Racism was a reason not to be scrupulous when, according to a cruel rationality, it was a German interest to do the nastiest things. In the Soviet Union the interest of the local people were completely neglected and that the German policy was threatening their chance to survive no reason to find other solutions, but when the occupier found out that it was better for Germany to follow another policy, Berlin even treated Slavic people in a decent way, not for humanitarian reasons, but because it was in its interests. The undermining of the economies of the occupied Soviet territories, the remains of Poland and of the Balkan was done because the Germans thought this was in their interests at that moment. Only when the fortune of war turned the other way round and the Germans found that they now needed these economies, they had to experience that it was too late. It proved impossible first to butcher the cow and then milk her.

As a result, in Western Europe as well as the protectorate of Bohemia and Moravia, a more or less adapted production went on. These countries with modern economies contributed importantly to the German warfare, as they were needed were allowed a reasonable level of welfare and the population therefore had a high chance to survive. In Eastern Europe, although the economies not completely collapsed, only by a substantial clandestine production – possible as these economies were for high parts agrarian – most people could survive. The mortality rates were however much higher than in the West, while the fact that the occupier took all factors of production it could get – labour as well as machinery and raw materials – not only undermined production, but also the production capacity. Nonetheless, the occupier obtained much more in the West than in these countries. In Eastern Europe and the Balkan, the destructive German policy even resulted in a dangerous guerrilla warfare that not just had severe military, but also enormous economic implications. As a subject of further research it would be interesting to find out how strong the relation was between guerrilla war and economic development. In that it is interesting that in France, where the economic situation was somewhere in between that in other Western European countries and the Eastern part of the continent, the resistance was more violence than in most Western countries, but incomparable less than in the Eastern parts of Europe.

The differences in wartime development not only had consequences for what the occupier obtained in the diverse countries, but also for the interests of the local population, just as for the long-term economic development. In the chapters of part 4 this will be the subject.