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10.1 Introduction

Some of the most radical reforms in the privatization program have occurred in the transport industries, particularly air and road. British Airways, the British Airports Authority (now BAA), National Freight, Sealink ferries, Associated British Ports, and subsidiaries of the National Bus Company have been transferred to the private sector, along with the aerospace companies British Aerospace and Rolls-Royce. The scope of competitive forces in transport has been widened by the deregulation of coach and bus services, and by some steps toward the liberalization of domestic and international air services. New methods of regulation have been introduced, for example in the operation of airports. These developments, and the debates about ownership, competition, and regulation that have attended them, are the concern of the present chapter.

The next section describes the privatization of British Airways, and the steps that are being taken to introduce some competition on domestic and international routes. However, the company was sold with its dominant position—in terms of market share, routes, access to airports (especially Heathrow), and fleet—substantially intact, and its market power is bolstered further by the acquisition of British Caledonian, hitherto its principal U.K. competitor. An important question is whether the new threats of entry, and policy against possible anticompetitive practices, will be effective in constraining the market power that British Airways derives from its established (and now strengthened) market position.

Section 10.3 is concerned with the privatization of BAA and the regulation of airport pricing. No attempt was made to promote competition between airports: monopoly was simply transferred to the private sector. The valuable part of the sale was not so much the air traffic activities, but the prime site property and shops at airports together with their duty-free tax concessions. We consider possible inefficiencies of resource allocation arising from the pricing and investment policies for airports, and we examine the merits of the proposal that BAA should have been split into competing units prior to sale.

10.2.1 Competition and Regulation in the Airline Industry

Throughout the world the airline industry is heavily regulated. As well as the necessary regulation of safety, security, and environmental (e.g. noise) standards, there is a high degree of *economic* regulation. Governments are closely involved with the allocation of routes, the licensing of airlines, the setting of fares, and airports policy. Following the deregulation of the domestic airline industry in the United States in 1978, moves towards liberalization are being made in many countries, but progress is slow and patchy. The deregulation of international routes is inhibited by the need for multilateral renegotiation of air services agreements between governments, and domestic deregulation depends on the attitudes of particular governments. The limited extent of liberalization so far bears witness to the strength of many existing airlines in resisting the arrival of effective competition.

The fortunes of airline companies are nevertheless quite volatile. Profits are very sensitive to demand because of the high fixed (though not necessarily sunk) cost of operating a fleet of aircraft. The marginal cost of carrying additional passengers on a route is low, and "load factors" (i.e. the extent to which aircraft are full) are of critical importance. Demand uncertainties are therefore magnified in terms of their impact on profits. There is also much uncertainty on the cost side, because financing charges and fuel costs account for a large proportion of total expenditure, and both tend to be volatile. Finally, there is exchange rate uncertainty. Competition (where it exists) further affects these uncertainties, because price is free to oscillate more than in a highly regulated regime. But competition sometimes diminishes profit uncertainty insofar as price movements tend to be correlated with cost changes so that the volatility of profit margins is dampened.

The nature of competition and regulation varies from route to route. It is instructive to begin with the most liberal domestic regime—the United States—where deregulation occurred in 1978. (Safety regulation of course remained.) Bailey (1986) reports on the experience of deregulation in airlines and other industries (see further Graham *et al.* (1983) and Bailey *et al.* (1985)). On average air fares fell significantly, and cross-subsidies were eroded as prices came more into line with costs. Productivity improved, and the wages of airline employees were sharply reduced. Consumer choice widened and more price/quality options became available. However, these mostly desirable consequences of deregulation have recently been followed by more disconcerting events. Competitive failure and merger activity (in which the authorities have been reluctant to intervene) have caused an

increase in concentration, with the six largest airlines increasing their market share from 73 percent in 1978 to 84 percent in 1986. Fears have been expressed that the initial bout of competition will be followed by cosy oligopoly unless antitrust policy is sufficiently vigilant. A particular danger is that airlines derive local market power from their "hub and spoke" networks centered on major airports. American experience in the past decade has important lessons for other countries (and groups of countries) that are moving towards liberalization. The rapid restructuring of prices demonstrates the inefficiency and inertia that regulation can sustain, but the recent trends towards a more concentrated market structure show that there are forces in the industry that might threaten the benefits of liberalization unless they are somehow held in check.

Domestic routes in the U.K. have also been substantially deregulated in the 1980s. Regulatory barriers to entry have been diminished, and competitors providing services on both new and existing routes have entered the market. However, policy on access to airports (especially Heathrow) can pose difficulties for competitors. Restrictions on fare setting have been relaxed, and approval of fares by the CAA is no longer required: notification is sufficient. Pricing is subject to regulation only insofar as it is found to be anticompetitive, for example predatory pricing.

It is not yet possible to make a definitive assessment of the effects of airline deregulation in the U.K., but the initial evidence suggests that its impact has been positive, if not dramatically so. Traffic volume has grown, and independent operators such as British Midland have increased their market shares at the expense of British Airways. Competition has grown on some routes, and services have consequently improved. Fares on U.K. routes have tended to come down since liberalization, at least on the main trunk routes, and they are generally lower than on comparable routes in Continental Europe. Special discount fares have become more prevalent, and are perhaps the most obvious manifestation of increased competition.

The economic regulation of international scheduled services is for the most part based on bilateral "air services agreements" between governments, which give each government the power to designate one or more of its national airlines to operate the service in question. Air services agreements often specify capacity limits for incumbents, require fares to be approved, and regulate entry. Many fares are coordinated by the airline cartel IATA. Thus the identity and behavior of route operators is determined to a large extent by government decision rather than competitive forces. Airlines may compete to be awarded the routes by government, but that competition is essentially rent-seeking activity.

To win government designation for an international route, a British airline must obtain a licence for that route from the CAA and permission from the foreign government. In Europe (see McGowan and Trengrove, 1986) the U.K. has negotiated relatively liberal air services agreements with the Netherlands, Belgium, and Luxembourg, which deregulate fares, capacity, and entry. The agreements with West Germany and Switzerland are pro-competitive to a limited extent, but other European countries—notably Denmark, Greece, Italy, Portugal, and Spain (who have state airlines)—are more hostile to deregulation of European air services. The Civil Aviation Act 1982 lays down the criteria to which the CAA must have regard in granting licenses, which include efficiency, profitability, consumer benefit, and so on. Competition for licenses to operate new routes is more effective than competition for licenses on existing routes, because revocation of licenses is relatively rare. Thus there is a considerable incumbent advantage. However, bilateral liberalization policies are offering some opportunities for entrants to seek to gain access to routes already flown. For example, in mid-1987 the CAA granted route licenses for scheduled services between Gatwick and nine European cities to Air Europe, a charter airline owned by the International Leisure Group. The CAA also granted some routes to British Caledonian. These licenses are subject to approval by the European countries concerned, but this is likely to be given in most of the cases in question and it is clear that competition to British Airways is growing in this area.

Some attempts to liberalize European civil aviation in the EEC as a whole have also been made, but they have so far met with little success. The national airlines have in the past enjoyed effective immunity from the provisions of EEC competition law (Articles 85 and 86 of the Treaty of Rome), but in 1986 the European Court ruled, in a case brought by the Nouvelles Frontières travel group, that the air transport sector was in principle subject to Community competition rules. Following this judgment, the European Commission began litigation against national airlines alleging a variety of anticompetitive practices. It remains to be seen whether this action against cartelization will succeed in the Court. At the same time the governments of the Member States deliberated a compromise package that would have brought a very modest degree of competition to European routes. However, talks broke down at the end of June 1987 (because of a dispute about the status of Gibraltar airport). Thus the initiative for reform now seems to lie with the Commission. If their action succeeds, liberalization may go much further than that proposed in the compromise package that failed to win acceptance.

Services between the U.K. and the United States are governed by the "Bermuda 2" air services agreement, which is more liberal than most international agreements, although fares, capacity, and entry are regulated to some extent. Competition on North Atlantic routes has been quite keen, and the major airlines have had to respond to low cost operators such as Laker, Virgin, and People's Express, which have met with varying degrees of success. There has also been some competition with other European airlines such as Air France on North Atlantic routes.

Airports policy is another important element of the framework of competition and regulation, because the demand for the services of an airline is influenced by the location of the airports it uses and the ease of transferring to connecting flights. This last factor gives rise to a kind of "network externality" inasmuch as flights to or from busy airports are especially desirable. This gives a competitive advantage to an airline with rights at a major airport hub.

10.2.2 British Airways

BA's main business is the operation of international and domestic scheduled passenger air services. It also runs charter services (through its British Airtours subsidiary) and cargo services. Its international route network, which covers 145 destinations in 68 countries, is arguably the best in the world, and measured by passengers carried BA has a larger share of the market for international scheduled services than any other airline. Its center of operations is at Heathrow, the world's busiest international airport. At the end of 1986 BA had a fleet of 163 aircraft. Of these the 51 long-haul aircraft for intercontinental routes included 31 Boeing 747s and seven Concorde, and 70 of the 112 short-haul aircraft were also Boeings.

Until 1984 BA was a public corporation run by a Board appointed by the Secretary of State for Transport. It became a public limited company on 1 April 1984 in readiness for privatization, but almost three years elapsed before its shares were sold to private hands. In the public sector BA's financial performance had been poor for some years, but a strong improvement in its performance occurred after Lord King became Chairman in 1981 and assembled a new management team. Table 10.1 gives information on BA's turnover and profits for the past six years. The improvement from 1982 to 1984 is especially notable. Demand growth and currency movements were helpful factors, but internal efficiency measures were the driving force. The number of BA employees fell by almost a third—from 54,000 to 36,000—in the early 1980s, and labor productivity consequently rose substantially. Modernization of the fleet of aircraft made for fuel efficiency improvements, and computerization provided

Table 10.1 BA's financial performance, 1982-1987

Year to 31 March	Turnover (£ million)	Operating surplus (£ million)	Pretax profit (loss) (£ million)
1982	2,241	12	(108)
1983	2,497	185	74
1984	2,514	268	185
1985	2,943	292	191
1986	3,149	198	195
1987	3,263	173	162

Source: *British Airways Prospectus* (1987) and *Annual Report and Accounts* (1987).

further efficiency gains. At the same time BA's marketing approach changed, and services became more customer oriented. The fall in profits in 1986-1987 was due largely to the reduction in transatlantic traffic in the summer of 1986 following the Chernobyl and Libyan incidents. It does not reflect a deterioration in BA's operating efficiency.

It is worth emphasizing that the main improvements in financial and productivity performance occurred two years or so *before* privatization, while BA was still in the public sector (on productivity trends see table 5.6 in chapter 5 above). BA was clearly a leading candidate for privatization at the time, but the monitoring and incentive systems of private ownership (see chapter 2 above) were not in place. BA's experience therefore shows that public ownership is no bar to major efficiency gains. It may well be that the impending prospect of privatization fostered keener commercial objectives in BA's management, but it is not clear that it was essential for that to happen. We attach importance to the fact that BA was operating in an industry where competition existed and was growing at least in major business segments, and where performance comparisons with other airlines were readily available. In short, the changing framework of competition and regulation, together with the energy of Lord King's new management team, were key factors.

Finally we should briefly describe the litigation which delayed BA's flotation. Late in 1982 the liquidator of Laker Airways brought a treble damages suit for \$1 billion in the U.S. courts against BA and other airlines alleging that they had conspired to put Laker out of business. Similar actions were initiated in 1984 and 1986 by creditors of Laker. The cases have all been either settled or dismissed. An important question that arises from the Laker cases is the extent to which BA is subject to American antitrust laws in relation to its transatlantic services. Given that American antitrust law is tougher than U.K. or EEC competition law relating to airlines, this issue has a significant influence on the framework of

competition and regulation faced by BA on some of its major routes. The U.S. courts have held that international airline services are within their jurisdiction, but the U.K. Government has maintained that American antitrust law is not applicable to air services authorized under the Bermuda 2 agreement. The matter has not yet been fully resolved. It is an interesting example of how international frameworks of competition and regulation can affect a privatized U.K. firm.

10.2.3 Government Policy for Airlines

Following a review carried out by the CAA (Civil Aviation Authority, 1984), the U.K. Government set out its airline policy in the White Paper on *Airline Competition Policy* (Department of Transport, 1984b). This document established the framework in which the privatized BA was to operate for the foreseeable future.

In the White Paper the Government stated four main objectives in addition to the maintenance of high standards of safety:

- (i) to encourage a sound and competitive multi-airline industry;
- (ii) to promote competition in all markets both internationally and domestically;
- (iii) to ensure adequate safeguards against anticompetitive or predatory behavior by airlines;
- (iv) to privatize BA.

However, the Government's response to the CAA's report on airline policy was by no means radically pro-competitive.

The CAA made several recommendations designed to promote competition by reducing the extent of BA's dominant position in the U.K. airline industry and enhancing the scope for independent airlines to compete effectively. Among other things, the CAA recommended the following:

- (i) there should be at least one airline fit to replace BA on any major intercontinental route if necessary, and additional competition by British airlines on those routes should be licensed where possible;
- (ii) BA's routes to Saudi Arabia and Harare should be transferred to British Caledonian;
- (iii) BA's scheduled service routes from Gatwick should be taken over by other British airlines;
- (iv) BA's routes from provincial airports should be taken over by other British airlines.

The Government rejected the proposed route transfers, taking the view that the independent airlines had grown and would continue to be able to do so provided that fair competition prevailed. Instead, the Government favored a voluntary agreement between BA and British Caledonian to exchange routes and boost British Caledonian's financial strength. In the event, the two airlines agreed to exchange BA's routes to Saudi Arabia for British Caledonian's faltering routes to South America.

This exchange was much less favorable to British Caledonian than the CAA proposal. Moreover, the fall in oil prices in 1986 badly affected the profitability of the Saudi Arabian routes, while ironically the South American routes picked up. In the event the exchanges did not achieve the objective of securing British Caledonian's independence, and the company became vulnerable to takeover. The BA takeover is discussed in section 10.2.4 below. The CAA proposals would have given British Caledonian a greater chance of survival as an independent force in the industry.

The Government also turned down the proposals that other airlines should take over BA's scheduled service routes from Gatwick and provincial airports. It was argued that BA's presence enhanced the stature of those airports. The other British airlines would have benefited from the changes recommended by the CAA, and so they were among the losers in relative terms. However, BA offered to provide independent airlines other than British Caledonian with up to £450,000 per route to help to develop up to 15 new European routes from regional airports. There is a good case for saying that the interests of consumers (i.e. air travellers) were also damaged by the Government's decision not to restructure BA to promote competition. We shall pursue this question when we consider the BA-British Caledonian merger proposal and offer an assessment of policy in the next section.

The Government's response to other recommendations by the CAA was more favorable. It welcomed the proposal that domestic fares should cease to require specific approval by the CAA, and the proposed introduction for a two-year experimental period of an area licensing facility allowing airlines to fly between any two points in the U.K. The Government also endorsed the CAA's intention to use its licensing powers to increase the range and market penetration of European scheduled services from Gatwick Airport. However, the Government did not agree that CAA powers needed strengthening in order to promote effective competition and to guard against the danger of anticompetitive behavior.

10.2.4 Concluding Remarks

By international standards the U.K. Government has been relatively liberal in its attitude towards deregulation, and its stated objectives are pro-competitive. However, its negative response to the CAA's proposals to reduce BA's dominance was not in keeping with its pro-competitive intentions. It is hard to avoid the conclusion that the Government was greatly influenced by the impending privatization of BA and by the company's management in particular. Lord King forcefully opposed reductions in BA's relative size, and stressed that the company was already undergoing a tough efficiency drive that involved a sharp decrease in staff numbers. With privatization so close at hand, BA's management was in a strong position in its dealings with the Government, and the CAA's proposed route transfers were successfully avoided.

What options could the Government have chosen to promote its stated competitive objectives more fully? (See Ashworth and Forsyth (1984) and Forsyth (1984) for a fuller discussion of this question and related issues.) Broadly speaking, routes (including landing rights) can be allocated to airlines in two ways—by government franchise or by market forces. There is scope for competition even in the case of highly regulated routes, provided that airlines compete effectively for the government franchises. Competition can occur when a new route becomes available and if existing routes come up for regular renewal. It is essential for effective competition that there should be several airlines capable of competing in this way. Otherwise competitive disciplines will be undermined by incumbent advantages or the danger of collusion between the few. In fact, however, BA faces little competition on many major routes, and it enjoys the great advantage of privileged access to Heathrow. BA's size in relation to the independent British airlines means that there is no prospect of the independents displacing BA on a large number of its existing routes. Moreover, it is Government policy that it will not lightly revoke licences currently in use in any case.

The route transfers proposed by the CAA can be criticized on the grounds that they would have done little to promote competition directly, but they would have had the indirect benefit of strengthening the position of the independents in a way that enhanced the prospects of realistic competition between British airlines—competition both *in* the market and *for* the market. This last point calls attention to the criteria upon which routes (including landing rights) are awarded. These are usually loosely defined, and the CAA has relatively little information (about efficiency etc.) to go on. The monopoly rents can be considerable, and airlines

therefore have an incentive to engage in socially wasteful rent-seeking activity. Ashworth and Forsyth (1984) discuss the possibility of auctioning franchises to routes or groups of routes. Such a system offers several advantages. Routes would be granted according to a clear-cut criterion. Efficiency would be encouraged insofar as routes would tend to be allocated to the airlines best able to operate them, and efficient operation of those routes would be further stimulated. Wasteful rent-seeking activity would also be discouraged.

A further step in the same direction would be to allow airlines to sell or trade the route franchises that they owned. This again would enhance the efficiency of both the allocation and the operation of routes, because a mechanism would exist for the mutually advantageous transfer of routes from less efficient to more efficient operators. Moreover, the transfer mechanism would advantageously exploit the information of the airlines, which is naturally greater than that available to regulatory authorities. As before, the operation of a system of this kind would require a multi-airline industry capable of providing adequate actual and potential competition. It would also require changes to airports policy, which we shall consider in the next section.

Market forces have more play in routes, such as domestic routes, where deregulation is happening. Competition can occur in the market, rather than for the market via the regulatory process of route allocation. Sunk costs need not be high, because aircraft can be leased and in the case of existing operators can be switched from route to route. However, entry barriers can result if some airlines enjoy privileged access to important airports, as BA does in the case of Heathrow. Access is privileged in the sense that BA pays less for its landing rights than others would pay for them: it is enjoying a scarce input at below market prices. Furthermore, strategic entry barriers can result if incumbent operators can credibly threaten predatory behavior against new entrants. The ability of an airline such as BA to withstand an episode of predatory pricing is so much greater than that of most independents that this is a serious concern. Of course the Laker litigation was about exactly this question. The need for vigorous policy against anticompetitive behavior is self-evident. It is disturbing that the CAA believes that its powers need strengthening in this regard, but that the Government is satisfied that they do not. However, the Government has ended the immunity of domestic and charter services from the provisions of the Competition Act 1980.

British airline competition policy was thrown into turmoil in July 1987, only a few months after privatization, when BA and British Caledonian

announced their intention to merge. BA's agreed bid for its principal U.K. competitor was valued at £237 million, a considerable premium over British Caledonian's net asset value of £97 million at 31 October 1986. In favor of the merger it was contended that British Caledonian was in a precarious financial plight and vulnerable to takeover (probably foreign) in any event. In the year to October 1986 it made a pretax loss of £19.3 million owing to the adverse effects of falling oil prices on its Saudi and Nigerian routes, and the fall in traffic caused by the Chernobyl and Libyan incidents. Nevertheless the airline was set to return to profitability in 1987, and it would have enjoyed a sounder financial position if the Government had accepted the CAA proposals described above. Secondly, it was argued that the merger would cut overhead costs, reduce duplication of some services, and encourage more business from passengers transferring between flights. Thirdly, it was contended that the competitive threat from giant American airline combines required the union of the two main British airlines.

However, the merger posed very serious threats to competition. Under the terms of the original bid BA would come to dominate Gatwick as well as Heathrow, its share of international scheduled services would rise from around 82 to 93 percent, and its share of U.K. domestic services by U.K. airlines would rise to about 60 percent. Moreover, the merger threatened to make a mockery of the Government's airline competition policy set out in the 1984 White Paper and reaffirmed so recently in the BA share prospectus. The first objective of that policy was "to encourage a sound and competitive multi-airline industry." The case for referring the merger to the Monopolies and Mergers Commission (MMC) was overwhelming, and despite intensive and controversial lobbying by BA, the Secretary of State duly accepted the recommendation of the Director General of Fair Trading to make a reference. In order to avoid prolonged and damaging uncertainty, the MMC was given three months, rather than the usual six, to produce its report.

The MMC reported in November 1987 that under revised terms proposed by BA the takeover was not against the public interest. Thus the way was cleared for BA to make a new bid for British Caledonian. BA proposed that the merged company would surrender British Caledonian's five domestic route licenses and some European route licenses. However, the merged firm intends to reapply for those route licenses in competition with independent airlines. BA also proposed to withdraw British Caledonian's objections to Air Europe's applications for some European routes, and not to oppose bids by other airlines for long-haul route licenses where multiple designation is possible. However, BA intends to keep all

British Caledonian's intercontinental routes. The preponderance of the merged firm in the British airline industry—in terms of fleet, crew, and existing route network—is such that competition for the surrendered routes is unlikely to be fully effective. Following a battle with Scandinavian Airline Systems (SAS), BA finally won control of British Caledonian in December 1987.

We have to conclude that the record of the U.K. Government in promoting competition in airlines is mixed. Its declared attitude towards the deregulation of domestic and international (especially European) services contrasts favorably with the illiberal attitudes of some other countries. But in the case of BA its actions were less than actively pro-competitive. BA's dominance of the U.K. airline industry has been maintained, and indeed extended by the takeover of British Caledonian, its principal competitor. That event undermined a central element in previously stated airline competition policy, but might have been averted if the Government had strengthened British Caledonian's chances of survival as an independent competitive force by accepting the CAA's recommendations on route transfers in 1984. In BA's case as in others, we believe that the desire to enhance the proceeds from privatization, and the strong bargaining position of management, played no small part in shaping the framework of competition and regulation for the industry.

10.3 Airports

The privatization of BAA (formerly the British Airports Authority) in July 1987 is perhaps the clearest example of the Conservative Government's preference for regulated private monopoly over public monopoly. Given the Government's decision not to divide BAA into potentially competing parts, its privatization had virtually nothing to do with competition. Moreover, since the great majority of those working on BAA premises were already employees of private firms (shops, banks, restaurants, etc.) or will continue to be public employees (air traffic controllers, customs officers, etc.), the privatization did not do a great deal to increase the scope of private operations at airports. Mainly it was about the transfer to private hands of valuable *assets*—runways, terminals, car parks, prime shopping sites, and tax concessions.

This section has four parts. The first describes Government airports policy as set out in the 1985 White Paper, which gives useful background, for example concerning plans for the future development of airport capacity in the U.K. We then outline BAA's main activities, its financial

performance, and its pricing policies. Thirdly, we describe the new regime of price regulation, and finally we offer an assessment of BAA's privatization. The unusual method of selling BAA's shares, which combined an offer for sale and a tender offer, has already been discussed in chapter 7 above.

10.3.1 Airports Policy

The privatization of BAA is just one element in Government airports policy, and it should be viewed in the wider context. The central problem for airports policy over the years has been to accommodate the rapidly growing demand for air travel without undue damage to the environment. Proposals to establish a third major airport near London, successively at Maplin or Stansted, and plans to extend capacity at Heathrow and Gatwick have been the subject of intense controversy. The role of the regional airports in national policy has also been much debated. A series of public inquiries has taken place, and discussion documents and White Papers have been issued. The most recent is the 1985 White Paper on *Airports Policy* (Department of Transport, 1985), which is the focus of this section. The White Paper has two main parts: the first considers the development of airports in the U.K., and the second outlines reform of their ownership and regulation, notably the privatization of BAA.

Airport capacity is determined by two principal constraints: the capacity of airport terminals to handle passenger movements, and the capacity of runways safely to handle aircraft movements. Expansions in terminal capacity at London's main airports (i.e. the fourth terminal at Heathrow and the second at Gatwick which opens in 1988) have made runway capacity the binding constraint. The White Paper estimated that the effective capacity of London airports in 1995 would be 64.5 to 70.5 million passengers per annum (mppa), with Heathrow and Gatwick respectively accounting for about 60 percent and 32 percent of that capacity, and Stansted and Luton making up the residual.

The Government's principal measure to meet the anticipated growth in demand was to approve planning permission for the development of terminal facilities at Stansted up to a capacity of 15 mppa. This development is to occur in two phases of 7–8 mppa each, with the second phase requiring Parliamentary approval. The capacity limit is determined by terminal space: Stansted's runway could handle 25 mppa (depending on aircraft size and mix), and further development of the airport to utilize runway capacity might occur in the more distant future. The Government

reaffirmed the policy that Gatwick should remain a single-runway airport, and stated that the possibility of a fifth terminal at Heathrow would be kept under review. A modest development of Luton Airport was also proposed.

The measures above are concerned with meeting demand in the southeast, but the White Paper also envisaged a greater role for the regional airports where capacity is less intensively used. Outside London the two "gateway international" airports for long-haul services are Manchester and Prestwick. Together with Aberdeen and Birmingham they handle about 70 percent of regional traffic. The smaller regional airports include Newcastle, East Midlands, Leeds, Liverpool, Cardiff, Bristol, Teesside, Glasgow, and Edinburgh. The regional airports jointly handle about a third of passenger traffic at U.K. airports. Domestic traffic accounts for approximately 45 percent of their business, and international scheduled and charter traffic account for about 10 percent and 45 percent respectively.

The Government stated its belief that airports should be free to compete as far as possible, and its concern to encourage the growth and development of regional airports. It declared its readiness to approve financially justified capital expenditures for expansion of regional airports, and its intention to develop Manchester as a regional hub airport. The regional airports also have a part to play in relation to the partial liberalization of airline services (see section 10.2.3). Finally on airport development, the White Paper discusses airports for business aviation, including the new "Stolport" (i.e. short takeoff and landing airport) in the East London dockland, and helicopter ports.

The White Paper made proposals for reform of the structure of ownership and regulation of airports, which were carried into law by the Airports Act 1986. The BAA has a near monopoly of airports in the southeast by virtue of owning the main three of the four London airports (Heathrow, Gatwick, and Stansted), and it owns Scotland's four principal airports (Aberdeen, Edinburgh, Glasgow, and Prestwick). The Government chose to sell BAA as a single entity, rather than dividing it into potentially competing parts. Selling the seven airports separately would have diminished BAA's dominance, but the Government took the view that the resulting advantages were not substantial and were outweighed by serious disadvantages. We shall assess this and other questions in section 10.3.4 below, but next we shall describe BAA's main activities.

10.3.2 BAA's Activities

The BAA owns and operates the principal airports in Britain. It was set up

under the 1965 Airports Authority Act, and initially comprised the four Gateway International Airports—Heathrow, Gatwick, Stansted, and Prestwick. The BAA took over the regional airports at Edinburgh, Aberdeen, and Glasgow in the 1970s; most other regional airports are owned and operated by local authorities. The BAA's seven airports together handled 55.3 million passengers in the year to 31 March 1987, which was 73 percent of U.K. air passenger traffic, and £25 billion worth of cargo traffic, which was 85 percent of the cargo tonnage passing through U.K. airports. Heathrow handles the majority (over 57 percent) of BAA's passenger traffic. It is the busiest international airport in the world, and is used by more than 70 airlines flying to over 200 destinations. In terms of numbers of international passengers Gatwick has just become the second-busiest airport in the world. Passenger traffic growth is a crucial determinant of BAA's future profits. For more than 20 years it has been quite steady at an average rate of 6.4 percent, and growth is set to continue. The Department of Transport predicts annual growth rates of between 3.4 and 6.1 percent for London's airports, and between 2.1 and 5.7 percent for other U.K. airports, until the end of the century. BAA has 7,500 employees, but they are only a tenth of the number that work on BAA's premises.

Profits have also grown strongly over the years. Unlike other nationalized industries, BAA has always been in the black, and in the year to 31 March 1987 it made a pretax profit of £90 million on a current cost basis, and £124 million on a historic cost basis, on total income of £439 million. About 48 percent of that income came from charges for airport traffic services provided by BAA to airlines. Airport charges include elements for each departing passenger, aircraft landing, and aircraft parking. Airport charges have been subject to price regulation since 1 April 1987 (see section 10.3.3). BAA's air traffic activities require large sums of capital expenditure to expand and improve airport capacity—runways, terminals, roads, and car parks. BAA plans to spend over £850 million over the next five years on projects such as the refurbishment of Terminal 3 at Heathrow, the new terminal at Gatwick, and the expansion of Stansted airport (see above). Other expenditure on air traffic services includes the cost of security, operational safety, and emergency services, which together account for a third of BAA's workforce.

The remaining 52 percent of BAA's income in 1986–1987 came from commercial activities. Most of this income (£158 million, i.e. about 36 percent of BAA's total income) came from concessionaires who sell goods and services to the public, including duty-free drink and tobacco, tax-free goods, books and newspapers, insurance and banking facilities, car rental

services, car parking, and catering services. Most concession income (£88 million in 1986–1987) comes from duty-free and tax-free shops. Concessions are usually put out to competitive tender, and BAA typically receives a percentage of the concessionaires' turnover. Other commercial income comes from rents and services provided to tenants such as airlines and hotels.

Although traffic and commercial activities account for an approximately equal share of BAA's income, most costs are incurred in relation to traffic activities. In the year to 31 March 1987 BAA made a current cost trading profit of £131 million on commercial activities, and a trading loss of £36 million on traffic activities. (On the historic cost basis the commercial profit was £140 million and the traffic loss was £9 million.) The allocation of joint costs (e.g. on terminals) between traffic and commercial activities is not a precise science, and BAA may have an incentive to increase the reported loss on traffic activities (especially in view of past litigation over traffic charges by a number of airlines), but by any reckoning there is a substantial cross-subsidy from commercial activities to traffic activities. BAA makes a loss on its primary business, which it more than recoups by its income from its highly desirable shopping areas, which is enhanced by the tax privileges currently enjoyed by duty-free and tax-free shops, and by the relative lack of competition between them.

Under public ownership the BAA's stated policy for traffic charges was to apply long-run marginal cost (LRMC) pricing. Although LRMC prices are helpful in making investment appraisals, their use in practice can cause large losses in allocative efficiency in industries where capacity constraints are long term. The usual argument for using LRMC prices rather than short-run marginal cost (SRMC) prices is that SRMC prices can be very volatile when capacity is periodically adjusted to match demand, with undesirable consequences for uncertainty and investment planning. However, the capacity limits at airports (e.g. for Heathrow landing slots at peak times) are long term in nature, and there is a strong case for using SRMC pricing to ration demand at peak times more efficiently and increase revenues to cover overheads.

Furthermore, it is questionable whether the BAA under public ownership did actually pursue its stated policy of LRMC pricing. Starkie and Thompson (1985) concluded from their investigation that LRMC pricing was not consistently applied. They used cost data relating to the expansion of terminal facilities at Heathrow and Gatwick to assess LRMC.

This information was prepared by BAA in connection with the lawsuit initiated by a number of airlines in 1980 who alleged that BAA's traffic

charges were discriminatory and too high. The British and American Governments were also in dispute at that time about airport charges at Heathrow. The litigation was settled out of court and a Memorandum of Understanding between the two Governments was signed in 1983. The memorandum stated that the British Government would look "for no more than a reasonable rate of return on investment" in formulating financial targets for BAA, and that no distinction would be drawn between sources of revenue (whether traffic or commercial) in computing rates of return. This is known as the "single-till" principle. Starkie and Thompson found that, even after changes in pricing structure in 1983, BAA's traffic charges at Heathrow and Gatwick were in general below LRMC (let alone SRMC), that Stansted was unjustifiably cross-subsidized, and that LRMC pricing would allow traffic income to cover traffic expenditure. These criticisms also apply to the traffic charges of the privatized BAA, because the regulatory regime has the effect of perpetuating the pricing structure that prevailed under public ownership. The regulatory regime is described in more detail in the next section.

BAA's policies regarding commercial activities were the subject of an inquiry by the MMC (Monopolies and Mergers Commission, 1985). Most commercial activities are not operated directly by BAA but are subcontracted or franchised to private sector firms—banks, caterers, newsagents, and so on. In many cases the BAA effectively auctions monopoly rights by tender: there is competition for the market rather than competition in the market (see section 4.6.1 above on franchising). In other cases the BAA grants concessions to competing suppliers, for example car hire firms or oil companies refuelling aircraft at Heathrow. Franchising is well suited to achieving productive efficiency, but the BAA faces a dilemma regarding allocative efficiency. Competition between concessionaires supplying similar product ranges (e.g. rival bookshops) would enhance allocative efficiency insofar as it eliminates monopolistic exploitation, but it would reduce the BAA's revenues by diminishing the value of the franchises. This is basically the same as the trade-off between competition and revenue maximization that the Government faces when privatizing a firm. Of course competition would not always promote allocative efficiency. Space in terminal buildings is scarce, and competition in one service might entail the undesirable disappearance of another: there is a trade-off between competition and diversity. However, the MMC concluded that the danger of monopolistic abuse in commercial services was real, and they expressed reservations about the BAA's attitude to competition. However, a majority of the MMC panel found that the BAA

was not pursuing a course of conduct which operated against the public interest. Professor K.D. George dissented from this view. He concluded that BAA effectively restricted or prevented competition to its concessionaires, even where such competition would be possible, in a manner contrary to the public interest. The MMC made a series of recommendations concerning, among other things, the promotion of competition in tendering, the establishment of performance indicators, and the presentation of detailed accounting information to show separately the results of traffic and commercial activities at each airport. The MMC finally remarked that privatization might increase the difficulty of containing BAA's ability to exploit the captive nature of the concessionaires' market, and they concluded that their recommendations should be applicable to the privatized BAA.

A separate distortion of allocative efficiency arises from the tax privileges accorded to duty-free goods. Duty-free shops are a major source of revenue. They account for about 20 percent of BAA's total income. A large fraction of the proceeds from the privatization of BAA therefore reflect the capitalized value of a tax distortion. There is no economic justification for the tax anomaly: it is arbitrary and inefficient, and there is no distributional reason for giving perks to international travelers who are prepared to add bags of drink and cigarettes to their luggage in already crowded aircraft cabins. (It might be more sensible, though still anomalous, to give duty-free perks to arriving passengers rather than to those departing.) Given the BAA's policy on traffic charges (see above), the tax distortion also has the effect of cross-subsidizing traffic activities, thereby adding to allocative inefficiency. The future of duty-free sales is uncertain. Duty-free tax privileges in Europe may be abolished after 1992 as part of fiscal harmonization within the EEC. This prospect is serious for BAA because about half of its substantial income from duty-free goods comes from intra-European sales. However, 1992 is also the date at which the regulation of BAA's airport charges will be reviewed. Loss of income from duty-free goods could then be made good by allowing an increase in traffic charges, quite consistently with the single-till principle. The regulation of BAA is our next topic.

10.3.3 Regulation of BAA

Many aspects of BAA's behavior are subject to Government regulation. Airports are licensed and periodically inspected by the CAA to ensure that their operators are competent and that safety standards are upheld. Airports are subject to environmental regulation, especially regarding

noise, and they are required to carry out airport security measures. The Government also has powers of traffic regulation, and may influence the use of U.K. airports by making rules on traffic distribution between airports, limiting aircraft movements, and allocating landing and takeoff slots between airlines at airports where capacity is constrained. Runway and terminal developments are subject to planning regulation. However, the main concern of this section is the economic regulation of airport pricing.

The Airports Act 1986 subjects all U.K. airports above a certain size to economic regulation, and their operators are required to obtain permission from the CAA to levy airport charges. Economic regulation takes the form of conditions attached to these permissions. All BAA's seven airports are subject to economic regulation, and the three London airports are "designated," which means that they also have to meet some mandatory conditions regarding airport charges and the information to be published in their accounts. Section 39 of the 1986 Act states that in carrying out its duties as economic regulator, the CAA must act

"... in the manner which it considers best calculated

- (a) to further the reasonable interests of users of airports within the UK
- (b) to promote the efficient, economic and profitable operation of such airports
- (c) to encourage investment in new facilities at airports in time to satisfy anticipated demands by the users of such airports
- (d) to impose the minimum restrictions that are consistent with the performance by the CAA of its functions. . . ."

The CAA must also have regard to the U.K.'s international obligations, including the Chicago Convention on nondiscrimination between airlines of different nations, the Bermuda 2 agreement, and the 1983 Memorandum of Understanding with the American Government concerning airport charges (see above). If the CAA and an airport operator cannot agree on certain conditions, the matter is referred to the MMC, which must also have regard to the above objectives in its decision making.

The centerpiece of the economic regulation of BAA is the price formula which limits the airport charges at the three London airports collectively, and at Heathrow and Gatwick individually. The formula is a version of RPI - X price regulation, which has been described in earlier chapters in relation to telecommunications and gas (see sections 8.3 and 9.2.3 respectively). Regulation applies to average revenue per passenger from specified charges (principally on landing and departing aircraft, on

passengers, and for baggage handling), and X was set equal to unity. To be more precise the formula is

$$M_t = \left(1 + \frac{\text{RPI}_{t-1}}{100}\right) Y_{t-1} - K_t$$

where M_t is the maximum average revenue per passenger allowable in year t , RPI_t is the percentage change in the Retail Price Index between September in year t and the preceding September, Y_{t-1} is the specified average revenue per passenger in the previous financial year $t-1$ and is defined as

$$\left(1 + \frac{\text{RPI}_{t-1} - 1}{100}\right) Y_{t-2} + S_{t-2},$$

where S_{t-2} is the allowable security costs per passenger in year $t-2$, and K_t is a positive or negative correction factor to adjust for any discrepancy between the actual and the maximum allowed average revenue per passenger two years previously.

The correction factor is needed because it is impossible for BAA to predict all elements of the formula a year ahead, and without it BAA would have an incentive to forecast incorrectly so as to manipulate the formula in its favor. The security factor in the formula allows BAA to recoup 75 percent of any additional costs necessarily incurred as a result of changes in Government policy toward airport security. In sum, the formula applies $\text{RPI} - 1$ to average (airport charge) revenue per passenger, with an allowance for 75 percent of any extra security costs and a factor to correct for past forecasting errors.

The formula came into effect on 1 April 1987 and was based on average revenue per passenger in the previous year. It will be reviewed by the MMC every five years, with the first review in 1992. The CAA can alter pricing conditions within five-year periods only with BAA's consent. The Secretary of State for Transport can override the formula in order to meet the U.K.'s international obligations.

Regulation of airport charges is not the only element of economic regulation. At its five-yearly reviews of designated airports the MMC must also report on whether their "operational activities" (i.e. activities that are carried out for the benefit of, or paid for by, airport users) are being conducted in a manner contrary to the public interest. The broad definition of operational activities embraces the bulk of BAA's operations, including commercial activities. The CAA has the duty of imposing conditions to remedy conduct found by the MMC to be against the public interest. The

CAA also has powers to impose conditions in relation to "aviation-related activities" (aircraft landing, takeoff, and parking, and the handling of passengers and their baggage) in order to remedy or prevent anticompetitive conduct such as discriminatory or predatory pricing. If the airport operator objects to such conditions, the matter is referred to the MMC. Finally, there are conditions which increase the information available to the CAA by requiring BAA to publish detailed accounts annually for each of its seven airports.

10.3.4 Assessment

The main effect of privatizing BAA was financial: the Government sold assets yielding future flows of property income to private hands in exchange for a lump sum. The sale was not so underpriced as some other major privatizations, but it was a poor financial deal for the general public insofar as the assets were sold for less than the stock market's judgment of their value. The privatization of BAA offers little prospect of efficiency improvement. The large majority of employees at airports work for private companies (retailers, banks, caterers, etc.) anyway. BAA's commercial activities were already conducted so as to maximize profits, and its traffic activities continue to be subject to heavy regulation. Allocative inefficiencies in pricing policy are to persist, the Government will continue to control major investment plans through planning legislation, and no competitive stimulus has been injected. Below we shall consider how privatization affects the regulation of BAA's activities, but first we ask whether more could have been done to promote competition in airport services.

Competition BAA's airports face a limited degree of competition from overseas airports such as Amsterdam, Frankfurt, and Paris, but the most natural way to enhance competitive forces would be to promote competition between airports within the U.K. This could have been achieved by dividing the ownership of BAA's airports so that, for example, Heathrow and Gatwick could have competed for custom. BAA management argued vigorously against separate ownership, and the Government also took the view that any advantages that it offered were outweighed by serious disadvantages. In the Airports White Paper they argued that effective competition between airports was limited in any case, partly because the desire of airlines operating scheduled services to facilitate interconnections between flights tended to make one airport dominant in a regional group (as Heathrow is in the London area).

Secondly, the Government argued that the London airports were an integrated system (notwithstanding the fact that Luton Airport is separately owned), and that the prospects for each airport would be unduly sensitive to Government policy (on licensing, planning consents, and so on) in the event of separation. The separate sale of the London and Scottish airport groups was also rejected, on the grounds that it would do nothing to promote competition but would jeopardize efficiency and delay privatization. These considerations, together with management influence and the likely dampening effect of separation (via increased competition) on sales proceeds, held sway and BAA was privatized as a single entity.

Nonetheless, the case for separating ownership in order to promote competition is considerable (see Starkie and Thompson, 1985, especially chapters 5 and 8). Although capacity constraints imply that competition would have less effect at peak times (there is no incentive to undercut a rival if you have no spare capacity to meet extra demand), the same is not true off-peak. For example, competition for charter and long-haul discount-fare traffic at off-peak times could benefit many actual and potential passengers greatly and ensure fuller utilization of capacity. Secondly, separation of ownership would have sharpened the capital market pressures on airport managements by giving shareholders a keener interest in the comparative financial performance of different airports. Takeover threats would also have been strengthened, but in any case they have been ruled out by Government measures including its "special share" (which gives a veto on takeover), limitations on shareholdings, and restrictions on the disposal of airports. Thirdly, separate ownership would have increased the information available to the regulatory authority (the CAA) and would have permitted the possibility of some "competition via regulation" (as described in section 4.6.2).

Regulation The first problem with the regulation of BAA pricing is that it perpetuates the inefficiencies in resource allocation that have prevailed in the past (see section 10.3.2 above). Traffic charges are generally too low (for example, there is heavy rationing at peak times at Heathrow and Gatwick), and traffic operations are cross-subsidized by commercial activities. Commercial income is boosted by the market power of concessionaires, and a large proportion of it derives from arbitrary tax concessions to duty-free and tax-free goods. As a result, international travelers enjoy lower-cost airport charges (not to mention cheaper cigarettes and drink) at the expense of the Exchequer, and large amounts of retail space, which could be used by competing retailers, are absorbed by goods for which

demand is inflated by tax concessions. The British Government is not entirely to blame for this bizarre state of affairs, which was enshrined by the "single-till principle" of the 1983 Memorandum of Understanding following pressure from the U.S. authorities. It remains to be seen whether the tax concessions will be removed in the European Community after 1992 and whether airport charges will rise if the cross-subsidy is thereby reduced.

Although the inherited pricing policy and the single-till principle imply that traffic charges are inefficiently low (especially at peak times), the RPI - 1 constraint appears quite consistent with substantial profit growth by BAA, even if productivity does not improve by 1 percent per annum. It is projected that passenger traffic at the London airports will rise by about 4 to 5 percent annually, and traffic and commercial income are therefore set to grow strongly. Moreover, many of BAA's activities are not subject to RPI - 1 regulation, including traffic activities at the Scottish airports and commercial activities generally.

BAA also retains discretion concerning *relative* prices within the price formula, which applies only to *average* (traffic) revenue per passenger at the three London airports. The constraint is similar to the "average price per therm" control faced by British Gas (see section 9.2). In each case the company has a strategic incentive to expand business segments with low marginal costs. For example, cutting traffic charges to off-peak charter operators would tend to reduce average revenue per passenger and relax the constraint on charges to high revenue passengers at peak times. In an otherwise perfect world, this encouragement to changing relative prices would be undesirable (see section 4.4 on departures from Ramsey pricing), but in practice it may be desirable insofar as it partly offsets the existing subsidy to peak-time travelers and the incentive for BAA to exercise market power in relation to off-peak travelers.

It is difficult to assess the likely effect of privatization upon the investment behavior of BAA. In an unregulated market, a dominant firm would find it profitable to restrict capacity below the socially desirable level in order to raise price and extract monopoly profits. A tendency to underinvestment can also arise insofar as private and social discount rates differ (e.g. because of political and regulatory uncertainties). But price regulation can have contrary effects. Many peak charges are held below market levels. The 1983 Memorandum of Understanding on airport charges speaks of a reasonable rate of return on assets, and we have noted elsewhere that RPI - X control has some similarities to rate-of-return regulation. BAA may therefore have some incentive to expand capacity for strategic reasons (see section 4.2.1 above on the Averch-Johnson effect),

though we believe that the tendency to underinvestment is likely to be more powerful. However, we must not ignore the close Government involvement with airport investment policy, which is dictated by concern for the environment and the promotion of British aviation. Notwithstanding the change of BAA's ownership, it will ultimately be the Government that decides major aspects of future expansion plans.

This point is underlined by the fact that the major investment decisions for Britain's airports announced in the 1985 White Paper were implemented immediately *before* BAA's privatization (see section 10.3.1 above and Starkie and Thompson (1986) on the commercial viability of the expansion at Stansted). If the privatization of BAA had been motivated by a belief in the superiority of market forces and private decision making, it would hardly have been appropriate for the Government to initiate such an important investment program so soon before the sale.

We conclude that, above all else, the privatization of BAA was simply the transfer to private hands of a monopoly with valuable property assets. The sale did something to extend share ownership, but in the process there was a transfer of wealth from the Government (representing the general public) to successful applicants for shares because most of the shares were offered for less than their worth as subsequently judged by the market. The case for promoting competition and enhancing the effectiveness of regulation by separating the ownership of BAA's airports was rejected, and, as management had urged, the group was sold intact. The Government will continue to influence and regulate key aspects of BAA's behavior, notably investment programs, and allocative inefficiencies in the pricing structure will persist. It is hard to see how the privatization of BAA will improve the economic efficiency of airport operations: it was primarily a financial operation designed to serve other objectives.

10.4 Express Coaching and Local Bus Services

The framework of competition and regulation for coach and bus services in Britain has been radically reformed by recent legislation. The Transport Acts of 1980 and 1985 dismantled the regulatory structure that had lasted for 50 years, and opened up new possibilities for competition. In some areas liberalization has had immediate effects on pricing, passenger choice and demand, the range of services offered, the nature of cross-subsidies, and the number of competitors in the marketplace. But in most areas deregulation has had little apparent effect in its first year. In the longer term the blessings of deregulation may be mixed, and important questions for policy remain.

Does liberalization guarantee effective competition, or will incumbent operators prevail over their rivals and come to exercise local market power on their route networks? Is there a danger of "destructive competition," leading to inefficiency and possibly even to chaos? What will be the nature of competition between long-distance coach services and rail?

There is also the question of the ownership of the public sector coach and bus operators—notably those within the National Bus Company—that have dominated the industry. There was a wide range of options for privatization concerning both the structure of the firms sold to private hands and the methods of sale. The Government has chosen the option of structural reform and has favored management buyouts as a way of privatizing parts of National Bus.

Great uncertainty surrounds the future of both competition and ownership in the coach and bus sectors, and too little time has elapsed since deregulation to make a confident prediction of how events will unfold. However, the industry is a particularly interesting part of the privatization program because the policy of radical liberalization and structural reform is very different from that followed in the major utility industries and in airports and airlines.

We begin this section by describing the main operators in the industry and the regulatory structure in which they operated before 1980. We then outline the main provisions of the 1980 Transport Act, which deregulated express coaching, and we review the development of competition in that sector. Next we look at the 1985 Transport Act, which extended deregulation to local bus services where competition began in October 1986. Finally we consider the options for privatizing National Bus. Limitations of space prevent us from providing much more than a sketch of what is happening in the industry. For fuller accounts the reader is referred to Davis (1984), Kilvington (1985), Kilvington and Cross (1986), and Jaffer and Thompson (1986) on express coaching, the MMC report (Monopolies and Mergers Commission, 1982a) on bus services, the 1984 Government White Paper on *Buses* (Department of Transport, 1984a), Meadowcroft and Pickup (1987) on the initial effects of bus deregulation, and Mulley and Wright (1986) on the privatization of National Bus. We draw from these sources in what follows.

10.4.1 The Industry before 1980

The 1930 Road Traffic Act instituted a system of heavy regulation that lasted essentially unchanged for 50 years. The Act was motivated by concern about passenger safety and the danger of destructive and

inefficient competition (see sections 3.2.1 and 3.3.1), and accordingly it provided a regime of control over both quality and quantity. Quality regulation embraces vehicle safety, maintenance arrangements, mechanical inspection, professional competence, the fitness and working hours of drivers, and so on. The system of quality regulation, which is supervised by the independent Traffic Commissioners, has not been weakened by the recent legislation.

Before 1980 the Traffic Commissioners also had extensive powers regarding the number, identity, and behavior of firms supplying public passenger road transport services. A firm seeking to provide a service had to obtain a route license from the Commissioners, who also had powers over fares and timetabling. The Commissioners were empowered to grant licenses only if they were satisfied that they were positively in the public interest. Thus the burden of proof lay with the potential entrant, who was likely to be opposed in his application by incumbent operators of bus and rail services. The whole procedure was costly, lengthy, and prone to inertia. In effect, existing operators were shielded by regulatory barriers to entry.

Incumbent operators of bus services were left free to exercise their local market power in a variety of ways. There was no pressing need to cut costs, reduce inefficiency, or respond to consumers' changing preferences with innovative solutions. There was ample scope for cross-subsidization between routes and between times of day. Industry performance appeared tolerably good in the early years, but its drawbacks began to emerge in the 1950s as car ownership became more widespread. The vicious circle of higher fares, fewer passengers, and growing losses became apparent, and an increasing number of bus services came to rely heavily on funds from central and local government. Public funding was inevitably required to subsidize loss-making services judged to be socially desirable (such as many rural bus services), but the pattern of subsidy was hidden from view and was in all probability an inefficient way of meeting the social ends that it sought to achieve.

Public sector operators have in the past dominated coach and bus services, and of course rail services. Competition from the private sector came from a number of independent bus operators and from taxi services, which were also subject to extensive regulation. The main public sector operators have been the National Bus Company, local government Passenger Transport Executives (PTEs), municipal operators, the Scottish Bus Group, and London Regional Transport.

National Bus was created effectively as a nationalized industry under the

Transport Act 1968. It took over many bus and coach services then in public ownership. Its local bus operations were divided into four regional units which owned numerous local operating companies (see Mulley and Wright (1986, tables 3 and 4) for statistics on their recent performance). Two subsidiaries of National Bus—the Bristol Omnibus Company and the Trent Motor Traction Company—were part of the recent investigation by the MMC into the efficiency of local bus services (see Monopolies and Mergers Commission, 1982a). The National Express and National Holidays divisions of the company operate scheduled express services and holiday tours, and the National Travelworld travel agency business has about a hundred retail outlets. In the year to 31 December 1985, on the eve of its privatization, the National Bus Company made an operating profit (after interest and tax charges) of £17.6 million on a turnover of £807 million, of which 79 percent was received from passengers. (In that year there was also an extraordinary charge in preparation for privatization—relating to deferred taxation, pension fund deficiencies, and closures—of more than £100 million.) At the year end the company employed nearly 49,000 staff and operated a fleet of more than 14,500 buses and coaches. In 1985 the company operated 616 million vehicle miles in service, of which local bus services accounted for 75 percent and National Express 12 percent; there were 1,440 million passenger journeys.

Under the 1968 Transport Act the county council PTEs were required to meet passenger transport needs in the English metropolitan counties and in Strathclyde in Scotland. Councils in nonmetropolitan counties had similar functions under the 1978 Transport Act. They operated some bus services directly and some by agreements with other operators (public or private). The 1985 Transport Act modified the duties of county councils (and the successors to the metropolitan county councils, which were abolished in recent local government reform) by requiring them to secure the efficient provision of necessary transport services not provided by a free market. A number of district councils operate bus services as well. An example is the City of Cardiff Council, which was also part of the MMC investigation referred to above. The City Council has statutory powers to operate bus services under local Acts of Parliament. The Council has a Transport Committee composed of local councillors, and day-to-day operations are run by a Transport Department. Arrangements in London are different again. In 1984 the London Regional Transport Act was passed, which transferred responsibility for London transport from the Greater London Council to the new London Regional Transport. The Act provided for greater competition (e.g. via tendering) and for more private sector

involvement. In view of these recent changes the further deregulation of bus services in London has been deferred.

Bus companies are financed by revenues from fares and by subsidies from local authorities (some of which are ultimately paid by central government). The main kinds of subsidy are revenue support grants and concessionary fare subsidies for groups such as the elderly. The level of subsidy has tended to rise steadily over time, and became particularly acute in the London area. The White Paper on *Buses* (Department of Transport, 1984a, table 15) found that in 1982–1983 (when total industry turnover was some £2.4 billion) the proportions of bus operators' income from fares, concessionary fares payments, and revenue support were 62 percent, 10 percent, and 28 percent respectively. In London the figures were 46 percent, 11 percent, and 44 percent. However, National Bus and the Scottish Bus Group obtained 76 percent of their income from fares.

Until recently, a typical arrangement would involve the authority specifying what services it wanted and meeting the operator's reported costs. In the absence of potential competition, the poor incentives for cost efficiency of such cost-based contracts are well known. In addition such schemes have allocative efficiency problems because there is no clear way of relating the cost of individual services to the private and social demand for them. These twin efficiency problems were a central part of the motivation behind the reforms instituted by the 1980 and 1985 Transport Acts. We will consider the deregulation of local bus services in sections 10.4.4 and 10.4.5, but first we will describe the deregulation of express coaching.

10.4.2 Deregulation I: The 1980 Transport Act

The 1980 Transport Act was the first step in the deregulation of the markets for coach and bus services. The Act had four parts, dealing respectively with public service vehicles, the privatization of the National Freight Corporation (NFC), pension schemes in British Rail (BR) and the NFC, and various miscellaneous items. Our main concern is with Part I of the Act, the purposes of which were as follows:

- (a) redefining and reclassifying public service vehicles;
- (b) abolishing road service licenses for express carriages as redefined;
- (c) making it easier for applicants to obtain road service licenses, and restricting the power to attach thereto conditions as to fares;
- (d) providing for the designation of areas as trial areas in which road service licenses are not required for stage carriage services;
- (e) making new provision for securing the fitness of public service vehicles;

- (f) substituting a system of public service vehicle operators' licenses for the system of public service vehicle licenses; and
- (g) providing an appeal against a refusal by the London Transport Executive to enter into an agreement with a person other than the Executive for the provision of a London bus service.

The Act defined "public service vehicles" as vehicles adapted for more than eight passengers at separate fares in the course of business. Public service vehicles were classified into three types:

- (i) stage carriages (vehicles used for local bus services);
- (ii) express carriages;
- (iii) contract carriages.

An express service is defined as one where passengers travel at least 30 miles measured in a straight line. The Act abolished road service licenses for express services, and thereby removed regulatory barriers to entry into the express services market.

Regulatory barriers to competition in local bus services were diminished by three measures. First, the onus of proof regarding the granting of licenses by traffic commissioners was reversed. Thus Section 5(2) of the Act stipulates that the commissioners "shall grant the licence unless they are satisfied that to do so would be against the interests of the public." Secondly, regulatory controls on pricing were relaxed. Section 7(3) requires the traffic commissioners not to exercise their powers over pricing conditions to licenses "unless satisfied that the proposed exercise of those powers ... is essential in the interests of the public." Thirdly, the Act provided for experiments in more radical deregulation by giving the Minister power to designate "trial areas" in which the licensing requirement for local bus services was dropped. The initiative here lay with the local authorities, because the Minister could use his powers of designation only upon their request. Operators of bus services in trial areas were required to inform the relevant local authorities and the local public about new, changed, or discontinued services.

The Act relaxed quantity regulation by removing (in the case of express services) and easing (in the case of local bus services) restrictions on the conduct of participants in the market. Entry was made freer and price controls became less strict. But quality regulation was retained and strengthened by tighter standards on vehicle fitness and by switching the focus of regulation onto the operators themselves, rather than their behavior. Section 21 of the Act states that the traffic commissioners should grant a public service vehicle operator's license only if they are satisfied as

to the good repute, financial standing, and professional competence of the potential operator.

In section 10.4.4 we will describe how the 1985 Transport Act made the second major step to a liberalized framework for competition. But first we shall examine the rise and fall of competition in express coaching after the 1980 Act.

10.4.3 Competition in Express Coach Services

At the time of deregulation in October 1980 the market for scheduled express coach services in England and Wales was dominated by National Express, the publicly owned subsidiary of the National Bus Company, and the Scottish Bus Group enjoyed a similar position in Scotland. No independent operators ran major networks. However, deregulation was followed rapidly by new entry. A major new entrant was British Coachways, a consortium of ten independent companies who planned to attack the heart of National Express business by operating a wide network of intercity express services. Other independent operators introduced services from their local regions to London, and many new firms entered market niches operating commuter coaches, holiday coaches, excursions, and tours.

The immediate result was a phase of intense competition. British Coachways' fares were set at roughly *half* those previously charged by National Express. The response was swift—National Express promptly matched the low prices charged by the entrant. The nature of express services altered rapidly, with the emphasis shifting to frequent, rapid, and direct services with fewer stopping points on the main trunk routes. This change is shown graphically by the coach timetables reproduced as illustrations 1–4 in Kilvington and Cross (1986). For example, typical journey times between London and Manchester were cut from 5½ to 4 hours as a result of the elimination of intermediate stops and better use of the motorway. Smaller towns became less well served, and many services were discontinued. Nevertheless demand expanded strongly, and the number of passengers traveling on National Express rose by more than 50 percent despite the advent of competition and the suspension of less popular services. Demand growth was most spectacular on the principal trunk routes, and it has been estimated that demand trebled in some cases. Much of this business was due to switching from rail travel, and we shall consider the response of BR below.

The bout of intense competition between express coach operators was over in a matter of months, and National Express regained its dominant

position. Members of the British Coachways consortium were beginning to withdraw from the market as soon as April 1981, only six months after deregulation, and their challenge had effectively disappeared by 1983. The demise of the consortium has been attributed to a number of causes, including the nature of their competitive strategy, the incumbent advantages enjoyed by National Express, and its aggressive response to entry.

The essence of British Coachways' strategy was to compete on price, but National Express enjoyed numerous nonprice advantages by virtue of its incumbent position, and once it matched British Coachways (and other independents) on price, the entrants' prospects became very bleak. The three main advantages enjoyed by National Express were its established nationwide network, its goodwill and customer awareness, and its privileged access to major terminals such as Victoria Coach Station in London. Technical cost factors were probably not such an important consideration. There is little evidence that National Express possessed absolute cost advantages, or that economies of scale or scope characterize production technology in coaching. Nor are the sunk costs of running a coach service on a given route particularly great, because the coach can be switched to other duties with relative ease.

Marketing advantages are quite another matter. Whereas National Express was well known throughout the country, the entrants were little known except perhaps in their home regions. Therefore National Express could achieve higher load factors and frequency of service—and hence lower unit costs—by serving customers from both “ends” of a route, rather than relying mainly on the home base. The entrants could have attempted to promote customer awareness of their services by massive marketing campaigns, but that would have entailed enormous sunk costs and would have reduced timetabling flexibility. Such marketing advantages were compounded by the policy of National Bus (the parent of National Express) of not allowing competitors to have access to its coach terminals, notably Victoria Coach Station. There is an analogy here with the issues of vertical integration and interconnection in telecommunications: National Express denied interconnection rights to its competitors and hence they were put at a disadvantage. The entrants had to find alternative terminal facilities, such as a derelict goods yard near King's Cross railway station. As well as being less pleasant and less well known than Victoria Coach Station, these facilities were less suitable for passengers wishing to change coaches. (Davis (1984) states that 24 percent of passengers arriving at Victoria change coaches there.) This kind of problem is recognized in the

1985 Transport Act, which forbids discriminatory practices in relation to bus stations for local bus services.

Given the nature of its incumbent advantages, it is not surprising that National Express responded aggressively to competition right from the start, before its rivals could build up goodwill and customer awareness. The entrant's pockets could not withstand the effects of the incumbent's sharp price-cutting strategy for long, and National Express had good reason to believe that short-run revenue losses would soon be recouped by the return of its market dominance. The policy adopted by National Express bears some signs of a campaign of predatory pricing, but, whether or not this is so, the competition authorities stood by and did nothing.

Some independent operators on trunk routes have survived, but they have generally done so by pursuing policies of product differentiation and specialized niche entry. They have tended to serve just one or two routes and have differentiated their product by using luxury coaches. Many have entered into agreements with National Express. Policies of this kind are exactly the opposite of those attempted by the British Coachways consortium. They have been more successful because they considerably diminish the incumbent firm's incentive to respond to entry in an aggressive manner. The independent sector has also fared better in Scotland, where the Scottish Bus Group was less responsive to competition than National Express was south of the border.

Although the period of intense competition on trunk routes was short lived, deregulation also brought about some longer-term changes. Fares did rise after the price wars, but not to the levels at which they had been before deregulation. Profitable routes have become better served, and services have been reduced and withdrawn on less profitable ones. Journey times between major population centers have been reduced, but at the expense of those living in between them. Most significantly there has been keener competition between coach and rail, which was given a boost by the rail strike in 1982 which encouraged many new customers to travel by coach. Kilvington and Cross (1986, table 5) list a number of initiatives by BR in response to coach competition after deregulation. They include schemes to reduce rail fares for off-peak travelers (e.g. Railcards for families, under 24s, and senior citizens) and intercity saver fares. These moves were aimed at the groups and the times of the day and week where coach competition is most threatening and where marginal cost is low as a result of spare capacity. BR's policies of targeted discounts have been successful in expanding demand, but the overall effect of coach deregulation on BR (and hence on Government) cash flows has been

significantly negative. Consumers of rail services have benefited, and allocative efficiency has improved insofar as fares for various services have moved more closely into line with the relevant costs.

The independent sector has been more successful in commuter coaching, seasonal (mainly summer) business, and excursions and tours, than it was in challenging the intercity network business of National Express. The rail strike in 1982 gave commuter coach services an important boost, and the market has expanded steadily since then. Because commuter traffic is at peak times, BR cannot respond so aggressively. Deregulation has added to competitive pressures in seasonal and excursion business, but there was some freedom of entry into those sectors before the 1980 Act. Independent operators have tended to compete (on quality as well as price) more strongly with each other, and they have also faced some new competition from the public sector in the shape of an extension of the activities of municipal bus undertakings.

In broad terms the deregulation of express coaching has so far achieved a mixed record of success. Fares have fallen on average, and services have become more responsive to consumer demands. However, some consumer groups have lost out as their areas have become less well served. Competition between the public sector operators in coach and rail has become keener to the general benefit of the traveling public. There have been some surprising and ironic consequences of deregulation. Far from enabling private sector entrepreneurs to exploit profitable opportunities at the expense of the public sector incumbents, National Express swiftly emerged victorious in the battle for intercity services, where barriers to entry gave it important advantages over competitors.

The experience of competition in express coaching has several important lessons. First, it was the threat of potential competition, and not any change in ownership, that transformed the behavior of National Express. Secondly, competition within the public sector is perfectly feasible, as the responses by BR show. Thirdly, the removal of regulatory barriers to entry is no guarantee that effective competition will prevail. Accompanying measures to safeguard the competitive process are also required.

10.4.4 Deregulation II: The 1985 Transport Act

In July 1984 the Government set out its plans for the second major step to deregulation in the White Paper on *Buses* (Department of Transport, 1984a). Its proposals were enacted in the Transport Act 1985, which received Royal Assent in October 1985, and competition in local bus services began a year later. The main provisions of the Act concerning

competition, regulation, and ownership were as follows. First, the deregulation in 1980 of express coaching, and of local bus services in trial areas, was extended to bus services throughout the country (except London). Secondly, the Act brought about important structural changes in the industry by providing for the reorganization and privatization of the National Bus Company. Thirdly, the bus operations of PTEs and local councils were reformed by providing for their transfer to separate companies. Fourthly, the Act altered financing arrangements, notably in relation to tendering for subsidized services, travel concession schemes, and grants for rural services.

Part I of the Act abolished road service licensing, and in its place introduced the requirement that local bus services (outside London) should simply be registered with the Traffic Commissioners for the relevant area. Under section 7 of the Act the Commissioners may apply traffic regulation conditions to local services, but only so as to prevent danger to road users or to reduce severe traffic congestion. Such conditions may relate to the routes, stopping places, and stopping times of services, and they must be applied equally to all actual and potential operators of local services in an area. Part I of the Act also deregulated taxi and hire car services to some extent, and it modified certain public service vehicle licensing requirements. Regulation of road passenger transport continued in London, where a system of "London local service licenses" was instituted in Part II of the Act. London was treated differently because of the recent events concerning the transfer of control from the Greater London Council and the establishment of London Regional Transport.

Part III of the Act dealt with the structural reform and privatization of the National Bus Company. The Company was required to submit to the Government its proposals for transferring its operations to the private sector, and the Secretary of State for Transport was given powers to modify those proposals. A three-year time limit was set down for the disposal program to be carried out. Section 48 of the Act gave the main objective of the Company in this regard as being "to promote sustained and fair competition, both between companies which are Bus group or former Bus group companies and between any such companies and other persons engaged in providing bus services . . ." However, the Company was also told to have regard to the effect of any program on "the net value that may be expected to be secured" from the asset disposals—a rather different consideration. In addition, the Company was required to give employees of any undertaking being sold a reasonable opportunity of acquiring (perhaps jointly with others) a controlling interest in its equity share capital.

Part IV of the Act was concerned with the powers and duties of Passenger Transport Authorities, PTEs, and local councils in relation to local transport services. In formulating and carrying out the transport plans for their areas, these authorities were given the duty of not inhibiting actual or potential competition between operators of local services. The Act required PTEs to transfer their bus undertakings to companies owned by their Passenger Transport Authorities and provide for their division into smaller self-standing companies. There was similar provision for the formation of companies to run council bus undertakings.

Part V of the Act covered financial provisions. Section 89 requires authorities responsible for expenditure on public transport to invite tenders for subsidized services on a competitive basis. As well as promoting efficiency by competitive contracting (see section 4.6 above), this measure makes more visible the pattern of subsidies in local bus services. The Act allows local authorities to establish travel concession schemes for children, elderly people, and the disabled, and gives all eligible service operators the right to participate in such schemes. Powers were also given for grants to be made for services in rural areas.

Two related principles motivated many of the central reforms instituted by the 1985 Act—the promotion of effective competition for the custom of passengers and public transport authorities, and the separation of the "expenditure" and "supply" functions of the latter bodies. These principles are supported by many of the incentive arguments set out in this book. It is too soon to judge how full deregulation will work in practice, but we now go on to describe some of the turbulent events that have occurred so far.

10.4.5 Competition in Local Bus Services

Only three councils applied to be designated as trial areas for the deregulation of local bus services under the 1980 Act—those in Devon, Norfolk, and Hereford. The full deregulation brought about by the 1985 Act, which came into effect on 26 October 1986, was therefore based on very few experiments. Moreover, the evidence from the trial areas must be treated with care because they were not representative of the country as a whole, competition could be on a limited scale only, and the conduct of participants in the experiments may have been affected by the public attention that they received at the time.

The most interesting trial area was the town of Hereford, which was the only major urban center to be deregulated at the time (Devon and Norfolk excluded their urban areas from the experiment). Competition between the three operators there took a variety of forms. As well as competition on

price and service there were allegedly attempts to disrupt rivals' services by the tactics that are said to have been common before regulation was instituted by the 1930 Act. Such tactics included racing to stops, refusing to set down passengers at intermediate stops for fear of being overtaken, blocking rivals' vehicles, duplicating rivals' timetables, early arrival to pick up passengers waiting for rivals' buses, painting over rivals' timetable displays, intimidating passengers intending to use rivals' buses, and deviating from routes. Since full deregulation in 1986 there have been allegations of tactics of this kind in those areas where competition has occurred. (They have been a prominent theme in our local newspapers in Oxford, which happens to be a notable example of competition.)

However, competition in commercial bus services has not been widespread since deregulation. In their study of the initial effects of deregulation in metropolitan areas, Meadowcroft and Pickup (1987) found that there has not been substantial competition on the road between existing major operators, or from existing independents, or from new entrants. Established operators have tended to remain in their existing territories, and new entrants, although perhaps 200 in number nationwide, are typically small and not directly in competition with incumbent operators. However, among the metropolitan areas, competition has been extensive in the Strathclyde region and substantial new entry has occurred in Manchester. (It is also possible that there is more competition, including competition on fares, outside the metropolitan areas.)

Meadowcroft and Pickup suggest four possible reasons why competition in commercial services has not been more widespread in the immediate aftermath of deregulation. The first is that barriers to the entry and growth of rival operators might be arising from incumbent advantages in relation to access to bus stations (recall the discussion of National Express and Victoria Coach Station above) and special ticketing arrangements (e.g. travelcards) which increase customer loyalty to incumbent firms with large networks.

Secondly, the superior efficiency of incumbent firms might partly explain why competition has not been more extensive. Entry threats can be an effective discipline on incumbent firms even though entry is not actually occurring. Since part of the case for deregulation was that incumbents were supposedly inefficient, this explanation does not seem very likely on the face of it, but as yet there is not enough evidence on the cost savings being achieved by incumbent operators to make a detailed assessment of the question.

Anticompetitive behavior by incumbent operators—or the threat of

it—might be another factor deterring entry and growth by rival firms. Aggressive pricing has been the incumbent's response to entry in very few areas but in general fares have not changed appreciably since deregulation. Nonprice strategies have also been used. A common tactic has been to proliferate services, often by using minibuses, on the routes where competition has emerged (or is thought likely to emerge). Bus users on these routes gain from more frequent services so long as the competition lasts, but the proliferation is not necessarily efficient and it can cause bad congestion in town centers. Moreover, if the proliferation of services is essentially part of a predatory response to entry, the benefits might quickly disappear if and when the rival operators are seen off.

Fourthly, competition might grow in the years to come. At the time of writing less than a year has elapsed since deregulation, and many potential entrants might have adopted a strategy of "wait and see" until some uncertainties have diminished. To say the least, the early experience of deregulation has varied greatly from place to place, and it is too soon to make firm judgments about the future pattern of market structure and conduct.

Nevertheless the extent of competition so far has been disappointing. The problems of disruptive and unstable competition on the commercially viable routes where competition is occurring are immense, and it is unclear how they can be resolved without the return of local market dominance. Bus competition is peculiarly prone to such problems for several reasons. First, it is easy for bus operators to disrupt the operations of their rivals with relative impunity. They rely on the common resource of finite road space, and tactics such as physical obstruction are easily implemented and hard to prevent. Secondly, potential customers are highly visible because they stand in queues in public places. Similarly, the positions of rival buses are clear for all to see. Such visibility and identifiability of both customers and suppliers gives rise to incentives to race to stops, to refuse to set down passengers at stops where few people are waiting, and so on. Thirdly, competition in bus timings tends to be unstable for the reasons set out in the theoretical literature on product differentiation that dates back to Hotelling. The number of passengers waiting at a stop depends on how much time has elapsed since the last bus stopped there. It is therefore desirable to arrive at a stop just before a rival does (this is a kind of "minimum product differentiation"). It is impossible for all competitors to do this profitably, and an unstable situation results. In short, equilibrium may fail to exist. The instability problem would not be so severe if bus timings (i.e. "product locations") were fixed once chosen, but they are not

entirely so. Timetables can readily be changed subject to registration procedures, and enforcement of adherence to timetables is no easy matter, especially given the random nature of traffic flows in town centers, although the 1985 Act does give Traffic Commissioners powers to prevent operators from running services that they have failed to operate in accordance with their registration.

The picture has been somewhat different, but also mixed, on routes that are not commercially viable. (It should be noted, however, that there is no clear-cut distinction between commercial and uncommercial routes: the two can interact in several ways, but space does not permit a discussion of this here.) Even where there is no competition *on* a route there can be competition *for* the route as a result of the requirement in the 1985 Act that subsidized services should be put out to competitive tender. This form of "competition via regulation" seems to be working well in some places. For example, the Hereford and Worcester County Council began competitive tendering in 1981. As a result the number of routes requiring subsidy and the average level of subsidy both fell significantly. However, competition for contracts has so far been less successful in many areas. There has been only one bidder (i.e. no competition) for a large proportion of contracts, and incumbent operators have been awarded the overwhelming bulk of contracts (see Meadowcroft and Pickup, 1987). Nevertheless there is evidence that competition for tendered services has led to significant cost savings, and its scope might be realized more fully in the future. Tendering can provide excellent incentives for productive efficiency by using competitive forces to overcome the informational disadvantage of the buyer of the service (the local authority). It can also improve allocative efficiency by clarifying the true cost of the service, although the ultimate choices of which routes are served and timetables still rest with the local authority. The problems of asset handover, contract specification, etc. that often bedevil franchising (see section 4.6.1) are not so great in relation to rural bus services.

Rather ironically we are therefore left with the provisional conclusion that the 1985 Act appears to have succeeded more by instituting "competition by regulation" for uncommercial services than by releasing competitive forces by deregulating commercial services. However, we must repeat that it is too soon to assert any conclusion about the longer-term effects of deregulation with confidence.

10.4.6 The Privatization of National Bus

The structure and scope of the operations of the National Bus Company

were briefly described above. Four broad options for its privatization are analyzed by Mulley and Wright (1986):

- (a) the sale of National Bus as a single entity;
- (b) splitting the company into its four local bus regions;
- (c) dividing the regions into subsidiary companies;
- (d) further dividing the subsidiaries into "sub-subsidiaries" that could compete in local areas.

If the overriding objective was to maximize sales proceeds, then option (a) would be best. The company would be large enough to be floated on the Stock Exchange, and its profit prospects would be enhanced by the likelihood that potential rivals would be inhibited from competing strongly with so powerful an incumbent (recall what happened in express coaching). But privatizing the company as a whole is the least attractive option on other counts. It would do nothing to increase the number of competitors, the scope for entry deterrence (and threats thereof) would be large, capital market incentives (in the form of takeover threats or bankruptcy) would be weak, managers and employees would not control their local businesses, and political interference might continue. Those disadvantages are avoided or reduced by breaking up the company into smaller parts, although that strategy makes Stock Exchange flotation unattractive because of the small size of the resulting companies. Nevertheless the Government has favored this approach by its policy of breaking up the company and encouraging employee/management buyouts.

The question remains of how far to split up the company. If larger units are sold, the proportionate equity stake of any individual or group of employees will be correspondingly smaller, and their return on investment will be less related to their own efforts. On the other hand, the risks and rewards associated with smaller units are likely to be less attractive to employees and their financial backers. The choice between options (c) and (d) is a crucial determinant of whether there is effective competition at the local level. Option (d) would break local market power—at least initially—and would therefore tend to reduce expected returns and raise risks to a marked degree. But it is doubtful whether employees would wish to commit substantial resources, as well as their human capital, to such risky ventures.

In the event a version of option (c) was adopted. The National Bus Company Group was restructured in preparation for its disposal program so that it became a financial holding company, no longer providing central services for subsidiaries. In place of its regional structure, National Bus's

operating companies were grouped into seven portfolios. A few of the operating companies were further divided into smaller units. Following this restructuring, the company is being sold as 52 separate local bus companies, six coach operating companies, and eight engineering companies. National Express, National Holidays, National Travelworld, and the Coach Station subsidiary are also to be privatized.

The disposal program was about halfway through by mid-1987 and should be essentially complete in 1988. The great majority of local bus operations have been sold to their management teams. Management buyouts are favored by the provision of £50,000 for their legal expenses and by allowing their bids to fall 5 percent below outside offers. The prices paid for the companies are confidential, but the revenues from privatization are likely to exceed £300 million. Sales proceeds could have been even larger if the National Bus Company had been sold as a single entity, but on this occasion the maximization of revenues has not been the Government's main aim.

10.4.7 Assessment

In contrast with its policies for the major utility industries, the objectives motivating the Government's recent bus transport policies have been admirably pro-competitive. The wholesale removal of regulatory barriers to entry—first in express coaching and then in local bus services—have been radical measures to promote competition. They have been accompanied by important steps to put the bus operators at arm's length from the public transport authorities, most notably the introduction of compulsory tendering for subsidized services, which introduces "competition via regulation." In particular, privatization (of National Bus) has occurred *after* the establishment of a more competitive industry structure.

However, experience has shown that there are severe problems in sustaining efficient and effective competition in coach and bus services, despite the apparent absence of natural monopoly cost conditions. In express coaching, National Express rapidly disposed of competitive challenges on its prime intercity routes by virtue of its aggressive pricing and its incumbent advantages in marketing and access to terminals. This underlines the point that the legal possibility of entry is not enough to guarantee effective competition. In the face of a powerful incumbent firm, effective competition is fragile indeed, and requires a strong competition policy of a kind not yet present in Britain. In addition, it would have been desirable to allow competitors to National Express better access to key

coach stations. Again we see how vertical integration can thwart competition.

Other difficulties have attended the deregulation of local bus services, at least in its early months. In many places, deregulation has had little visible impact because incumbent operators have not been faced with competitive challenges. In other areas competition has been intense, but sometimes chaotic, unstable, and inefficient. It was most unlikely that radical reform of the industry would be followed immediately by stable competitive equilibrium, but there are reasons to believe that instability may persist or that local market dominance will be reasserted. This belief receives some support from the historical experience of what happened before regulation was instituted by the 1930 Act, and from the features of bus competition discussed above—the ease of disrupting rivals' operations, the visibility of potential customers and competitors, and the instability of competition in bus timings. It is to be hoped that local authorities and the traffic commissioners will be able to contain malpractices between rival operators without impeding effective competition, but it is not yet clear that this will happen.

The introduction of competitive tendering for subsidized services appears to have been somewhat more successful in achieving its aims. As Kilvington (1985) observed on the Hereford trial area: competition for the market is seen to perform more adequately than competition within it. Market forces have been used to enhance the effectiveness of the regulation of operators on noncommercial routes, and have helped public decision makers by providing better information about the costs of various services.

We shall conclude this section with two points on the question of ownership. The first is that public ownership was evidently no impediment to aggressive competitive responses by National Express and local bus companies (and even by BR). It was the advent of actual and potential competition that transformed their behavior, and not any change in ownership.

The second point concerns the privatization of the National Bus Company. Market power in bus services is extremely localized, and even though National Bus subsidiaries are being sold separately, rather than as a single national company, the prospects for sustained effective competition may be poor. Established incumbent firms may soon be able to see off the competition in many areas, especially in view of the features of bus competition referred to above. The danger is that market power at local level will not be broken and that privatization will simply lead to its being exercised by private rather than public operators. If that happens, the call

will be for reregulation, not deregulation, and we will have turned full circle.

10.5 Railways

Railways in Britain were in private ownership until 1948, when nationalization consolidated various regional companies into a single state-owned entity. There is private ownership of railways in some other countries, for example the United States, and the Japanese National Railway company is in the process of being privatized. However, the bleak prospects for competition and profitability on the railways in Britain today are such that BR is the most difficult transport industry to privatize. Some of the nonrail activities (e.g. hotels) at the periphery of its operations have been sold to private hands, but its basic rail network business remains firmly in the public sector and immune from competition (except from other modes of transport such as coach and air).

The scope for effective competition on the railways is limited by the presence of fixed and sunk costs (see Starkie, 1984). Fixed costs are large because of the infrastructure (track, stations, etc.) that must be provided before any trains can run on a route. Duplication of infrastructure would generally be inefficient, and natural monopoly cost conditions therefore characterize physical network provision. Infrastructure costs are largely sunk because the assets are of minimal value for other purposes, and we saw in chapter 3 above how the sunkness of costs mitigates against freedom of entry, especially when there are natural monopoly cost conditions as well. However, the cost conditions relating to the operation of services on the physical network are less inimical to competition. To operate a service it is necessary to have trains, staff, and rights of way (including rights to set down and pick up passengers and/or goods at stations). Although there are inevitably some sunk costs in hiring staff and buying or leasing rolling stock, they are small in relation to the massive sunk costs of establishing network infrastructure.

For there to be any hope of competition in rail services, it would therefore be necessary to give actual and potential operators of services equal access to the railway infrastructure. Starkie (1984) proposes a framework in which the ownership of track and trains is separated. Divided ownership might lose economies of vertical integration (see Williamson, 1975), but there were examples of it in Britain prior to nationalization, and private wagons carry much of BR's freight traffic even today. A similar separation is essentially what happens in other transport industries such as

coach and air. Starkie envisages a division of BR into two groups. One company—"British Rail" in the strict sense—would own the infrastructure and would be responsible for train control and overhead administration. Another company or companies—"British Trains"—would own the rolling stock and would compete in the running of train services. The Rail company would charge competing operators of trains for the use of its track and stations. For example, it could charge direct costs at times of spare capacity and could auction rights of way at peak times.

A less radical step than enforced vertical separation of track and trains would be to allow BR to remain vertically integrated but to require it to grant access on fair terms to competing operators. Such a framework would be closely analogous to the regimes that have been established for the gas, electricity, and telecommunications networks. The issue in all these cases is interconnection—what constitutes "fair terms" for access to the network of the vertically integrated firm, and can they be effectively enforced? Continued vertical integration imposes a heavy regulatory burden, as the experience of those industries since liberalization shows, and it is evidently a very difficult task to create and maintain conditions for effective competition. Vertical separation of the kind proposed by Starkie for rail is a more direct route to the objective of promoting competition. Unless that objective can be met, privatization appears an unattractive prospect because the absence of competitive forces would compound the huge burden of regulation.

Another obstacle to privatization is that BR is heavily reliant on public funds. In the year to 31 March 1987, almost a quarter of BR's turnover (£786 million out of £3,183 million) came from Government grants. BR made an operating surplus of £69.9 million, and a surplus of £2.4 million after interest charges. This financial result was substantially better than results in previous years. The Government grant of £786 million was £110 million lower than the grant in 1985–1986, and BR's aim is to reduce the subsidy by a further 25 percent to £555 million in 1989–1990 by cost-cutting measures.

There are several possible justifications for Government grants to rail services, including the social desirability of services in less populated areas, the reduction of traffic congestion on roads, and the need to finance the deficits resulting from allocatively efficient pricing (i.e. $P = MC$) in natural monopoly cost conditions. Grants are not inconsistent with privatization—as we saw in connection with subsidies to bus services in rural areas—but privatization would make their administration considerably more difficult. Moreover, the industry's need for grants

would make the proceeds from privatization small and highly dependent on expectations about future subsidy policies.

The lack of competition and the presence of sunk costs (unless there is vertical separation of track and trains) imply that competitive tendering for uncommercial rail services is unlikely to work satisfactorily. In coach services there are low sunk costs, there are many actual and potential suppliers, and the service is not too difficult to specify. The fulfillment of these conditions in rail services is less likely, and franchising—or “competition for the market” (see section 4.6.1)—might encounter serious difficulties. Bidding for franchises would probably not be competitive, problems of asset handover might be considerable (depending who owns the assets), and the needs of integrated network operation would imply that sizeable areas would have to be franchised, with corresponding problems of contract specification and administration.

In conclusion, it is evident that the difficulties of establishing effective competition and regulation in the railway industry are an unappealing combination of many of the problems faced in other industries. There are natural monopoly cost conditions, massive sunk costs, and a vertically integrated incumbent firm with huge incumbent advantages. Even if competition could be promoted, it might be prone to the instabilities (e.g. in timetabling) apparent from the deregulation of local bus services. An alternative to a privatized BR operating in a partly competitive environment would be a private BR monopoly subject to heavy regulation. But the regulatory problems would be enormous, especially in the absence of competitive yardsticks. In addition, rail services are distinctly unprofitable in overall terms (although some services are commercially viable), and the proceeds from privatization would not be large. Taken together, these factors suggest that the privatization of BR—in whatever form—should and will be a remote prospect. A more fruitful path is to concentrate on improving incentives and regulation in the industry under public ownership, and (without too much hope) perhaps also to facilitate private competition as an experiment in some parts of the industry where it might stand a chance.