MARKET FORCES IN THE DEREGULATED AVIATION ENVIRONMENT

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This panel of experts was broadly based with representation from airlines, government, aerospace manufacturers, the financial community, academia and consultants. The panel first looked at the characteristics of the existing market for air travel. Next it examined the growth factors that may influence the future passenger air travel market. This was followed by an examination of airline marketing strategies and tactics, and then by an examination on the constraints imposed by the infrastructure. The panel concluded with some specific forecasts and suggested some research needs related to market forces.

Attention was focused on the demand for passenger travel through the year 2000 to test the hypothesis that traffic would double from today's level in this period. This limited period excludes possible effect of new technology such as a second generation SST or tilt rotor craft. It is also a period during which few, if any, new airports can be opened and operating capacity constraints will not be reduced significantly.

In general, the panel concluded that the primary market forces which caused rapid growth of air travel demand in the past are now largely exhausted. In addition, rate of growth will be constrained by the physical limits of the aviation infrastructure and the impact of industry concentration on the intensity of price competition. Thus, the rate of growth of world air travel probably will slow down significantly through the end of this century. Worldwide passenger traffic grew at a rate of 8% per year from 1967 through 1986. Most published forecasts expect this rate to decline to only 5% to the year 2000. The panel concluded that achieving this growth rate will be difficult.

Characteristics of the Existing Market for Air Travel.

Passenger travel is a derived demand based on the need or desire of people to be somewhere else. Air travel is used when it is more cost effective than other possible modes. Because of the many reasons for travel and the many individual decisions which are made with respect to timing, mode choice, destination. etc., the demand for air travel is extremely heterogeneous. This is easy to overlook because the product - a seat in an airplane - is quite homogenous. A single product serves many demands.

The best single description of the air travel market in the U.S. is provided by the annual ATA Gallup survey of the incidence of air travel taken since 1971. The latest report for the twelve months ended in June. 1987 shows that 30% of U.S. adults took at least one commercial air trip during the year and 72% have ever taken an air trip during their life. This compares with 21% and 49%, respectively, in 1971. An estimated 26% took personal or pleasure trips while only 9% took a business trip by air. The percentage of persons taking business trips has not risen significantly since 1971 but the percentage taking personal or pleasure trips his increased sharply. However, of all air trips taken, the proportion between business and personal/pleasure has remained about 50/50 with no clear trend.

Business travel is a concentrated market -- about 80% male, middle aged, upper income. Pleasure travel is a diverse market -- 55% female, all ages, all income categories. Business flyers fly frequently while pleasure flyers usually make only one or two trips per year. Frequent flyers are critical to airline marketing success. Five percent of those who flew last year(1.5% of all adults) produced 33% of airline passenger traffic and about 45% of airline passenger revenue. Only 4% of U.S. adults took an overseas air trip during the study period.

Growth Factors

The panel identified four major domestic U.S. factors and an international factor which generated the tremendous growth of air travel since the jet age began: 1) the steady decline in the real (inflation adjusted) cost of air travel; 2) large improvement in speed, comfort, convenience and safety of air travel compared with piston aircraft and with competing surface modes; 3) favorable cultural and demographic factors including a decline in the fear of flying, high population mobility, and early inoculation of the baby boom generation with the "flying bug."; 4) a rise in discretionary personal income which is partly due to the rise of the two income household; and 5) international factors such as dollar exchange rate.

The panel examined these factors in detail and speculated on possible new factors which may develop in order to assess the reasonability of the consensus forecast of 5% long term growth (i.e. a doubling by 2000).

1. "Real" Fares and Yield. There was no consensus on the level of future air fares in real terms. All agreed that fares would depend on what happens to unit costs per available seat mile and the achieved passenger load factor which determine cost per revenue passenger mile. Fares cannot deviate from costs over the long run. The various major elements of costs were discussed in depth.

Labor costs are a big question mark because of conflicting forces at work and the great disparity in labor costs within the airline industry. All agree that costs will tend to converge over time...but at what level? The need to improve the quality of airline services to meet new government reporting requirements will increase costs. There appear to be potential shortages of skilled labor - pilots and mechanics - which will put upward pressure on wage levels. However, if dual wage scale schemes continue to exist, the retirement of higher "A" scale workers and their replacement with "B" scale workers will bring down average wages. Airlines may purchase more services from outside sources in order to reduce costs. Labor productivity could improve with economies of scale from industry concentration. But the need to improve the quality of airline service to meet new government guidelines will increase costs. The panel could not agree on whether these diverse forces would cause unit labor costs to increase more or less rapidly than the Consumer Price Index.

Fuel prices are expected to rise over the long run because of an increase in the cost of crude oil and the probable imposition of additional fuel taxes. The big drop in jet fuel prices from $1.04 in 1981 to 55 cents in 1986 will not be repeated. Fuel efficiency will show steady but gradual improvement as the

result of changes in the airline fleet mix and larger airplanes with more efficient engines. However, the very large efficiency improvements promised by propfans won't be economically justified unless fuel prices go well above $1.00 per gallon. It is uncertain whether unit fuel costs will rise or fall during the forecast period but they certainly are not expected to repeat the dramatic decline of the last five years.

Airline capital costs for the acquisition of fleets and facilities are difficult to measure because of the diversity of financing methods being used. The cost of capital in general has risen because of tax law changes. Several economic studies, including those by aircraft manufacturers, have concluded that investment in new aircraft to replace existing fleets is difficult to justify economically at this time. Only market growth can clearly justify such investment. However, an environmental requirement to replace noisy aircraft may force airlines to invest in new aircraft which would have the net effect of increasing costs.

Other costs which seem to be headed higher or, at least, to remain level, include airport fees and commissions. On balance, the panel felt that total unit costs per ASM in the next decade will remain steady or slowly rise in real terms. Thus, the only strong hope for a continuation of the downtrend of unit cost per passenger mile and "real yield" is that the average passenger load factor can be increased.

Load factors on average have risen from the mid-fifties before deregulation to nearly 65% this year. This change has had the effect of dropping unit cost per RPM by about 15%. If load factor can be further increased to 75%, unit costs will go down another 14%. Whether this is possible was hotly debated. Success will depend on aggressive selling of off-peak capacity and sophisticated yield management.

Industry consolidation will tend to support a higher overall fare level in two important ways. First, it is deemed extremely improbable that a new "People Express" type airline will come into being in the U.S. to offer super bargain fares. Second, the reduction in direct multi-carrier route competition and the emergence of more stable route systems as a result of consolidation will make the outbreak of sporadic price wars much less likely.

In summary, the panel felt that real yields would either remain level or decline slowly...but definitely not repeat the dramatic decline of the past decade during which the real yield dropped by 3.5% per year on average.

2. Quality of Service. All agreed that improvements in speed, comfort, schedule convenience and safety have been important growth factors over the years. At present, consumers are complaining about a deterioration in these factors but there is no evidence that poorer service is resulting in less air travel. If the problems with on-time performance, schedule unreliability, lost baggage, etc. are reduced, there is little probability that demand will pick up as a result. Fixing these problems will be costly and could result in lower fleet utilization. Technological improvements in aircraft and the air traffic control system between now and 2000 will be barely perceptible to the passenger...marginal improvements in reliability

and ride comfort but no change in speed and, possibly, more crowding due to higher load factors. These historically positive growth forces have become neutral.

3. Cultural/Demographic Forces. Some observers believe that demographic trends favor the growth of air travel since the huge baby boom bulge is now moving into age brackets which are most likely to fly. Others point out, however, that as the baby boomers begin to have children at a later age than prior generations, they will be less inclined to travel. Also, there will be fewer young adults who are big leisure travelers and more "super senior" citizens who historically have done little flying. Demographic changes are not a clear plus or minus.

4. Discretionary Income. The conversion of the U.S. population from single to multiple earner households has gone about as far as it can go. In recent years, most of the personal income growth in the economy has taken place in the top 20% of the income strata - a group which already flies a lot. In fact, Gallup data show that lower air fares in recent years have not led to increased flying by lower income groups. These factors suggest that it will be difficult to increase the propensity of the U.S. population to spend on air travel. Some recent studies have shown that total spending on air travel as a percent of Disposable Personal Income has been declining in recent years. Furthermore, economists have pointed out that economic policies need to be changed to encourage a higher saving rate out of discretionary income - and lower discretionary consumption - to promote a more balanced economy.

Getting a bigger bite out of the discretionary dollar for air travel will depend to a great extent on changing consumer values and tastes. There is a trade-off between tangible values and experiential values...the BMW or the trip to Bavaria...the American vs. the European life style. Little hard data exist to permit generalization on spending habits and values of the "Yuppie" generation. Some recent experience with bargain weekend fare packages designed to appeal to "up-scale" consumers indicates that the actual buyers tended to be middle class instead.

On balance, it is expected that discretionary income will grow more slowly in the future, that a bigger slice will go into savings, and that American preferences for luxury goods will have to be overcome in order to achieve a major gain in discretionary spending on air travel.

5. International Factors. The foregoing applies primarily to the domestic U.S. market. The forces discussed will also apply to foreign travel but other factors will come into play as well. The decline in the exchange value of the dollar since early 1985 will eventually have a devastating impact on foreign travel by U.S. citizens, especially leisure travel. This impact in the past has hit with a lag of one or two years. Heavy travel in 1987 results from the pent-up demand from 1986 when people feared to go to Europe. A big drop is almost certain in 1988. Of course, more foreign visitors to the U.S. are expected but it is felt that the U.S. does a relatively poor job in promoting tourism and in handling foreign visitors. Few U.S. tourist destinations make much of an effort...there is a lot of room for improvement.

In the long run, the globalization of the airline industry and liberalization of regulated markets will be a strong growth stimulant. At present there is a lot of talk but little action. It also is clear that international leisure travel is highly sensitive to security problems. If terrorism is ever curtailed, travel could get a big boost. International business travel appears to be a strong growth sector for the foreseeable future.

Airline Marketing

A vast majority of airline tickets are dispensed through travel agents which have largely replaced direct airline distribution systems. The reason is simple; it costs less this way. Airlines have little interest in recapturing this function. The travel agency industry is going through a consolidation phase but is still not highly concentrated. Big gains in automation and streamlining of "back office" procedures are in prospect but the agent will remain in the picture because travel decisions are basically complex and the customer needs expert assistance.

Computerized reservations systems have enabled airlines to exert control of their product even though surrendering actual ticket distribution to travel agents. They enable airlines to engage in "yield management" -- i.e. optimization of the traffic mix and load factor -- which maximizes the revenue production of the system. If political forces should force airlines to divest their CRS's, there would be a net loss in efficiency which would hurt consumers in the long run. One possible consequence of the CRS systems is that travel agents will eventually become more like exclusive distributors for the airline which provides the CRS rather than independent agents for all the airlines. There is nothing inherently good or bad about such a development should it occur.

As noted above, the consolidation of the U.S. airline industry and the emergence of so-called "mega-carriers" will have an impact on the growth of air travel. In this changed environment, it will be very difficult for small carriers to find niches in which they can survive and it will be virtually impossible for new carriers to be created. The panel expects never to see the likes of People Express again. This means there will be less likelihood of fare wars and less pressure to hold fares down. Markets dominated by one carrier or shared by two carriers are not likely to have fares set below costs as was often the case in recent years. On balance, consolidation of the industry will tend to slow market growth.

Infrastructure Constraints

It may be that recent public concern with the safety of the aviation system, poor schedule performance and congested terminals is overdone, but there is no question that there is a severe problem facing the industry. The shortage of airport and airway capacity is not likely to be solved by the year 2000. FAA feels 10 more major airports are needed but won't be built by then. Congestion is not being caused by hub and spoke scheduling despite the popular impression to the contrary. More point to point schedules would make the situation worse rather than better because of the use of smaller airplanes and increased schedule frequency at major airports.

During the rest of this century, many technology improvements such as collision avoidance systems and microwave landing systems will make the system run smoother and safer. A scheme for equitably allocating operating slots is needed to maximize the use of existing capacity. Larger airplanes and higher load factors will be needed to handle even moderate growth. It may become necessary to displace some general aviation to make room for commercial aviation.

After 2000, new airports, tilt rotors and high speed ground systems are a possibility as ways to handle the growth of air travel demand. Until then, aviation will be living in a constrained environment.

Conclusions and Suggested Research

The growth rate of air travel during the rest of this century is likely to be significantly less than in the past. The growth rate for the world will be 5% per year or less and no better than 4% for the U.S. Relatively strong growth sectors will include foreign business travel, off-peak leisure travel at cut rates and foreign visitors to the U.S. Slow growth does not lessen the need to improve and expand the aviation infrastructure. Failure to do so could further slow growth and inhibit the introduction of promising new technology in the next century.

The panel identified a few areas where research effort should be directed to improve the prospects for the industry. These include 1) a new Census of Transportation to update benchmark data on travel, 2) a bigger and better version of the Gallup survey, 3) better analysis of existing data, 4) investigation of how best to ration scarce resources such as airport operating slots in the next decade, and 5) studies to support the justification of higher public spending on aviation infrastructure improvements.

Discussion

Question: How was the hub-and-spoke system viewed by your panel?

Mr. Nesbit: With respect to hub-and-spoke, those people familiar with airplane scheduling and the way the system works would say that it is very difficult to imagine a more efficient system for moving large numbers of people.

Question: From the airline standpoint?

Mr. Nesbit: No, from everybody's standpoint. You get more people moved through the system that way. You can use much larger airplanes because you can combine all these loads. The demand is from large cities to large cities for the most part. Going from medium to medium there are very few cities that make any sense for point to point travel, and obviously if we are going to have to live with the airports we have now, we not only have to retain the hubs but we have to replace the small airplanes operating on the spokes with bigger airplanes or go from hub-and-spoke to hub-and-loop where

instead of just going out to one point, the airplane goes out and hits two or maybe three other cities and comes back in, so that means an even bigger airplane to consolidate more travel. It is by far the most efficient way to move people through; and without hub-and-spoke, there is no way the system can handle it.

Question: I just want to make sure I understand it. Is that panel discussion or is that your feeling on it?

Mr. Nesbit: The panel discussed it. Nobody really disputed that view. Point to point is a myth.

Mr. Shinton (Avmark): I just want to add to Bill Nesbit's comment that the point was made that the percent of connecting passengers was no higher now than it was before deregulation except that before these connections were interlined, and now they are mostly online.

Mr. Nesbit: One place where more point-to-point service is quite obvious is in the Trans-Atlantic service where there are new gateways, and quite an increase in frequency there from smaller cities in the U.S. They tend to focus on London from the traditional hubs in the U.S., but they are starting to serve smaller cities in Europe so you are getting more point-to-point there That is because you have just as big airplanes as you can get flying Kennedy-Heathrow with as many as you can pack in, but it is not the same problem.

Mr. McDougall (Wichita State University): If you believe that the domestic growth rate might be around three percent and that that growth is going to come from non-business travel, would that suggest that your 50-50 split by the year 2000 is going to be 60-40?

Mr. Nesbit: Everybody has predicted that for a long time. It just does not seem to happen; but I will predict it again. It think is going to happen.