CHAPTER X

WAR TRANSPORT

(i)

The Effects of the Fall of France on Shipping[1]

THE estimates of Britain's shipping prospects were peculiarly susceptible to the uncertainties that pervaded life in the summer and autumn of 1940. The enemy powers held the initiative. Would they concentrate their attacks against shipping? Where and in what numbers would U-boats, E-boats, aircraft and surface raiders attack? Where would mines be sown? How heavy and prolonged would the strain on the Royal Navy be? Would the east coast ports be immobilised and the west coast ports bombed? What new military demands for shipping would arise? What new help in ships and crews would come from the countries overrun by the Germans?

It was extraordinarily difficult to estimate even approximately the volume of shipping at British disposal, or its probable performance. Early in June, before France fell, the Minister without Portfolio thought it would be unwise to count on getting more than 35 million tons of imports in the second year of war. But at that time allowance had to be made for the heavy demands of exports to France upon shipping and port capacity. For shipping purposes, indeed, the fall of France was a disaster mitigated by one or two temporary compensations. The programme of exports to France melted. British ports became crowded with ships destined for, or belonging to the countries overrun by the Germans. The acquisition of this tonnage bred a fleeting optimism. The shipping position was called 'easy'; there was talk of cutting the merchant shipbuilding programme; the plans for buying ships in America remained conservative. Yet there was also an undertone of caution. Sinkings were increasing. What if this increase were the result, not of a special effort by the enemy, but of enduring adverse factors? By July, air attacks and mine-laying were beginning off the south and east coasts.

Under these conditions the main task was one for the immediate present—to draw in imports to the fullest extent that port capacity permitted. But the Government still tried to look further ahead. In

[1] This chapter is confined almost entirely to dry cargo shipping. The problems of tankers were special.

August 1940, the Minister of Shipping tentatively estimated to his colleagues that an average of perhaps 12·9 million deadweight tons of deep sea dry cargo shipping would be available for the United Kingdom import programme in the second year of war;[1] this should bring in—though the total might be ten per cent. or so less—about 42 million tons of imports. Would port capacity be adequate to handle 42 million tons? The responsibility for answering this question lay on the Minister of Transport, who had already been asked by the Economic Policy Committee to consider the effects on the west coast ports if it became necessary to close all the ports from Aberdeen on the east coast to Southampton on the south coast.

This problem was by no means new; as we saw earlier, committees had wrestled with it for the past seven years.[2] But, until war was perilously near, these committees had overlooked an essential lesson of the 1914–18 war, namely, that port congestion derives primarily not from discharging the ships or handling the cargo on the quay but from difficulties of removing the cargo from the quay. Diversion to the western ports would completely dislocate the normal channels of distribution; congestion would first appear in facilities for inland clearance and work its way back to the quayside. These principles were reaffirmed just before war began but by June 1940 they seemed once more in danger of being forgotten; they were ignored in a new attempt by the Ministry of Transport to estimate the maximum volume of imports that the west coast ports could clear. But even when a still further attempt took the right principles into account, it was impossible to make a reliable calculation because the necessary statistics of inland traffic movements scarcely existed. This attempt, made in the late summer of 1940, suggested that if diversion came, the ports could probably deal with about 40½ million tons of imports.

According to the very provisional forecasts of 1940, then, there might be shipping enough to bring in between 38 and 42 million tons of imports while the ports should be able to handle about 40½ million tons. Actually, in the last quarter of 1940 and the first quarter of 1941, the balance struck between shipping capacity and port capacity[3] proved to be very close; but it was struck at a much lower level. Imports during this period were at an annual rate of less than 31 million tons[4] and, once diversion had begun, the ports could barely handle them.

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[1] For an explanation of gross tons and deadweight tons see footnote to Table 3 (c) on p. 80.

[2] See above, Chapter IV, p. 124.

[3] Shipping and port capacity are not really two separate concepts; the time of turn-round in port is a powerful influence on the number of journeys a ship can make in a year.

[4] Without allowing for seasonal differences.

The effects of the fall of France on shipping, in fact, belied the hopes of the summer of 1940 and surpassed the fears; during the whole of 1941 United Kingdom dry cargo imports were only 30·5 million tons. In the summer of 1940 the effects had been hard to foresee; but in retrospect they can be seen and summarised clearly. There occurred both a great increase in shipping losses and a reduction in the performance of the ships that were left. The German Navy, which had only sixty U-boats when war began, had over 140 by the summer of 1940. The occupation of the Biscay ports, by eliminating long journeys to and from bases, doubled the number of U-boats in the operational areas. Long-range aircraft could also now harass shipping in the Atlantic. In the Mediterranean, Italy, which had just entered the war, possessed about 100 submarines. The enemy's strength thus increased as British strength was grievously weakened through naval losses and damage off Dunkirk and Norway. The First Lord of the Admiralty told the War Cabinet in August 1940: 'In the last war we had the help of the U.S.A., French, Italian and Japanese naval forces. When convoy was introduced in 1917 we had 339 British destroyers. . . . Today we have 181.' New demands from the Mediterranean fell upon the scanty resources of the Navy and the threat of invasion kept strong naval forces tied to the English coast. So that, whereas in the 1914–18 war, the normal escort of convoys was eight to ten vessels, in August 1940 it was two or three. Until the spring of 1941 convoys could only be escorted a limited distance into the Atlantic, and the variation of routes was restricted because an escort leaving an outgoing convoy in the evening had to pick up an incoming convoy the next morning. Shipping losses were therefore inevitably heavy. Between June 1940 and December 1941 total losses of British flag tonnage were about seven million deadweight tons,[1] or roughly thirty-six per cent. of the British merchant fleet at June 1940; this figure moreover does not include losses of neutral or Allied ships under British control.

Not only were shipping losses alarming. There was also a serious fall in carrying capacity—that is, in the amount of commodities that existing ships could carry in a given space of time. Carrying capacity is determined, broadly, by five factors—the time ships spend at sea, the time they spend on ordinary port operations, the time they spend undergoing major repairs, the use made of ships' space and the way voyages are planned. In the months following the fall of France, ships were spending more time at sea and more time in port both in loading and unloading and for repairs.

A variety of causes kept ships longer at sea. An insufficiency of escorts made evasive routeing a principal means of defence. Ships

[1] Dry cargo, 1,600 g.t. and over. The figure includes marine losses but war losses formed the great majority.

bound for the south Atlantic, for example, had to go via the north Atlantic: ships on the Spain and Portugal routes had to keep out of the range of bombers. And as convoys became fewer and larger, ships had to wait longer at convoy assembly points. Some short routes were closed, others almost closed. The only merchant ships to use the Mediterranean were the heavily escorted convoys that fought their way to Malta; all other merchantmen bound for the east had to go round the Cape. The delays grew worse when the Suez Canal was temporarily closed by enemy action.[1] In home waters, the English Channel was closed to deep-sea ships and those making for the east coast had to go northabout through the Pentland Firth; and these ships had to wait about for coastal convoys which consisted mainly of coasters and were therefore particularly slow. Finally, on balance, ships had to go further for their cargoes. In the first eight months of war, twenty per cent. of the United Kingdom's dry cargo imports (measured by weight) came from Europe and North Africa: throughout the four following years, only three or four per cent. There was however some considerable compensation: imports from North America increased at the expense of those from still more distant areas. The proportion of dry cargo imports that came from North America rose from thirty-six per cent. in the first eight months of war to fifty-one per cent. at the end of 1940 and to fifty-four per cent. in the calendar year 1941.

Ships, as we saw, spent longer in port for two reasons. First the ports held a large mass of tonnage immobilised under repair. This was to be expected. Damage from enemy action and also from marine causes[2] had increased. Some of the ships that were brought in by the Allies, and nearly all those that were bought second-hand from the Americans, were in a bad state of repair. The demand for repair facilities was now concentrated upon the United Kingdom because European ports were no longer open to British and Allied ships. But British facilities had shrunk because the south and east coast docks could not be fully used. By February 1941, possibly two million gross tons of British deep sea dry cargo shipping were immobilised under repair in United Kingdom and foreign ports. Such a figure, if maintained throughout 1941, would be equivalent to the sinking during the year of four million gross tons. Moreover, in addition to these repairs proper, ships were held in dock for degaussing against magnetic mines.

The second reason why ships spent longer in port was that the turn-round of ships and the time taken over all the ordinary port operations had increased. At the beginning of September 1940, the Admiralty gave the long-expected and long-dreaded word that,

[1] The Middle East could not be supplied from the Red Sea ports.

[2] For example, concentration of tonnage in the North Atlantic in the winter led to bad passages and damage, especially when there were deadweight cargoes such as steel which were liable to roll about in the holds.

owing to the danger from aircraft and E-boats, the east coast must be used as little as possible. On the next three nights the Port of London was heavily bombed and it was decided to remove all ocean-going ships from it. From 10th September only ships of 6,500 gross tons and under might enter the Humber and the ports north of it, and no ship larger than a coaster was to enter any port to the south of it. There were other less rigid restrictions. It was dangerous for diesel-engine ships to go to the east coast because they were particularly liable to detonate acoustic mines. Refrigerator ships and ships with particularly valuable munitions cargoes were too precious to risk on the east coast. It was desirable to keep fast ships away from the east coast because it was wasteful, and sometimes very difficult, for them to keep down their speed to that of the coastal convoys. As the shipping shortage grew, greater risks had to be taken. From January 1941, deep-sea ships were allowed into the Port of London up to the number of fifty. Ships up to 8,500 gross tons were allowed on the east coast. Nevertheless, the restrictions always remained severe. In peace the east and south coast ports account for about sixty per cent. of British dry cargo imports measured in tons weight. There are no comparable figures for the war years; but the fact that in 1941 only about twenty-seven per cent. of the foreign-trade cargo shipping was arriving at the south and east coast ports gives some idea of their changed status. In the last quarter of 1940, the figure was down to eighteen per cent.

By the end of 1940, conditions on Merseyside, Clydeside and in the Bristol Channel seemed to be fulfilling all the worst expectations about the confusion that diversion of ships from the east coast would cause. Complaints poured in about a multitude of difficulties—about shortages of transport, storage, labour and equipment, about consignees who could not be identified or who could not decide where they wished their goods to be sent. Suppose, on top of all this, there were heavy air raids on the west coast?

The difficulties were not caused by an increase of shipping going to the west coast ports for discharge. It is true that the convoy system brought ships to port in bunches. It is also true that in the last quarter of 1940, thirty-one per cent. more shipping was arriving at the Clyde ports than in the three months before France fell. But the Clyde was an exception. Shipping generally was so scarce that, in spite of diversion, total monthly arrivals with cargo at the west coast ports as a whole were a little less in the last quarter of 1940 than they had been in the quarter before June 1940.[1] Moreover, exports, which of course competed with imports for port facilities, were smaller.

The root cause of the trouble was instead just what the Ministry of Transport had foreseen—a complete dislocation of the machinery of

[1] There are no figures to show the change in the actual volume of imports handled.

distribution. 'Once the diversion of shipping had started,' writes the shipping historian,[1] 'every west coast port began to receive cargoes which it did not receive in peace or not in the same quantities. Often these cargoes required facilities both to discharge and to transport them which it was difficult to provide.' The discharge of unaccustomed cargoes tried the port authorities sorely; but the really fundamental difficulty was clearing imports from the quays. Indeed, there could be no discharge at all if the quays became blocked with cargoes that could not be moved. Imports might lie about either because there was no storage space to which they could be sent, or because they had to wait for transport. A real shortage of storage space persisted throughout the war, but it seemed worse in the winter of 1940–41 because individuals and government departments who wanted space for storage or for production were left to scramble uncontrolled for it. As for transport, it was gravely insufficient at the time of the port crisis. One example will show the dimensions of the problem. In peace, nearly eighty per cent. of Liverpool's imports leave the docks by road on short journeys and less than twelve per cent. are distributed by rail. But with diversion from the east coast, supplies travelled further afield and in 1944 nearly forty per cent of Liverpool's imports were leaving by rail.

For some commodities transport difficulties were particularly acute. In the rush to build up steel stocks, nearly 1¼ million tons were imported in the last few months of 1940, compared with a normal peace-time rate of about 50,000 tons a month. And steel could only be moved in special wagons called bolsters which were very scarce. Other imports were of little value unless special plants in the east coast ports could be used. For example, refrigerator ships were too precious to risk on the east coast; yet half Great Britain's meat imports normally came through London, which possesses the bulk of the cold storage accommodation. This meant many complications; meat can only travel in heat-insulated vehicles and, moreover, the London cold stores were normally fed from the waterfront.

Diversion of shipping thus put a heavy strain on the port and transit system. The general condition of 'port congestion', that is, when ships actually have to wait for berths, never really arrived. But, if the ports had been asked to handle imports at the rate of the first year of war, or if the east coast ports had been completely closed, congestion would have been acute and even the most remarkable feats of organising ability might well have been unable to disperse it. As it was, individual ports were at times uncomfortably full. Ships were heavily delayed in them and this in turn meant fewer round voyages a year. Unfortunately, the loss cannot be measured exactly since the systematic examination of time spent in

[1] Miss C. B. A. Behrens, author of the Shipping History to be published later in this series.

United Kingdom ports did not begin until April 1941; it must, however, have been considerable. Abroad, the port delays were often still more serious than at home; in the Middle East, for example, conditions were truly chaotic.

As shipping capacity declined, the demands upon it increased. For from the late autumn of 1940 the centre of military activity was shifting to the Middle East. An increasing number of ships was needed to carry troops and supplies there from the United Kingdom, the Empire and the United States. Then, from June 1941, Russian needs for help had to be considered. The allocation of shipping to the Services rose by about 1·3 million deadweight tons between August 1940 and December 1941. The Ministry of Shipping always aimed at using these ships—even troopers—wherever possible for carrying civilian cargoes on homeward or cross 'legs' of their voyages. Thus the increased Service demands after Dunkirk did not so much decrease the shipping available for imports as decrease its carrying capacity. The authorities could not concentrate as much shipping as they would have wished on the short Atlantic haul.[1]

The relative significance of all these effects of the fall of France upon shipping cannot be assessed here;[2] but the gravity of them in combination must be emphasised. By the end of 1940, the optimism of the summer months was banished. In December 1940, the Prime Minister was writing:

> The decision for 1941 lies upon the seas. Unless we can establish our ability to feed this Island, to import the munitions of all kinds which we need, unless we can move our armies to the various theatres where Hitler and his confederate Mussolini must be met, and maintain them there, and do all this with the assurance of being able to carry it on till the spirit of the Continental Dictators is broken, we may fall by the way . . . It is, therefore, in shipping and in the power to transport across the oceans, particularly the Atlantic Ocean, that in 1941 the crunch of the whole war will be found.

(ii)

The Shipping Struggle

In fighting to overcome the shipping shortage, the Government had four major tasks. First, every effort must be made to lower the losses by better protection of merchant shipping. Secondly, the supply of ships must be increased to make good the losses. Thirdly,

[1] It was estimated that the ships carrying supplies to the Middle East could have carried between 2 and 2½ times as much if they had been employed on the North Atlantic.

[2] They will be analysed in Miss Behrens's Shipping History.

the time ships spent at sea and in the ports and repairing docks must be reduced as low as possible. And fourthly, shipping must be carefully allocated between all the competing demands in order to make the most profitable use of it. The tactics and strategy of shipping defence are the province of the Service historians; in this book we must confine ourselves to the other three tasks of the Government.

The most obvious need after trying to reduce the losses was to make them good. For if tonnage continued to decline steeply, the prospects for the later years of the war were grim. The British shipbuilding industry could not hope to replace losses anywhere near the 1941 level of about five million deadweight tons. The merchant shipbuilding programme at the end of 1940 was only for an output of just under two million deadweight tons per annum and the output of completed ships had not yet reached that rate. Moreover, the demand was increasingly for large, fast ships which took longer to build. This programme for the merchant navy had to compete for skilled labour with naval construction and conversion and with repair work. Efforts to increase the supply of labour bore fruit only slowly, and meanwhile there was constant pressure to divert labour from new building to repairs. It is not surprising that the tonnage of deep sea dry cargo shipping brought into service between June 1940 and December 1941 was only about thirty per cent. of the British flag tonnage that was lost.

Replacement of losses must therefore come largely from foreign sources. Before the war, probably about forty-three per cent. of the United Kingdom's imports[1] came in foreign ships, and in the pre-war planning it had been assumed that the United Kingdom would be able to time-charter the bulk of the neutral fleets. But, in the first period of the war, these fleets had shown themselves reluctant. This was due partly to their anxiety to maintain an irreproachable neutrality and partly to the enticements of more profitable alternative employments. When neutral ships did make themselves available, it was at fancy freight rates far above the British ones. However, the prospects became very different after Germany had overrun Denmark and Norway, the Low Countries and France, and after Italy had invaded Greece.

Between the fall of France and the end of 1941 the British flag acquired a big volume of foreign tonnage—nearly three million deadweight tons. Indeed, these transfers of tonnage and new building together replaced all but about two million deadweight tons of the shipping that was lost. The foreign ships that were transferred to the British flag were of various kinds. Some of them of course were captured German and Italian ships. But many of them were ships from Denmark and France. The ships from these two countries whose

[1] Measured by weight. The estimate is very tentative and may need correction in the light of further research.

lawful Governments remained in occupied territory were treated for the duration of the war like enemy ships.[1] A good many, of course, made their way voluntarily into British service but any recalcitrants in Allied ports or on the high seas could either be requisitioned or seized in prize.[2] The British Government was also much interested in the fate of the Danish and French ships—and of the German and Italian ships—immobilised in neutral, chiefly American, ports. After much diplomatic discussion, the United States Government took control of the Danish, German and Italian ships lying idle in United States ports[3] and also negotiated about the enemy ships in Central and South American ports. None of these ships were transferred to the United Kingdom. The British hoped that American use of all these ships would relieve the shipping shortage in the western hemisphere and so make it easier for the United States to spare ships for United Kingdom services; but there was no promise.

The European conquests of Germany and Italy not only brought foreign tonnage on to the British register; they also secured for the United Kingdom much greater assistance from the three great shipping nations—Holland, Norway and Greece—which had been neutrals and were now Allies.[4] The negotiations of shipping agreements with these Allies was by no means easy. There were difficulties over the amount of tonnage to be chartered and still greater complications over the rates of hire. For example, the Norwegians and the Dutch were anxious to keep as many of their ships as possible trading free on the safer routes in order to earn badly needed dollars; the Dutch, in addition, bore responsibilities to the Netherlands East Indies. For reasons that varied from country to country, the attempts to bring the rates of hire for Allied ships more nearly into line with British rates were a failure.

As has been seen, the acquisitions of tonnage from countries overrun by the enemy and the prospect of more to come had in the summer of 1940 inspired optimism about British shipping prospects. The sudden gains were indeed a blessing—not because they made the shipping position easy but because without them it might, by the late spring of 1941, have become disastrous. The same blessing could not be bestowed twice. Danish and French ships could not be seized a second time. Allied Governments without countries could not build

[1] They were ultimately treated for compensation, etc., as if they had been brought voluntarily into United Kingdom service.

[2] There was reluctance to deal too harshly with the French; the story is complicated and will be dealt with fully in the Shipping History.

[3] French ships in U.S. ports were not requisitioned by the United States until after Pearl Harbour.

[4] Unfortunately there are no comparable figures to show the total amount of foreign shipping at British disposal before and after the fall of France: for, before the summer of 1940, most of the foreign ships working for Britain were not on time charter but were chartered independently for single voyages.

ships. Meanwhile the losses continued. The nation could squeeze through 1941. But what of 1942 and 1943? Then, only one thing could replace heavy losses—American building. After the United States entered the First World War they had built up an immense shipbuilding capacity from nothing. This feat must be repeated. In 1942 and 1943 American help would be urgently needed. There was also need of it in 1941.

In March 1941 the Prime Minister sent Sir Arthur Salter with a broad mandate to establish a British Merchant Shipping Mission in Washington.

> The Battle of the Atlantic has begun [he wrote]. The issue may well depend on the speed with which our resources to combat the menace to our communications with the western hemisphere are supplemented by those of the U.S.A. I look to you to bring this fact home to the U.S. Administration and to convince them that they must act accordingly.

The Mission's chief tasks were to secure a large allocation of American tonnage for British services, a great increase in American shipbuilding, help in repair facilities, together with defensive equipment from United States yards and administrative co-operation in general shipping problems. The Mission was also expected, by presenting the facts of the shipping position, to give what help it could to the negotiations for American naval co-operation.

The background against which the Mission had to work has already been sketched in the last chapter. The success of its work was great. By December 1941—before the entry of Japan and the United States into the war completely transformed the situation—prospects were good. The American shipbuilding programme had been raised to eight million deadweight tons for 1942, and this, with British and Canadian building, would more than cover probable losses.

All this gave Britain hope for the future when hope was badly needed. But how great was United States help in 1941 itself? Their help with tankers was invaluable. By the early summer of 1941, oil stocks were down to danger level—4½ million tons—and an urgent call went to the United States for tankers to raise these stocks by one million tons. The help given was sufficient to raise oil stocks by the end of 1941 to seven million tons—the limit of British storage capacity.

American aid with dry cargo tonnage was much less considerable. For the United States merchant navy was small; it possessed only seven million deadweight tons of dry cargo and passenger vessels, of which four million deadweight tons were engaged on coastal services.[1] And in 1941, the total output of United States shipyards was only one

[1] Including the trade from the east to west coasts through the Panama Canal.

million deadweight tons. Moreover, American ships could be withdrawn from the most profitable employments only by overruling commercial and civilian interests which could muster powerful political support. Nor must it be forgotten that the Neutrality Act prohibiting United States ships from entering the war zones was not repealed until November 1941.

In these circumstances, the British could not expect very much. Between Dunkirk and Pearl Harbour they managed to buy sixty new United States ships totalling 600,000 deadweight tons and 100 second-hand ships totalling 900,000 deadweight tons; but not all the new ships were delivered in 1941 and many of the second-hand ships were in too poor repair to take to the ocean for some time. The number of American ships that circumvented the Neutrality Act on the Atlantic route was negligible throughout 1941. American help with shipping for the Middle East was rather larger, for in April 1941, the President excluded the Red Sea from the official war zones. Between the summer of 1940 and Pearl Harbour, the United States sent a total of 103 ships to the Middle East with war and civilian supplies. The United States helped in other ways. In the last nine months of 1941 there was a monthly average of about 430,000 deadweight tons of British and British-controlled dry cargo ships repairing in United States ports. In addition, something like a million deadweight tons of the enemy ships transferred to the British flag were secured through action of the United States. American pressure also helped to bring in some of the foreign tonnage acquired by the Ministry of Shipping on time charter. When all is considered, however, American help in 1941 was in no sense a decisive factor in the battle of supply at sea.

So far we have been considering ways and means of making good the shipping losses. Unfortunately, it is impossible to make an exact comparison of the total volumes of shipping at British disposal before and after the fall of France.[1] We can only estimate tendencies in the large. New building, the acquisition of enemy shipping, the increase in the amount of foreign tonnage on time charter and the help from America—all these together must have gone a considerable way towards the replacement of losses. The total net loss of tonnage must have been quite low.

In consequence, a high proportion of the fall in carrying capacity must have been due to the alarming decline in shipping performance. As we saw, this decline had three main causes. Ships spent longer at sea. Ships spent longer in port. Large blocs of tonnage were immobilised under repair. The drive to reduce the length of voyages, to speed turn-round in the ports and to hasten repairs involved many

[1] Because of the difficulties about foreign shipping explained in the footnote on p. 256.

problems that touched many departments. At the ministerial level, the Import Executive from January 1941, and then from March 1941 the Battle of the Atlantic Committee, were designed to keep watch on the situation as a whole and to initiate action.

The prospects of reducing the time ships spent at sea were not really very great. At the beginning of 1941, the Import Executive was discussing the possibilities of shortening the length of haul by a more intense concentration on near sources of supply. But when military needs sent ships further afield, for example to the Middle East, they naturally brought imports back from there. There were all kinds of other difficulties even after lend-lease had saved the payments situation—the needs of the Dominions and Colonies as exporting producers could not be completely disregarded, the buying programmes of the importing departments were not infinitely variable, all sources of supply were not technically interchangeable, the nearer sources could not necessarily supply extra quantities. So, as has been shown, the proportion of British imports drawn from North America showed little increase in 1941.[1]

The length of haul was one important factor in voyage time; the other was convoy delay. Here again there were no obvious remedies. Escorts were so scarce that it was impossible to run more convoys. A difficult choice had then to be made. If ships were allowed to sail independently there was an extra grave risk to their safety; but independent sailings would accelerate the movement of shipping and give an immediate and badly needed increase in the rate of import.[2] First, in November 1940, ships of thirteen knots and over were allowed to sail independently; in the following spring the limit was lowered to twelve knots. This limit was maintained in spite of some misgivings about increased sinkings. Indeed, in March 1941, the Import Executive was discussing whether the whole convoy system should be abolished; the maximum saving on a round trip, however, did not seem big enough to justify the increased losses that would result. The same conflict between delay and safety arose over ships going to and from the east coast. Waiting for the coastal convoys which provided defence against air attack caused delays; but the risks of sailing unescorted were too great.

Why then go to the east coast ports at all? Here we are back at the port problems mentioned in the last section. Diversion to the west coast ports had created confusion and if the east coast ports had been completely closed, there would have been severe port congestion. As it was, elimination of port delays was one of the most promising methods of improving the carrying capacity of British ships. In

[1] See above, p. 251.

[2] It would, of course, only be a short-term increase if sinkings rose.

December 1940, the Prime Minister sent a personal minute to the Minister of Transport:

> It is said [he wrote] that two-fifths of the decline in the fertility of our shipping is due to the loss of time in turning round ships in British ports. Now that we are confined so largely to the Mersey and the Clyde and must expect increasingly severe attacks on them, it would seem that this problem constitutes the most dangerous part of our whole front. Would you kindly give me a note on:
>
> A. The facts.
> B. What you are doing.
> C. How you can be helped.

At the same time, a sub-committee of the Economic Policy Committee was studying port problems.

Clearing up the confusion in the west coast ports called for much effort over a wide front. Better planning of inland transport, of storage space, of import, loading and movement programmes was needed. In the ports themselves the crying need was for improved organisation. At the end of 1940 the port and transit control had two main features. A very efficient headquarters body called the Diversion Room met every morning to determine the port to which each ship should be routed. The task of ensuring a quick turn-round of ships once they were in port lay with Port Emergency Committees. But these committees represented a variety of local and competing interests and had no power over government departments nor over port labour. In December 1940, the Government hoped to transform these controls by the appointment of Regional Port Directors to the Clyde, the Mersey and the Bristol Channel.[1]

Upon these directors were devolved the Minister of Transport's comprehensive powers in the ports. They were given overriding authority over any individual or government department and also, in the Clyde and the Mersey, control over port labour. It was extraordinarily difficult to find directors with the necessary experience,

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[1] At the same time the Government agreed upon two longer-term port improvements which did not, however, affect the immediate crisis:

(1) Dock labour which was notoriously ill-organised was to be decasualised. A first step in this direction had been taken in June 1940 but it was not enough. In January 1941, it was agreed that the dock labour on Merseyside and Clydeside should be brought directly under the control of the Ministry of War Transport and its Regional Port Directors. From April 1941 the Ministry employed the dockers in these areas and guaranteed them a full week's work. In September 1941, a National Dock Labour Corporation was set up, and its local Labour Boards became the direct employers in all the ports except Merseyside and Clydeside. In the same month, the industry was covered by an Essential Work Order (see below, p. 306).

(2) Inland sorting depots, where incoming cargoes could be sorted a safe distance away from the quay, were to be set up. They would keep the quays clear and would be a safeguard if the ports were bombed. There was much argument as to whether it would not be better to spend resources on improving transport rather than erecting depots. The final decision to proceed with the depots was not taken until March 1941.

character and ability. There was no simple and uniform story of success. The greatest achievements were in the Clyde, where diversion of shipping had caused the greatest difficulties. The Clyde had to deal not simply with different kinds of imports but with a larger total volume. Moreover, in the main port, Glasgow, there was a serious lack of shed and storage space, and the rail connections with the south and east were notoriously bad. Yet by the end of March the Regional Port Director could report that traffic congestion had been eliminated.

The threat of a slow strangulation of the British economy by congestion in the ports did not pass because the bombing had ended —for bombing of the ports did not reach its peak until May 1941— nor merely because of longer hours of daylight. Congestion of the quays disappeared because, although transport and storage space were still very scarce, there was a marked increase in the efficiency of management of existing facilities. It was not until May 1941 that a central control of storage was set up which could allocate the available space between port clearance and other demands. It was much later that the first real attempt was made to budget inland transport facilities and bring road, rail and water traffic into one co-ordinated system. In the spring of 1941, therefore, decisions about the claims of port clearance upon storage and inland transport had to be taken in the ports themselves. In the Clyde at least, port clearance became a finely planned operation in which everyone alike—shipowners, government, port and railway officials, master stevedores—knew and performed precisely defined duties.

Government departments helped the port authorities in several ways. In February 1941 each importing department emulated the Ministry of Food by employing a movement officer in each port to funnel all the department's demands for transport from the ports; these officers were responsible for knowing where every commodity was needed, whether the consignee could accept it and alternative destinations. Importing departments could also help by planning their import programmes well ahead in order to make sure that there were not sudden demands for large quantities of individual commodities, especially for those that were difficult to handle; the troubles caused by large arrivals of steel in the winter of 1940–41 were a cautionary lesson.

Another way of helping to ease port troubles was by loading cargoes so as to put as little strain as possible on the railways and coastal shipping. But this was very difficult. In ports abroad, the loading authorities were faced with immensely complicated requirements. To save shipping space ships should be loaded with the right combination of cargo bulky in relation to its weight and cargo heavy in relation to its bulk. To save time, ships must not discharge at more

than one port in the United Kingdom. There were, too, the intricate and changeable regulations by which ships were, and were not, allowed on the east coast. These were only a few of the problems and the loading authorities' task was doubly difficult because purchasing departments, in particular the Ministry of Supply, often did not know in advance the precise destination of the cargoes. It is not therefore surprising that the distribution of cargoes between the east and west coasts did not work out well; ships often had to call at more than one port or else there were unnecessary cross movements of imports from west to east England and from east to west.

But, though these loading difficulties still persisted at the end of 1941, the general port crisis was over by the spring of that year. Indeed, when the worst air attacks were launched against the western ports in May, the damage and delay they caused were extraordinarily small; the rate of turn-round of ships actually rose during the month. Reorganisation in the ports had prevented the threatened paralysis of British war economy and had increased shipping capacity by speeding up the turn-round of ships.

The attempts to increase the effectiveness of the merchant fleet by reducing the volume of tonnage immobilised under repair met with less success. By the beginning of 1941 there was grave concern over the mass of shipping held up in the ports for repair. Much research still remains to be done on the whole subject of ship repairs. On the surface it would seem that the machinery to determine priorities between merchant repairs, naval repairs, conversion and new construction of naval and merchant ships was inadequate. Nor was there any central machinery to distribute merchant ship repairs in the most profitable way between the repairing firms. During the spring and summer of 1941, the crisis was tackled by a variety of short-term expedients. Only essential repairs were permitted. Orders were given that, in general, repairs in the United Kingdom were not to be done if they would take more than six weeks to complete. Shipowners were directed to repair their ships abroad whenever possible and merchant ship repairs were given priority for two months over long-term naval repairs, new naval contruction (except escort vessels) and, if necessary, merchant ship construction. These expedients reduced the tonnage repairing in the United Kingdom by about half a million gross tons within four months and by about a million by the end of the year. But the cost was heavy. The amount of naval repairs was for some time reduced. The new construction and conversion of merchant ships were dislocated. The efficiency of repaired ships suffered because repairs had been cut to the bone. And in any case, the total volume of merchant shipping under repair did not decline; the ships sent for repair abroad carried the congestion with them.

So far, we have been considering the struggle to increase the supply of shipping and its carrying capacity. We must now turn to the third problem we undertook to examine, namely, the allocation of resources amongst the different claims upon them. There were three broad categories of demand—Service requirements, the needs of the cross-trades (that is, trade between ports in countries other than the United Kingdom and Eire), and of course the United Kingdom import programme. Within the import programme there were all the customary problems of deciding between competing claims of food and raw materials.

As has been seen, the shipping allocated to military demand had some importing value, but not nearly as much as it would have had if it had been directly allocated to United Kingdom importing services. The military demands upon shipping were strictly limited by the numbers of trained and equipped soldiers and airmen that could be spared from the defence of the United Kingdom; in the papers of the Chiefs of Staff and Defence Committees, shipping does not figure as a restriction on military plans until the very end of 1941. It was indeed fortunate that the shipping position, bad as it was, did not face this country with the choice between starving its war factories or its people and abandoning to the enemy its vital defences in the Middle East. As it was, it seems to have been generally agreed that the shipping necessary to meet the military demands must be found. What this amount should be was increasingly subject to review by a Military Requirements Committee which tried to prevent waste of space and urged the Services to programme their requirements more efficiently. Only in one special case were military requirements cut in the interests of the United Kingdom import programme. In March 1941, the Prime Minister was worried about the civilian meat ration. Meat imports competed directly with the Services for refrigerated ships which were usually large and fast and very useful as troopships, armed merchant cruisers and so on. An agreed scheme to bring in an extra 118,000 tons of meat per annum cost the Middle East 22,000 troops and their stores.

The demands of the Middle East were one reason for keeping so many British ships in the cross trades. The Import Executive was anxious to remove ships from these trades and use them exclusively to bring imports to the United Kingdom. It did not really need the pressure exerted by the Americans, who argued that the British could not so badly need help while they kept so many of their ships on the safe routes. But it was very difficult to bring these ships home. At the end of 1940, for example, 200 ships on the United Kingdom register were trading abroad. Of these, ninety-five were on local trading and were either unsuitable for other work or else engaged on Indian coasting work. Of the remaining 105, all but twenty were

either unsuitable for United Kingdom work or were taking war supplies to the Middle East, or were on the foreign leg of a triangular journey that brought them later to the United Kingdom or Middle East, or were on vital inter-imperial work. And these twenty were already being withdrawn. It was no easier to withdraw the Allied ships that were trading free in the safe zones. For example, although lend-lease removed the main reason for the Norwegians' anxiety to keep ships in the safe trades, it was commonly found that the ships in question were employed either on war work for Britain or on commercial work for the United States themselves: in the latter event, they could be withdrawn only at the expense of American interests.

The amount of British registered shipping trading abroad was about the same at the time of Pearl Harbour as at the fall of France—three million deadweight tons or so. It had become very important to make the best possible use of this shipping. But this was difficult, since in 1941 none of the demands on the tonnage operating east of Suez—other than the demands for the Middle East—had as yet been programmed. The authorities in London were faced with the problem of assessing demands which often came from politically independent territories, and of controlling supplies of shipping which consisted not only of British and British-controlled ships but also of a large number of free ships. British and British-controlled ships trading abroad were constantly under review. When it seemed that any service supplied by these ships could be abandoned, or that any Dominion-registered ship was urgently needed for the war zone, negotiations were begun with the Governments that would be affected.

To sum up so far: military needs for shipping in this period were not seriously questioned and very little tonnage could be brought home from trading abroad. In consequence, the third and major claimant on shipping—the British import programme—was a residuary legatee. There were three stages in drawing up an import programme. First of all, the Ministry of Shipping must provide an estimate of total importing capacity. Secondly, this capacity must be allocated between competing claims. Thirdly, the Ministry of Shipping must give effect to the allocation.

In the six months that followed the fall of France, the extreme uncertainty about importing capacity made it almost impossible to compose an import programme worthy of the name. At the beginning of June 1940, departments were told that it would be provident to count on no more than 35 million tons of imports, of which the Ministry of Food should have 15 million tons, the Ministry of Supply 19 millions and the Board of Trade one million. But while the Minister of Food and the Minister of Supply were still busy pointing out the immensely serious consequences of their 'hypothetical' minimum import programmes, the shipping situation was changed by the fall of France.

The immediate task then was to take advantage of the sudden shipping abundance to lift supplies from countries threatened by the enemy and to bring in the maximum amount of raw materials and easily stored food supplies. For the moment an annual import programme had become a little academic. It was agreed, however, that the temporary heavy imports must be used not for consumption but for stocks. Departments should aim at reducing food and raw materials consumption towards the level appropriate to a 35 million ton import programme. But it was also agreed to ease the transition to a drastic livestock policy by importing more animal feeding-stuffs than a 15 million ton import programme permitted and to help the Colonies and Dominions by continuing for the time being to import fresh fruit. The 35 million ton programme was therefore dead, not only as an estimate of importing capacity but as a guide to departments in framing their loading programmes and their consumption policies.

In August 1940, the Minister of Shipping was estimating importing capacity in the second year of war as between 38 and 42 million tons,[1] and departmental import programmes matched this calculation. In September, however, total imports were only coming in at an annual rate of just over 35 million tons; a slight improvement in October did not promise to be permanent. On 8th November the War Cabinet ordered a review of import programmes on the assumption that the United Kingdom could not import more than 35 million tons in the second year of war. Departments were also instructed to assume that the existing ratio between departmental programmes would be preserved, thus giving about 15½ million tons for food, 18½ million tons for raw materials and one million tons for miscellaneous items.

Again, the Ministers of Food and Supply reiterated the grave insufficiency of their shares of this programme. The Minister of Food alleged that the supply of calories would be perilously near the margin beyond which lay actual hunger. Unless and until a greater supply of food became available from home agriculture and the Government and public were willing to accept drastic changes in diet, these further cuts in food imports were not safe. The Minister of Supply argued that he could not cut his programme below 21·2 million tons without entrenching on the iron and steel requirements of essential transport services and war production. The arguments and rivalries were not resolved at this time by inter-departmental inquiry or by any firm decision possessing War Cabinet authority. At the end of the year, the initiative still lay with the importing departments and the Ministry of Shipping.

By the end of 1940, it was obvious that the methods for allocating importing capacity were wholly unsatisfactory. Importing departments

[1] See above, p. 249.

had drawn up loading programmes[1] for September, October and November appropriate to a total import figure for the year of 42 million tons, but in fact imports in those months only came in at a rate of 35 million tons. Loadings for December were arranged to match a 35 million ton programme but imports in that month were at a rate of only 30 million tons.[2] In these conditions, the absence of clear, ministerial direction on import programmes and priorities meant that the import programmes were in fact decided, as the Ministry of Food bitterly remarked, by 'a more or less obscure official of the Ministry of Shipping'. Officials of the Ministry of Shipping had indeed a thankless and difficult task. In arranging the loading of ships they had to wrestle with all the problems of shipping and port technique. They must try to make full use of shipping space and yet load ships down to their marks. They must take account of seasonal changes in shipping efficiency on certain routes and for certain cargoes, and of seasonal changes in the requirements of exporters and importers. They must find cargo suitable for particular ships loading in particular places.[3] On top of all this they had thrust upon them decisions involving high economic policy. Until the beginning of 1941, there were not only no firm directions on priorities between food and raw materials but the raw material import programme itself was not divided up into priorities. It is not surprising, therefore, that when the Ministry of Shipping was left to cut demands on shipping to fit capacity, the result was unsatisfactory. In September, October and November, for example, when total imports were at an annual rate of 35 million tons, the Ministry of Food was receiving imports only at the rate of 14 million tons a year instead of the 15½ million tons to which it was entitled.

The general dissatisfaction with the handling of import programmes led, at the end of 1940, to the establishment of the Import Executive.[4] The Ministry of Food, which was most dissatisfied of all, then had cause for jubilation. In January 1941, the Import Executive accepted 15·42 million tons as the Ministry of Food share of a total import of 35 millions, and agreed that the proportion allotted to food should be the same if imports fell below that total. The Ministry of Shipping was also instructed to arrange loadings to ensure that food got its full share of imports in the short as well as the long run. But imports were shrinking rapidly and by mid-March were down to a prospective

[1] Loading programmes were, of course, larger than arrivals programmes: they had to allow for sinkings and other misfortunes.

[2] Without allowing for seasonal differences.

[3] By 1942, the Ministry of War Transport in collaboration with the importing departments had developed great skill in translating the import programmes into practice.

[4] See Chapter VIII, p. 218 above.

total for the second year of war of 30 million tons, out of which food could claim 13·2 million tons. The Prime Minister was expressing alarm at 'the apparent tendency in our food policy towards a basal diet of bread, oatmeal, fats and potatoes'; he affirmed that there should be as little interference as possible with the normal consumption habits of the people and no unnecessary slaughter of livestock.[1] A few days later, the Minister of Food formally asked the Prime Minister that absolute priority be given to food shipments up to 15 million tons in the second year of war. The next day, the Prime Minister directed a fresh allocation of tonnage between the importing departments. Assuming total imports in the calendar year 1941 of 31 million tons, the Board of Trade should have one million tons and Food and Supply each 15 millions; any surplus or deficit should be shared in the ratio Food 1 : Supply 2.

Import programmes during 1941 were, then, settled on the basis of directions about the ratio in which competing claims should be satisfied. This was a great improvement on the previous arrangements where there had been no directions at all; but it was not in itself a very advanced stage of planning. The ratios were not fixed after detailed and critical scrutiny of departmental requirements but were rather a tribute to the superior persuasive ability of the Ministry of Food compared with the Raw Materials Department. At the time, indeed, the Prime Minister's ruling of March 1941 was greeted in some quarters with genuine horror. Disastrous effects upon war production and raw material stocks were prophesied. Only the previous November the Minister of Supply had said he could not manage on less than 21 million tons of imports and now he was told to expect not more than 15 millions. As for the food claims, it was difficult to believe that the British people were near their nutritional minimum when the extraction rate of wheat had not yet been raised, when feeding-stuffs were still to be imported and large areas of arable land were growing food for animals instead of for humans.

None of the prophesied disasters, however, came. Total imports for the year 1941 were only 30.5 million tons, of which 14·7 millions were food and 15 millions raw materials. Yet between the fall of France and Pearl Harbour food stocks rose by nearly 1½ million tons and raw material stocks by well over 2½ million tons.[2] Nor was war production held up by general raw material shortages.

It is clear in retrospect that minimum food requirements were considerably, and raw materials requirements wildly, overstated.

[1] The release of refrigerated tonnage to maintain the meat ration also came up at this time. See above, p. 263.

[2] Food stocks other than on farms, raw material stocks for materials covered by the import programme.

But the stock-building achieved during 1941,[1] out of an import total that would have seemed catastrophically low in the summer of 1940, was an impressive performance. It was paid for largely by adjustments in British industry and agriculture, by a rigorous reduction of exports, of capital equipment and of the civilian standard of living.[2]

(iii)

Inland Transport

In May 1941, the Ministry of Transport and the Ministry of Shipping—hitherto quite separate departments—were united into the Ministry of War Transport. This was logical. The Battle of the Atlantic might have been lost in the ports, where land and sea transport meet, or in the system of inland transport clearing the ports. Clearance of the ports, however, was only one part of the whole complex process of the inland transportation of civilian and military material and passengers. In the autumn of 1940, the efficiency of the inland transport system was being seriously strained by air raids and by the diversion of shipping to the west—difficulties that had long been expected. What plans had been made to take the strain? Had they been adequate?

The inland transport of the United Kingdom is divided between the railways, road transport, inland waterways and coastal shipping. An assessment of the relative importance of these services in goods traffic will vary according to the time and the methods of measurement. If we take 1944 we find that at that time the railways were carrying each month about 20 to 25 million tons of goods traffic, inland waterways about one million tons, road haulage about $4\frac{1}{2}$ million tons and coasters in domestic service $2\frac{1}{2}$ million tons.[3] Such figures are only very rough; moreover, in this case they refer only to the weight of commodities carried and not to the really significant measurement, namely, the weight multiplied by the length of haul.[4] But any other calculation would illustrate the same central fact—that railway performance is necessarily at the core of all transport plans.

To estimate in peace-time the strain on the railways in war would be in any circumstances an immensely complicated task. It would be

[1] Until the spring of 1941 it was nobody's specific business to watch the general stock position. In May 1941, the Lord President's Committee undertook a regular review and a statistical series was started for this purpose.

[2] See below, Chapter XII.

[3] Sir C. Hurcomb: 'The Co-ordination of Transport in Great Britain during the Years 1935–1944' (*Journal of the Institute of Transport*, Vol. 22, No. 3. May-June 1945). The figure for road haulage excludes the bulk of retail distribution and a large tonnage of commercial short distance traffic—both large but unknown quantities.

[4] Ton-mileage figures exist for the railways but not for other forms of transport.

necessary to calculate not only the volume but also the type and direction of imports and of all the most important movements of commodities about the country. On top of this goods traffic, allowance would have to be made for passenger movements—for ordinary travellers, for troops and for emergency calls such as evacuation. This picture of demand would have to be constructed on certain chosen assumptions. Not only must the planners have before them an outline import programme but they must know whether ships would be diverted from east coast to west coast ports and in what numbers. They must also make their assumptions about the reduction in the performance of road transport through cuts in petrol supplies, and of coastwise shipping through the removal of ships for other purposes, delays at sea and so forth. Against such a survey of demand would then be measured railway capacity and railway organisation. Would the railway track and signalling facilities be adequate in all sections? Would specific junctions, exchange points and marshalling yards be hopelessly overstrained? Would there be enough locomotives, enough wagons of both the ordinary and specialist kinds, and could these supplies be more efficiently organised than in peace? Moreover, in calculating railway capacity, allowance would have to be made for possible dislocations and reduced efficiency through air raids.

In the years before 1939 it would certainly have been impossible to draw up a balance sheet of this kind which had any claim to statistical accuracy. But statistical accuracy was not required. What was wanted was an attempt to see the problem as a whole and to form some provisional and general estimate of its size. This attempt was not resolutely made. In the First World War the railways had been severely strained. Transport conditions had of course changed greatly between the two wars, if only because of the growth of the road haulage industry. But there was much that was unknown about these changes. Existing knowledge was certainly not sufficient to warrant the conclusion that the railways possessed enough spare capacity to deal with almost any demands likely to be made upon them. This conclusion nevertheless dominated all inland transport planning up to the eve of the Second World War. Obsessed by the idea of 'surplus capacity' in peace time, the railway companies seem constantly to have overrated their capabilities in war.

Until the Munich crisis, the only attempt to estimate railway capacity was that contained in the report of the committee appointed to study the diversion of shipping to the west coast ports.[1] The committee had procured from the railway companies and port authorities estimates of the maximum tonnage that could be carried from each of the west coast ports. It had added up the answers and concluded that whereas the railways had carried under 17 million

[1] See page 124 above.

tons of traffic a year from these ports between 1927 and 1929, they had capacity for about 75½ million tons. But, as an earlier chapter showed, these calculations had taken each port in isolation and had paid no attention to traffic movements inland nor to the special facilities needed to carry particular goods.

A more promising approach to the problem of railway capacity in war time was begun by the inspecting officers of the Ministry of Transport. In 1936 they produced a list of some sixteen principal points and areas where congestion was most likely to occur if war came. This was only a rough preliminary survey but it would have been a good starting point for action. It was, however, almost immediately forgotten and was not considered again until May 1939.

Just after Munich, the Minister of Transport admitted that although numerous plans had been discussed between government departments and the railways, his Ministry had been unable to ascertain the total of demands and relate them to the capacity of the railways. An inter-departmental committee was set up to remedy the position. This committee formulated priorities for the guidance of the railways, but it made practically no headway in adding up demands and comparing them with railway capacity. Indeed, the sub-committee composed of the departments concerned with supply did not meet at all between the end of 1938 and the outbreak of war.

The Mines Department analysed its war-time demands on the railways; it seemed that the railways would have to carry about 250 million tons of coal a year instead of the normal 180 million tons, in addition to coal traffic diverted from coasters to the railways. The Food (Defence Plans) Department also produced a careful study of the effects upon inland transport of the diversion of food imports to the west coast. But there is no evidence that these two sets of figures were related to each other or to the capacity of the railways.

In the year before the outbreak of war, doubts were voiced in the Ministry of Transport about the possible achievements of the railways. The earlier estimates about clearance from the west coast ports were judged 'nonsense'. The Minister foresaw that there would be difficulties 'in placing a sudden demand on the railways for greatly increased traffic in unfamiliar channels'. But the optimism of the railway companies themselves was still very strong. In May 1939, the chairman of the Railway Executive Committee was assuming that the ton-mileage of goods traffic would increase by 100 per cent. but that, provided passenger traffic was drastically cut and the turn-round of wagons improved, the railways could discharge the burden.[1]

[1] This was subject to the need for individual examination of the west coast ports. In the event, railway capacity proved itself indeed highly elastic but much less so than these prophecies. In 1944 the railways were strained almost to breaking point with a goods ton mileage about fifty per cent. above pre-war.

It seems that any doubts by the Ministry of Transport were not strong enough to modify this general optimism. The Ministry's inspecting officers showed renewed anxiety about bottlenecks on specific lines at marshalling yards and junctions; but the railway companies did not share it.

The general sense of optimism about railway performance had many unfortunate results. When a severe strain on transport is expected, plans are obviously needed to keep all the main transport requirements and transport resources under continuous review. Machinery for allocating traffic between the different forms of transport is also necessary. All this in turn means that there must be machinery for assessing demands and also that the control over all forms of transport and of the main blocs of traffic must be effective. It would have been too much to expect in the last pre-war years and months coherent plans to handle all these problems. But they might at least have been studied systematically and persistently. Instead, on the outbreak of war the collection of the only good transport statistics —those for the railways—was suspended.

This optimism about the railways also meant that assumptions about war-time transport policy were accepted too easily. No one questioned the removal of coastal tramps from the coal trade. No one questioned the major premise that, in the interests of petrol economy, long-distance road transport must be reduced as much as possible. At the same time, the Ministry of Transport had considered that it would be impracticable to set up on the outbreak of war an effective organisation for mobilising and controlling road haulage vehicles: the control was left to the indirect sanction of petrol rationing. The control over canals was also to be loose. Only in coastwise shipping were the plans for control adequate to ensure that the vessels could be allocated to the uses where they were needed most.

As for the policy towards the railways themselves, it was considered sufficient to have a loose method of securing unified control. The general managers of the main railway groups, acting in committee,[1] would direct the co-ordinated operation of the railways as an instrument of the Government, subject to directives on policy framed by the Minister of Transport and transmitted to them through a Railway Control Officer.[2] Railway management was not carefully adjusted to the strains of war. As we have seen, when war broke out there was no detailed survey ready of the points on the railway system where congestion was likely to occur and where physical development would be necessary. Nor is there any evidence of a central review of the adequacy of the country's rolling-stock.[3]

[1] The Railway Executive Committee.

[2] Until March 1941 this officer was not a member of the Railway Executive Committee.

[3] Apart from an investigation made into supplies of mineral wagons.

Thus inland transport went to war. The railways played their part effectively in military mobilisation and in civilian evacuation and for some time coped successfully with their other burdens. The burden of railway goods traffic quickly increased as long-distance traffic was diverted to the railways from the roads, canals and coastwise shipping. Road transport was restricted by petrol rationing, and traffic was diverted from canals and coastal liners mainly because their rates rose so much higher than those of the railways.[1] Of coastal tramps there was a severe shortage; many had been requisitioned for military service and many were engaged on the short sea routes or in carrying cargoes to France. For all these reasons, by the end of March 1940, the ton-mileage of freight carried by the railways was about thirty per cent. higher than at the beginning of the war.[2] Aided by big cuts in passenger services, by the requisitioning of privately owned wagons and by heavier loading of wagons and trains, the railways dealt with this traffic without much difficulty.

The only real trouble of the first war winter arose over the transport of coal to London and the south. Before the war, the railways had been confident that they could carry the coal normally taken down the east coast by coasters. But when a shortage of coastal tramps developed in this trade in the first few months of war, stocks at the public utility undertakings in the south dwindled alarmingly. This accentuated the effects of the very severe weather that came in January and February 1940. An acute coal crisis developed. The crisis was met mainly by improvisation. The Ministry of Shipping released some ships for the coal trade. Train-loads of coal were requisitioned wholesale *en route*. The choked colliery sidings were cleared by despatching train-loads made up from coal wagons all going to a single destination. For three weeks, all coal, and not just coal for public utilities and munitions, was given priority on the railways at the cost of serious delays to railway traffic of all other kinds. This might have been an occasion for some salutary heart-searching, not only about methods of coal distribution but also about transport[3]. Were the established practices of railway management adequate for the burdens of war? Could the railways be expected to deal with large emergency movements of traffic except with the co-operation of other forms of transport? The Ministry of Food had long since concluded that they could not; it had made its own arrangements with the owners of refrigerated motor vehicles to ensure the distribution of meat. But, in general, the warning was not greatly heeded.

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[1] A subsidy to canal carriers did not come into effect until 1st June 1940.

[2] There are no official figures. This is taken from some estimates made in mid-1941 by economists in the War Cabinet secretariat.

[3] These paragraphs about the railway crisis are subject to review after further research has been completed.

The first months of war provided a hard winter but none of the really stern tests of inland transport that had been contemplated before the war. There were no air raids and no lasting diversion of ships to the west coast. Nevertheless, by the summer of 1940, the railways were modifying their optimism. When port capacity came once more under urgent examination, they once again declared themselves capable of carrying diverted traffic from the west coast ports; but this time they added provisos which in fact nullified their conclusions. They could carry this traffic only if there were no heavy rushes of other business, troop movements, evacuation, etc.; only if there were no air raids and no abnormal weather; only if the traffic from the ports came forward with reasonable regularity . . . In September 1940, the air raids and the diversion of shipping to west coast ports arrived together. With them they brought the inevitable transport crisis.

The transport crisis was primarily a railway crisis which manifested itself in many ways. The two main signs were the delays in clearing the ports, which have been discussed earlier in this chapter, and the serious difficulties in supplying coal to south and south-east England. But the trouble could also be seen all over the railway system. Railway embargoes on the acceptance of traffic multiplied, especially on the Great Western Railway. The immediate symptom of the transport congestion was a shortage of empty railway wagons for loading, whether at the ports, the collieries or at the goods stations. When some lines became blocked nearly back to the terminals and it was impossible to get loaded wagons away the disease was clearly becoming chronic.

In the autumn of 1940 there was a real shortage of the necessary specialised equipment for some kinds of traffic. There were, as we saw, not enough 'bolster' wagons for the large steel cargoes that were being landed at the west coast.[1] 'Macaw' wagons for timber were insufficient and the provision of the necessary 'hopper' wagons had not kept pace with the enormous increase in the output of iron-ore in the Midlands. But these were special cases. The railways were asked to carry more steel and more iron-ore, but at the time of crisis they were carrying about sixteen per cent. less freight traffic (expressed in ton-miles) than they had carried without great difficulty in June and July 1940.[2] In part, this was itself a result of the railway congestion, but it is also probable that the total demands on the railways were actually smaller. Imports were falling sharply and air raids were hindering production. Even the average length of haul seems to have been less from September onwards than it was in July and August.

[1] See above, p. 253.

[2] These are the estimates made in mid-1941 by the economists of the War Cabinet secretariat.

The cause of the crisis was not, then, a sudden increase in freight traffic. Wagons were not really scarce; they were simply taking far longer to accomplish their journeys and to unload. Why was this? In the first place, wagons were spending more time at junctions, exchange points and marshalling yards, while on some routes progress along the track itself was slow. One major cause was the change in the flow of traffic. The diversion to the west coast ports was primarily responsible; as we saw, the total imports into the west coast ports were lower in the autumn of 1940 than in the spring, but a much higher percentage was travelling inland by rail to unfamiliar destinations.[1] This brought great pressure upon junctions such as Carlisle, Crewe, Rugby and Bletchley, upon the points of exchange between the four main-line systems and upon particular routes—those from north to south, west to east, and south-west to north-east. Other changes in the flow of traffic were superimposed upon those caused by the diversion of ships. When South Wales' coal export trade ceased, the coal had to be sent, instead, to the east. The G.W.R. route from South Wales to London, indeed, became notorious for its congestion. Imports landed at Bristol Channel ports, and coal from Welsh mines, struggled to get through the Severn Tunnel, and as they travelled east they met other competitors for railway facilities. The west of England was popular for evacuation and passenger traffic was therefore heavy; moreover, before the end of 1940, over ninety new government factories had been established along the G.W.R. And at various points traffic from the north was trying to cross to the south.

Congestion was made worse by the inevitable results of air raids and air-raid precautions. There were instructions that, when air-raid warnings were given, trains must reduce their speed considerably. This, combined with damage on the lines, meant that planned movement on the railways broke down over wide areas, and the marshalling yards became still further congested through lack of engines or crews, or both. Efficiency in the marshalling yards suffered considerably through air-raid warnings. Good lighting was necessary and the blackout had already created difficulties, but when the approach of bombers was signalled, all external lights had to be extinguished. Actual damage of course made things worse. In Birmingham, for example, the G.W.R. and L.M.S. junctions were attacked twelve times during October and November 1940, and largely because of this, the average number of wagons exchanged daily between the two yards dropped from 950 to 680.

London was worst affected by the air raids. On 7th September 1940, for example, four out of six principal London goods depots

[1] See above, p. 253.

belonging to the G.W.R. had to be closed for over three weeks; on 29th September the number of wagons exchanged between the L.M.S. and the Southern Railway in London was less than a quarter of what is had been six months earlier. Since London is the centre of the British railway system, the damage infected traffic movements throughout the country. The most alarming direct effect of London railway conditions was the drop in coal deliveries to the south. In September, when sea-borne supplies fell heavily, rail deliveries of coal to London were only fifty-two per cent. of the monthly rate in the summer and fifty-six per cent. of the rate of the previous winter. A vast mass of loaded coal wagons began to pile up in marshalling yards and exchange sidings.

Many of the results of air attack were unavoidable; they would have been much worse if it had not been for the skill of the railway engineers in repairing damage and improvising resources. But there were additional difficulties besides air raids. The congestion of wagons in yards and sidings grew thicker as there accumulated another mass of loaded wagons of all kinds which no one knew what to do with. In South Wales, for example, some 10,000 wagons loaded with coal for France before the Franco-German armistice were still standing there in November 1940. In the ports, wagons stood loaded with imports which the importing departments could not or would not dispose of; for other miscellaneous imports the consignee could not be identified. Again, other loaded wagons stood about because bombing of consignees' premises delayed or prevented delivery to them. In many other cases, traffic was despatched at a rate far in excess of the ability of the consignee to accept.[1]

The confusion was made unnecessarily worse by the inadequacy of the arrangements for pooling railway wagons belonging to or requisitioned by the four main-line companies. When one company received from another wagons in excess of the number it had itself forwarded, it was still, in war time, supposed to return them empty to the owning company. But the principle of ownership determining the balance of wagons between the groups was highly unsatisfactory in war when changes in the flow and volume of traffic had entirely altered the requirements of the different groups. There was indeed no provision for an equitable distribution of wagons between companies according to their relative needs.

Many causes, then, contributed to the railway crisis of 1940–41. It would be difficult, even after much further research, to segregate them carefully and trace the effects first of one cause and then of

[1] One investigating committee reported: 'Wagons loaded by fifties or hundreds, are sent to consignees whose daily capacity for unloading is no more than three or four per day.' The Ministry of Food—always far ahead of other departments in transport matters—was not guilty of the sins described in this paragraph.

another; one weakness disclosed another, for the railway system is a highly sensitive whole and an infection in one part rapidly spreads through all the arteries and organs. And, if it is difficult to diagnose the disease, it is not much easier to measure the wastage that it caused. One cannot trace the innumerable dislocations which must have been caused by traffic delays and embargoes on the acceptance of traffic, nor can one measure the precise effects of transport difficulties on the turn-round of ships in the ports or on coal production and distribution.

Certainly, by the middle of October 1940, there was great anxiety about the effects of railway congestion and a general demand for action to cure it. The crisis lasted throughout the winter and early spring. Then recovery began. By the end of April 1941 the number of wagons standing under load for more than forty-eight hours had dropped from well over 90,000 in October, November and December to below 60,000. In the summer, the volume of freight traffic carried was returning to the level of the spring of 1940.

Clearly, these improvements in so short a period cannot have been achieved by fundamental reorganisation of transport resources. They were partly the result of longer daylight and the absence of air raids. Improvements of organisation also made their contribution. The improvements in the ports and in the ministries responsible for imports have been already described. And in January 1941, the Ministry of Supply at long last established a transport division. From February onwards transport officers of the Ministries of Food and Supply were stationed in the ports and were responsible for knowing where the imports were to be sent and whether the consignees had the facilities for unloading them. This helped to thin out the accumulation in yards and sidings of wagons loaded with unclaimed goods. Decisions by the shipping authorities also brought relief to the railways. More ships were sent to the east coast and there was a constant struggle so to arrange loading in ports abroad as to ease the strain on British transport.

Congestion at yards, sidings and terminals was also loosened by hastily improvised and skilfully administered measures to get rid of the vast mass of loaded coal wagons. In October 1940, the coal congestion was beginning to extend the whole way back to the pits, where many loaded wagons were blocked because it was impossible to get them through to the south. On 9th October the War Cabinet put the matter in the hands of the Lord President, who formed a special committee for this purpose. Under this committee's aegis, the Mines Department established a Standing Diversion Committee whose duty it was to find an alternative disposal for all the coal which, for one reason or another, could not be delivered to consignees in the southern towns served by lines running through London.

The committee did its work well, keeping track of all this undelivered coal and sending it to other consignees or else to the nearest government coal dump. There still remained the problem of getting coal across the Thames, where the rail-crossings were being fiercely attacked. The Committee initiated the preparation of special sites on the northern periphery of London where whole train-loads of coal could be unloaded and then transported by rail and road. But these sites and sidings were not ready until the transport crisis was really over; temporary arrangements were necessary to increase the supply of sea-borne coal to ports on the south bank of the Thames and to take rail-borne coal by barge across the river from the north bank. Other measures were taken to safeguard the coal supplies of southern England between the Thames and the Severn. Areas, which special transport difficulties were making into black spots, were dealt with by specially controlled traffic;[1] train-loads of wagons all going to a single destination were organised as in the previous winter.

The same inefficient organisation of railway wagons as afflicted coal distribution had plagued most other goods traffic. Perhaps the worst trouble had arisen over the heat-insulated wagons for which an unprecedented demand had arisen when large quantities of frozen meat had to be moved from the west coast ports to cold stores in or near London. A departmental inquiry was held and a scheme produced which brought all insulated vehicles, road and rail, under a central operating committee working from Amersham. After the middle of December 1940 when the scheme started, transport of meat was never again held up for lack of vehicles. In March 1941, the same pooling principle replaced the old arrangements which distributed wagons between the main-line companies according to their ownership. An Inter-Company Freight Rolling Stock Control was set up at Amersham to create a pool of wagons which could be distributed between the companies according to their actual needs and the conditions prevailing from day to day.

There were other measures to ease the wagon position. The shortage of specialised wagons was slowly overcome by improvisation and new building. Departments were persuaded to reduce the number of wagons they used, for example, for storing explosives. Finally, there was a general campaign for quicker unloading of wagons at the receiving end. It was at last realised that, just as in the 1914–18 war, it was useless to rely on stricter demurrage penalties to ensure speedy turn-round, since traders often preferred to pay the fines rather than unload quickly, and it was always difficult to collect outstanding penalties. More effective was the pressure for quicker unloading which was constantly exerted from the autumn of 1940 through

[1] This controlled traffic was never more than ten per cent. of the total coal traffic.

government departments concerned with the movement of large quantities of bulk commodities.

This wide variety of expedients was designed to improve the carrying capacity of the railways. But the crisis of 1940–41 decisively refuted the old pre-war assumption that the railways would be able to cope with almost any demands that war would make upon them. Help was badly needed from all other forms of transport, from the road hauliers, the canals and the coastal ships. Without the coastal ships the transport crisis would have been incomparably worse. At the time of the crisis, the railways alone could not have handled that additional traffic of coal, sulphate of ammonia, sugar-beet and scrap-iron, which the coasters carried. While the coasters played a notable part in relieving the railways, road transport and canals did not. When the crisis broke, road transport was not sufficiently organised to meet it. Local road transport pools were set up in the west coast ports, but local resources were not enough and in the absence of proper control it proved impossible in some areas to obtain from other areas the fleets of vehicles needed for urgent port clearance. Nor was the canal position much more satisfactory; matters had drifted and the canals were suffering from a shortage of craft and of labour.

The transport crisis of 1940–41 was overcome, then, not by major reorganisation or an integration of transport resources, but by 'a variety of expedients and some narrow squeaks'.[1] Some particular transport problems such as the clearance of the west coast ports had been solved partly by the grant of railway priorities. But this only created new problems. Traffic outside the limited priority class was crowded out and embargoes on the acceptance of traffic became more frequent.

It was in fact abundantly clear that war would demand an immense transport effort which, as yet, the transport services were neither equipped nor organised to sustain. There emerged from the troubles of this winter four main lessons. First, the physical capacity of the railways was inadequate. Secondly, government control over the railways was inadequate. Thirdly, the controls over road transport and canals must be strengthened. Fourthly, a new, broad approach to inland transport was needed; demands must be matched against resources and traffic so allocated that the utmost use was made of the resources.

Following the winter crisis, some action was taken under each of these four heads. To consider first the problem of railway capacity: the need for enlarging it had been to some extent recognised in the first months of the war. Under pressure from the Ministry of Transport, the Railway Executive Committee had brought forward schemes for

[1] The words were used about coal distribution by the Lord President.

new works of an insurance character or for works on heavily burdened routes. By May 1940, about £1 million of work had been authorised and by March 1941 another £1 million. But little of this work was ready in time to meet the 1940–41 crisis and at the end of 1940 it was admitted that the railways had looked ahead in 'small and unrealistic terms'. In November 1940, the chairman of the Railway Executive Committee presented a scheme for new works on main routes which would cost £10 millions and take two years to complete. This scheme was in the end scaled down to a £5 million scheme in which most of the work could be completed within one year.

In the spring of 1941, there was widespread dissatisfaction with the control over the different forms of transport. Not least were the complaints about the railways. The original financial agreement with them had been intended to buttress the control exercised through the Railway Executive Committee, by providing an incentive to efficiency.[1] But the combined effect was not impressive. In the spring of 1941, the Ministry of Food was loud in its complaints against the railways; they had defied instructions to give the Ministry special rates and had displayed in other ways—so the Ministry complained—a purely commercial outlook wholly inappropriate in war time. The Minister of Transport admitted to the Lord President's Committee that the co-ordination and unity of effort secured by the existing management was insufficient. In the end, revision of the financial agreement[2] was combined with the appointment of a Controller of Railways in the Ministry of Transport who would also take over the Chairmanship of the Railway Executive Committee. The new Controller took office in August 1941.

Reorganisation of control on the roads and canals came more slowly. The third winter of the war was almost gone before there was any effective scheme for controlling road haulage. From May 1940 onwards successive committees worked to prepare one; but opposition came from almost every quarter in turn and a first control was not established until February 1942. It proved unsuccessful. Canal control, however, was strengthened in the summer of 1941 by the appointment of regional committees. Since the transport-using departments were represented on these committees, there was some assurance that the canals would serve suitable traffic.

Meanwhile the Ministry of Transport had begun to appreciate the need for planning transport resources in advance and planning them as a whole. In April 1941, it established a Central Transport Committee composed of persons representing the major interests in traffic movements—the heads of the railways, docks, road transport and canal divisions of the Ministry of Transport and the chairman of

[1] See Chapter VI above, p. 162.

[2] See Chapter XII below, p. 341.

the Railway Executive Committee.[1] Its task was to consider large transport requirements, to co-ordinate them and allocate them between the various forms of transport, and, where necessary, to make plans for the development of transport resources. In May 1941, the formation of the Ministry of War Transport promised better co-ordination between shipping, port and transit facilities.

The immediate fruit of this new approach was seen in the summer of 1941, when for the first time a serious attempt was made to forecast the load on the railways in the following winter. The calculation that emerged—that the volume of freight traffic originating on the railways would be nine per cent. greater in 1941–42 than it had been during 1940–41—was necessarily rough and ready. But it supplied a basis for making claims for the necessary priority for locomotives, and it also encouraged plans for transport economies—for rationalisation of distribution and reductions in passenger traffic. These plans and transport conditions in 1941–42 will be described more fully in Chapter XVI below. When winter came, the new Ministry of War Transport had not had time to produce drastic or sufficient changes in the organisation of inland transport. But it had at least made a beginning.

[1] The Chairman of the C.T.C. was a high official of the Ministry of Transport.