THE CONTESTABILITY OF MARKETS

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In this essay Jonathan Miller draws our attention to one of the dominant issues in European Transport Policy – that of the contestability of markets. The author applies Baumol's theory to the airline industry, highlighting the barriers to contestability and providing an illustrative case study of the US airlines.

Introduction

European Transport Policy in the 21st century is dominated by four main issues: social cost, value for money, safety and contestability. This essay addresses contestability by introducing Baumol's Theory of Contestability (1982) and also by discussing deregulation. The theory will be applied to the transport market. The topical air transport industry[1] will be the primary focus within the market since Baumol's theory postulated that airline markets could provide a particularly close approximation to contestability (Baumol and Bailey, 1984). Furthermore, the airline industry gives the added bonus of providing many barriers to contestability. This will be commented on at a later stage, followed by a case study on USA airline industry.

In a contestable market, potential entrants can easily challenge the position of incumbents. A perfectly contestable market occurs when entry is free. This implies that there is an absence of sunk costs, costless reversible entry exits, and incumbents compete on symmetric terms with entrants.[2] Hence, any cost differences arise from price or quality differences in output since there are no regulatory restrictions or threat of predatory pricing. Under these assumptions the knowledge that firms will enter if supernormal profits are being earned means that even a small number of incumbents will sell at a competitive price. Baumol found that some

[1] Examples include Aer Lingus marketing and change in service, state aid to EU national flag-carriers, Ryanair's cheap tickets, the collapse of Swiss Air, Air France amalgamations, to name but a few.

[2] Access to the same production techniques and input prices exist and there is no subsidy being awarded to solely the incumbent or the potential entrant

industries with small numbers of firms are in fact highly contestable and claimed that high concentration with low prices can be seen as a virtue rather than a vice.

Welfare Features of a Perfectly Contestable Market

- Zero profits constitute equilibrium because if the incumbent earns any supernormal profits, it would automatically constitute an incentive for a potential entrant to ‘hit and run’.
- There is an absence of productive inefficiency in long run equilibrium, or efficient entrants would contest the market.
- No product can be sold at a price greater than marginal cost in long run equilibrium therefore cross-subsidisation is impossible.
- These characteristics keep the incumbent efficient, as potential entrants can force monopolists or oligopolists to act in a socially optimal manner.[3]

Benefits of Deregulation

Microeconomic forces have provided increasing evidence that the costs of regulatory failure are not actually worth the reduction in market failure that they were designed to achieve. Examples include the efficiency savings of private bus operators in Sydney, British Coachways in Britain, Aircoach and other small private bus operators in Ireland. Extreme cases have led to regulatory capture where competing (usually the incumbent) firms are able to influence the regulatory body, e.g. CIE,[4] EU state airlines in the 1990s,[5] taxis in 1990s.[6]

Deregulation is considered procontestable as it causes a higher industrial output, which leads to greater output and productivity and lower prices. This confirms with the Theory of Contestable Markets and its applications, which were conceived primarily with consumers’ interests at heart.

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[3] Ryanair made British Airways and Aer Lingus change their entire approach to business operations. British Airways pulled out of low cost city routes, which were in direct competition with Ryanair, Buzz and Go. Aer Lingus has now become a “no frills” airline with much administration imposed on the passenger rather than the airline or travel operators, thus reducing cost.

[4] Especially during the period of nationalisation and controlled competition 1930-1974. Further liberalisation for private bus operations in Ireland is required to increase contestability and in turn competition. At the moment, it can take up to a couple of months for a private bus operator to obtain a route licence while CIE can obtain one nearly overnight.

[5] Aer Lingus, Air France, Iberia and British Airways

[6] A Dublin taxi plate valued at €100,000 before deregulation to €5,000 after. Only 3,913 taxis were on the streets on the eve of deregulation. This number had reached 11,630 two years later. See Fingleton (1998) and Barrett (1982).

There has been much deregulation throughout numerous sectors of the economy since the early 1980s with varying success. Freight haulage is probably the most successful deregulated transport sector where contestability has increased substantially. Ireland completed deregulation of the haulage sector by September 1988, with quality controls replacing quantity controls on market entry. Quality controls can be used to combat externalities and along with private sector investment, there exists no need for governmental intervention, the West Link and East Link toll bridges provided by National Toll Roads being a prime example.[7] Originally restrictions imposed on the haulage sector in 1933 were designed to assist the railways, but their main effect was to increase transport costs and to generate a scarcity value for haulage licences similar to those of taxi plates in Dublin in the 1990s. With deregulation, road haulage increased from 17% to 72.4 % of the market share, to the detriment of the rail freight (Barrett, October 2003)

The Airline Industry

A healthy airline industry is, in a similar fashion to telecommunications and finance, essential for the prosperity of other business. Around 1.25 billion people a year travel on aeroplanes, spending $250 billion and providing jobs for about 1.5 million people. Perhaps more importantly, airlines are a key element of the larger business of travel and tourism, which has revenues of $3,400 billion a year and which makes up about 10% of world GDP, in employing 200 million people (Asia-Pacific Technology Network, 2004).

For the past half-century, growth rates in the airline business have consistently been above world GDP growth, with the exception of 1991, largely due to the Gulf War, and in 2001/02 in the aftermath of September 11th. In spite of this strong growth, profit margins have typically been low and some large carriers have either made large losses or have disappeared altogether.[8]

Airlines have many of the features frequently found in nationalised industries. They have strategic importance, potentially large externalities, high fixed costs and contain elements of national pride. Unsurprisingly, for most of the post-war period the industry has been dominated by state-owned ‘flag carriers’. Governments are able to control the amount of competition their domestic carriers are exposed to, which is a key factor in any airline’s profitability, whether state-owned or private. For example, while some would argue that British Airways’ post-privatisation record is due to efficiencies imposed by free market pressures, others

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[7] It will be interesting to see of the tolling of the Irish motorways will also provide empirical evidence to the argument that regulation is not required and that private public partnership can optimise consumer welfare benefits.

[8] TWA, Swissair, PanAm

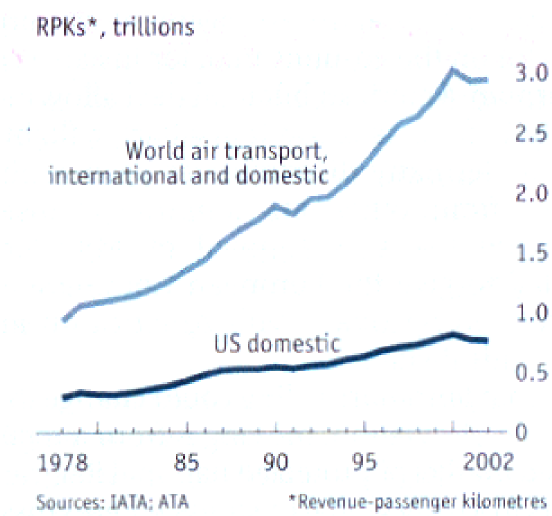
would claim that healthy profits are more attributable to the continued preferential treatment it receives at Heathrow airport through grandfather rights and slot control.

However, over the last 15 years or so the airline industry has been undergoing fundamental structural change. In the past, it was a global industry dominated by national firms. More recently airlines have revealed ambitions to become global firms, through a programme of mergers and alliances. The reasons are similar to those for telecommunications firms, rising fixed costs and increased importance of access to new markets in a global economy.

Liberalisation of the Air

The US Airline Deregulation Act, 1978, freed airlines of government control over airfares and routes, which allowed some airlines to develop large domestic control, like Delta Airlines. Bailey (1986, In: Williams G., 1994) states the benefits of procontestable policies as reducing average prices, time spent travelling, real cost of airline operation and cross-subsidisation, whilst increasing efficiency via computerised routing. These in turn benefit the consumer by providing a wider variety and better service at a lower price, leading to an upsurge in air travel, which rose by 150% over the last 20 years (See Figure 1). With the developed world no longer having a monopoly in technology, capital and human skills, this competitive spur is required to maintain its market shares (Scamorana, 1993).

Figure.1: Explosion in US Air Travel after Deregulation



Source: The Economist October 14th 2003

The gains from European airline deregulation have been more dramatic than in the USA[9] and of all European countries, Ireland was one of the first and most dramatic cases of fare reductions and traveller volume increases. On the first day of deregulation, 23rd May 1986, the Dublin-London airfare was reduced from £208 to £94.99 (€264.11 to €120.61), a fall of 54%. The current average fare per journey on Ryanair, the Irish start-up airline under deregulation, is €41 and the airline claims cuts of as much as 85% off the fares charged by traditional European national airlines. Passenger numbers between Dublin and London in August 1987, the first complete year of deregulation, were 92% above those in August 1985. Although the population of Ireland is just over 4 million, more people fly between Ireland and the UK than between the UK and France, Germany and Italy combined (Barrett, 2003). Ryanair was the first start-up airline in Europe to carry more passengers than its national airline, and with 24 million passengers in the current year, it is likely to become the largest international passenger airline in the EU in 2004. Ryanair's passengers may exceed 30 million passing British Airways and Lufthansa, each currently with c.29 million passengers in Europe (O'Leary, 2004).

Bailey's 1984 article led to the acceptance of the first of two hypotheses tested by Graham, Kaplon and Sibley that national airlines used to employ excess capacity relative to that in unregulated competition, resulting in inefficient use of resources. This fact can be easily seen by the fact that Ryanair's growth in the airline market has led to main airline carriers tightening staff quotas to cut unneeded costs. The second hypothesis that potential competition would keep fares at cost in highly concentrated markets was refuted. They found that potential competition alone is not enough to reduce fares since they were closely related to market traits such as time-distance sensitivity. Kenneth Button (1982) wrote that since buses are an experienced good, reputation was a significant factor. Potential entry was not enough to reduce fares. It would be interesting to see if this hypothesis still holds true in light of the events of September 11th 2001 and whether safety is now a factor that must be built into the business model and, as it is an externality, whether the model should be altered to reflect the recent change in people's concerns? Similarly, should externalities such as health concerns caused by deep vein thrombosis be incorporated into the 21st century model, or will large settlements arising from proceedings taken by claimants of the airlines be required before they are incorporated into economic models as a real and substantial cost?

Deregulation has allowed low cost entrant airlines into the industry who, unlike the incumbents, are not tied into high cost labour agreements with powerful

[9] European air fairs before deregulation were the highest in the world, according to an ICAO survey.

unions.[10] The incumbents' attempt to overcome the disadvantage of a different cost structure was originally a two-tier labour structure. This entailed existing staff being paid the original wage but new staff receiving a more competitive lower wage. This approach was thwarted by disruptions and strikes.[11] Baumol seems to have overlooked this dilemma when choosing air transport to support this theory.[12]

The existence of sunk costs provides an advantage to incumbents, which seems to prevent entry and cannot be simply legislated away. In this way, railways have not been considered a contestable market due to the existence of substantial sunk costs like the laying of tracks.[13] However, the airline industry has the ultimate in mobile assets and a highly developed resale market. Bearing this in mind, why in the past was so much of the market under state ownership and regulated?

National Monopoly or National Pride?

Airlines were traditionally seen as a public utility, which helps to explain the prevalence of state ownership and heavy regulation. However, they cannot be seen as a natural monopoly as the cost implications of more than one airline serving one route are not the same as those of more than one water company laying down pipes.

It is possible to argue that there exist elements of natural monopoly in the provision of airport facilities,[14] but the same is not necessarily true of the airlines, which serve these airports. Whilst airlines may have heavy fixed costs in terms of their aircraft and computer systems, the assets are both mobile and escapable. Statistical studies have shown that there is little relationship between size and average cost, once a minimum efficient scale of operation had been reached. Returns to scale are constant, so large airlines do not automatically have a cost advantage over smaller ones. It would therefore appear that governments choose to regulate or

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[10] Ryanair's low cost base would cause Aer Lingus to make losses at Ryanair's prices

[11] Michael O'Leary often states that his workers receive a higher wage than high cost airlines due to the workers higher productivity. With 24 million passengers and 2,200 staff, Ryanair has 10,900 passengers per staff member per year in contrast with 800 in member airlines of the Association of European Airlines. Aer Lingus had much union trouble since the implementation of its restructuring plan in 2002 but the Aer Lingus Board headed by Tom Mulchay have recognised that this is the only plausible method to make the airline profitable again and eventually lead it to its initial public placing as was originally intended by the government in 2000.

[12] Baumol and Willig do state in a later article that TCM is an ideological economic market. Prefect contestability is not primarily a description of reality but rather a benchmark for desirable industrial organisation.

[13] Even the privatisation of locomotives failed to make the British railway profitable

[14] This argument is becoming obsolete as more people are willing to fly to smaller airports further outside the city in return for cheaper flights.

own airlines because of the externalities, the national image and the strategic factors involved. Much of the rationale for government regulation is based on non-economic factors. To understand this, consider the domestic reaction, politically and popularly, if a foreign carrier were to make a take-over bid for Aer Lingus and the union strife that would ensue.

Ports following Lines

Airport competition has been an unprecedented result of airline deregulation in Europe. The traditional European hub airport was a high-cost, non-competing facility, controlled by the host national airline through a scheduling committee, which allocated slots to airlines in order of seniority, through the grandfather rights system. Without airport competition, the Single European Market in aviation would have afforded few market opportunities for new market entrants who would have had freedom to enter the market but would not have had access to hub airports in a sufficient number of slots to make a significant market impact. Airports in Europe are thus becoming contestable markets with passengers quite willing to transfer to new airports and low-cost airlines providing services not supplied by the incumbent airlines in the past. [15] Airport competition appears sustainable because of the large number of underused airports in Europe. For example, Charleroi Airport, Brussels, has a terminal capacity of 1.8 million passengers and a runway capacity of 10 to 15 million operating 24 hours a day. In 2002, the number of passengers at the airport was 1.5 million. Airport and airline competition has also brought downward pressure on airport charges at the hub airports. At Dublin, Aer Lingus has joined with Ryanair in its criticisms of airport charges. According to Barrett, the scope for savings from airport deregulation ranges from 50% to 92% (Barrett, 2003). However, these savings could be diminished as Ryanair was ordered on the 3rd February 2004 to pay back €4.5 million in illegal subsidies in a landmark European Commission decision. The Commission said cut-priced rates offered exclusively to Ryanair for using Charleroi Airport in southern Belgium were illegal. The airline will not have to repay all its subsidies from the Belgian regional government, but Michael O'Leary sees the decision as a "disaster for consumers". It could lead to similar action been taken in other regional airports, in some cases making it unviable for low-cost airlines to continue operating certain routes (The Irish Times, 2004).

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[15] New airport market entrants under deregulation include Stansted, Prestwick, Charleroi, Beauvais, Hahn and Lubeck

Economies of Scope

In the airline business the efficiencies due to size are more correctly termed economies of scope, rather than economies of scale. The latter are typically found in manufacturing when the cost of producing an extra unit of output is lower than the average cost of the output, which has gone before it. Essentially, this is due to the high cost of the investment needed before production can begin - what economists term start-up fixed costs.

The airline industry reaps economies of scope when the cost of supplying two products jointly is cheaper than producing them separately. These economies usually relate to the size of an airline's flight network. For example, advertising costs are not aimed at a particular route, but at the airline's whole network, which can be termed an economy of scope. Large networks also give opportunities for economies of scope in areas such as frequent flyer schemes to generate customer loyalty and computer reservation systems.

Deregulation tends to result in lower prices because in addition to stronger competition on routes, it generates increasing economies of scope by allowing network size to increase, whether by corporate expansion, mergers, or alliances. As a result, airfares have risen much slower than the rate of inflation in recent years (Asia-Pacific Technology Network, 2004).

Barriers to Contestability

In US internal aviation the consumer welfare gains from deregulation have been estimated at $20 billion a year, but incumbents have many structural and strategic anti-competitive advantages over potential entrants including:

- Hub airport dominance/Grandfather rights are the control of major airports by incumbent airlines and the restriction of access to these airports for new airlines thus reducing the latter's ability to entice passengers. Airport slots should be allocated by lottery, franchise or auction instead of senior scheduling committees. It was considered the most important barrier to contestability. However, as mentioned above, many customers have made the choice of flying to more remote destinations at a reduced cost with new low fare airlines.
- Ground Handling Monopolies were restricted to airlines with grandfather rights thus enabling them to charge prices for this service to smaller airlines. This limited the price-competitiveness of potential entrants. EU deregulation of handling rights lead to the appointment of competing specialist baggage handling groups,

which resulted in some cases to costs to smaller airlines being halved.[16]

- Computer Reservation Systems (CRS) of incumbents must be used by potential entrants because of economies of scale. CRS are used to bias travel agents' displays against small airlines although, neutrality should exist. This problem has been overcome in recent years with the advancement of internet technology. Selling tickets over the Internet is a more cost efficient and productive means of sale. The reduced cost of ticket sales has led to low air fares and more airlines dealing on-line, like *aerlingus.com*
- Geographical Price Discrimination is the strongest obstacle as it allows incumbents to undercut new entrants on competitive routes by cross subsidising with the profits of uncontested routes (Kahn, 1988). This was the most destructive post-deregulation obstacle to efficiency in the U.S.,[17] so the EU Commission have wisely initiated and implemented a package, which can investigate fares which are either too high or too low. Similarly price collusion between incumbents must be broken and national airlines' anticompetitive Article 81.3 status, exempting them from competition policy, must be lifted.
- Frequent flyer programmes place new airlines at a disadvantage as with a bigger network the passenger can maximise benefits by flying with a larger airline. It is also difficult to regulate. However, it is becoming an issue only affecting the executive traveller flying on company business who collects the air miles for his own use, rather than the tourist traveller who has little or no carrier loyalty.
- Mergers and Concentrations as potential entrants are taken over by larger airlines, continuously reducing the contestability of the market. Mergers[18] have made it more likely that deregulation will not reach its full potential (Morrison and Winston, 1986).

[16] British Midland International halved their costs when they started handling their own baggage instead of having to pay British Airways.

[17] See Case Study on Predatory Practices in the US Airline Industry.

[18] As a prime example, Air France and KLM Royal Dutch Airlines are to come as close to a cross-border merger as the industry's rules currently allow. They hope to circumvent the rules that tie traffic rights between two countries to domestically owned carriers. The two airlines will be owned by a joint holding company, but will operate as separate brands from their bases in Paris and Amsterdam. By obtaining KLM, Air France will dominate two of the four long-haul hubs in Europe and increase its annual passenger load to 42 million people. The deal has to win clearance from both the American and EU antitrust authorities.

thus merger policy should be more rigorously enforced. Strategic alliances also increase airlines economies of scope but without the complication of government intervention. The three main forms of alliances are code sharing, block spacing and franchising. Chataway (1992) suggests an independent, non-political European Agency, which would make decisions purely on competition grounds. This could be further developed to look after safety and health aspects, which now concern a majority of passengers.[19] This power could be removed from the bodies such as the CAA and IAA, and given to a European Agency. Whilst the CAA and IAA are not politically inclined, there must be sizeable duplication of costs by having so many regional authorities.

- State Aid in the past to national airlines seriously distorted contestability, allowing below cost selling by incumbents, therefore placing entrants at an unfair disadvantage. Although not the recipients of state aid, Chapter 11 bankruptcy laws still permit bankrupt US airlines to operate without having to make interest or pension fund payments, thus reducing ease of exit. This in turn reduces the benefit of procontestable policies (Barrett, 1994). In an attempt to create a more level playing field, regulations limiting when state aid could be provided were issued under Articles 87 and 88 of the EU Treaty. Aid is permitted in areas where there has been economic disruption. This is an area, which state airlines play to, examples including September 11th and possible terrorist fears weakening the aviation market. Whilst the administration and legislation is in place the European Commission must make sure that any aid given follows certain criteria, and that it is a once off improvement package, which has to be implemented correctly by the receiving airlines. Even though the EU has strengthened competitiveness by limiting when state aid is granted, it unfortunately lacks real enforcement.

Case Study on Predatory Pricing in the US Airline Industry in the early 1990s

In the early 1990s, after an economic recession, a new wave of start-up airlines began operating and by the mid-1990s, one in five travellers were flying with these small, low cost companies. It was therefore a matter of concern to the Department of Transportation (DOT) when the new entrants complained that they

[19] These could be incorporated into a minimum safety and health standard without which airlines cannot operate and the costs of which are borne by the airlines.

encountered sharp price-cutting by major incumbent carriers, particularly when entering concentrated hub markets. The DOT questioned whether incumbents were setting fares well below cost in an effort to divert customers away from the new challengers, seeking the demise of the new entrants in order to raise fares back to much higher, pre-entry levels. There were also reports of incumbents using their long-term leases and other airport contractual arrangements to exclude challengers; for instance, by refusing to sublet idle gates.

Concerned about possible predatory practices in the airline industry, and recognising the uncertainty and expense involved in trying to prove such conduct through the courts under traditional antitrust law, the DOT offered its own criteria for detecting predatory pricing. It proposed an administrative enforcement and investigative process to police unfair competition in the airline industry. Sharp price cutting and large increases in seating capacity in a city-pair market by a major airline in response to the entry of a lower-priced competitor would trigger an investigation and possible enforcement proceedings.

The DOT's proposal, in April 1998, prompted strong reactions. It was lauded by some, including many start-up airlines, as a necessary supplement to traditional antitrust enforcement, giving new entrants the opportunity to compete on the merits of their product. Others, including most major airlines, have criticised it as a perilous first step towards re-regulation of passenger fares and services and as incompatible with traditional antitrust enforcement. In addition, in May 1999, the Department of Justice filed a civil antitrust action against American Airlines, claiming that it engaged in predatory tactics

Conclusion

Privatisation assists in contestability being obtained in that any high airfares charged would be reflected in supernormal profits. These attract more attention than economic rents dissipated in inefficiency or labour costs. Privatisation also ends the monopoly of regulatory capture by Europe's airlines over their 'parent' government departments.

Baumol's theory was justified by the massive success of deregulation in all areas of economic life over the past 20 years including telecommunications and utilities. To prevent contestability becoming a monopolistic damp squib (Pryke, 1987) the government and EU must enforce and further develop the recently introduced procontestable policies. More than ever, regulation has an important role to play in tackling barriers to contestability. Contestability has been assisted greatly by advances in communication technology enabling consumers to obtain a high degree of information and price comparability at low cost e.g. the through internet and its search engines. Lobbying against anti-competitive and concerted practices as illustrated in cases in the United States, Ireland and the EU[20] suggest an ever-increasing trend towards a level playing field. For the sake of efficiency and moreover for the sake of the consumer, let us hope that Baumol's ideological market structure can be illustrated by the airline industry.

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[20] For example Ahmed Saeed Flugreisen (1989), Nouvelles Frontiers (1985), British Airways/ British Caledonian (1988), British Midland vs. Aer Lingus (1992)

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