Briefing Paper on Flight Catering 2005

This briefing paper is based on material from my book 'Flight Catering'. It also draws specifically on two unpublished studies we[1] have done since publishing the textbook. The first was research into infight service departments of airlines – what they do and how they are organised. The second was a preliminary study of the scale and nature of demand in the industry based on passenger data from IATA.

1.0 Who Does What?

In the contract foodservice industry, the basic business model is relatively straightforward – the contractor (such as Aramark, Marriott, Sodexho) in return for a fee provides meals and drinks in the client's premises. Whilst there are three or four alternatives with regard the precise nature of the contract, fundamentally the client delegates to the contractor the specific implementation of foodservice policy. The client in effect buys the expertise (and purchasing power) of the contractor.

This is currently not the case in much of the airline industry. Many airlines have inflight service expertise in house. They design and develop the menus, select the wines, and even purchase product directly from suppliers. Historically airlines had no option but to develop their own expertise - as the flight catering market was highly fragmented and they had to deal with many suppliers in many countries. But the industry structure today is significantly different to what is was only ten years ago, with the growth of LSGSkychef and Gate Gourmet – the 'Big Two'. Between them, these two firms no have around 55% of total market share.

Despite the growth of global caterers, many airlines continue to have the same in house organisation and functions that they always had. But there has been a trend for airlines to downsize their inflight service departments as a result of their need to cut costs. Downsizing usually has two results – one of which may be an opportunity for flight caterers, whilst the other may not be.

1.1 Implications of Airline Downsizing

1.1.1 Outsourcing Functions

First, airlines that downsize have begun to outsource their expertise to caterers in areas such as menu planning, galley planning, duty free, and etc. Alpha Flight Catering have set up a subsidiary called Inflight Service Management (IFSM) - http://www.alphaifsm.co.uk/whoweare.html - which in effect takes over the role airline's inflight service department (ie adopts the contract foodservice model). This works well for relatively small airlines as they cannot achieve the scale economies or learning curve effects that the caterer can.

A key factor that has facilitated this shift is the internet. Both LSGSkychef and Gate Gourmet have invested heavily in internet-based solutions that enable airlines to monitor more closely the total supply chain. This gives them the confidence to outsource more. This is partly discussed in the text (pp. 233-224) and illustrated in Figure 12.2.

1.1.2 Buying 'Meal Solutions'

---

[1] 'We' refers in this instance to the Travel Catering Research Centre here at the University of Surrey (http://www.som.surrey.ac.uk/research/groups/hospitality.asp).

The second implication of downsizing is that the airline cuts back on its onboard provision, both simplifying the offer and reducing cost. This clearly is detrimental to caterers and they have little control over this. One of the reasons for this is that onboard service is one of the few operational costs that is variable. Raising fuel prices have forced airlines to re-evaluate their variable costs .

Simplifying the onboard offer has been facilitated by a number of developments in the supply chain. New players have entered the market, such as Supplair and Air Fayre, who supply airlines with food that has been completely outsourced. Another development by food manufacturers is "onboard meal solutions". A good example is the Nestle Sky Tray (http://www.ifca.co.uk/awards/mercury/showentry.asp?ID=105). A key feature of Sky Tray is that it is not simply a food product by a complete food delivery system. All the caterer has to do is move a cardboard box from their stores onto the plane. The trays developed by Nestle go straight into the onboard ovens to heat the product, and then cool rapidly enough to be used for serving the Hot Pocket.

Ironically, it may be that the growth of the Big Two, with their major airline contracts, has resulted in a much simplified supply chain that greatly helps major food manufacturers deliver their product to airlines.

1.2 The Value Chain

In essence flight catering is concerned with the logistical management of three different types of material:

- Perishable consumables (ie food and hot drinks)
- Non-perishable consumables (ie drink, especially alcoholic beverages)
- Equipment

In addition, the caterer may also be involved in the manufacture of perishable consumables. But even though operators are referred to as flight *caterers* and operate out of flight *kitchens*, **the industry is essentially 80% logistics and 20% 'catering'**.

Another key feature of managing these processes relates to **health and safety**. Caterers add significant value by ensuring equipment is washed and cleaned hygienically and all consumables are safe to consume. This requires caterers to ensure that food and drink is neither contaminated by microbiological organisms nor foreign bodies.

A unique feature of the industry relates to the supply and handling of **duty free** alcoholic beverages. This requires caterers to operate bonded warehouses and to ensure the security of these, as well as the movement of such goods to and from aircraft.

1.2.1 The Perishable Consumable Chain

This is the area that is most dynamic at the moment. The major issue is the extent to which **economy class meals** will be outsourced to food manufacturers or suppliers, such as Nestle, in regions that have the supply infrastructure (Europe and North America). The key drivers of this are lower unit cost (due to scale economies), the opportunity to exploit established brands, and (arguably) even safer 'chill chains'. Already many caterers outsource the production of specialist meals such as kosher, halal, vegetarian, and so on. Such outsourcing has major implications since food production is the highest value added element of what the caterer does.

Allied to this there may also be the switch to '**buy-on-board**', the model adopted by low cost carriers.

It is less likely that **business class meals** will be outsourced in this way due to the smaller volumes and the airlines desire to develop a product 'exclusively' for this segment. Linked to this is some airlines policy of involving 'celebrity chefs' in the dish and menu development process.

1.2.2 The Non-Perishable Consumable Supply Chain
This activity – **bonded storage** - is not likely to be change in the near future.

1.2.3 Equipment
This activity may be reduced as a result of changing the economy meal offer to pre-packaged snack products supplied directly from manufacturers. There may also be some changes as a result of increased concerns about the **environment**. There may therefore be a greater use of disposable equipment, both for cost and environmental reasons (flight washup machines produce very large quantities of waste water contaminated by cleaning agents). This reduction in washup activity may partially be offset by the need to sort disposable waste streams into different types (metal, paper, glass, etc.) for recycling purposes.

2.0 How Global is the Industry?

Much is made of the global nature of the industry. The reality is that there a very few airlines that have a truly global network, and even for these their intercontinental services are a relatively small proportion of their total passenger numbers. Three major markets have over 90% of all passengers – North America, Europe, and Asia.

The structure of these three main markets is significantly different. In North America there are six main American carriers who operate scheduled services, with a relatively small, but growing low cost segment. The United States has largely deregulated its airline industry and has a so-called 'open skies' policy.

In Europe, there are many more airlines, often so-called 'flag' carriers who are the national airline of a country. However, the number of flag carriers is in decline due to increased competition between them and from low cost carriers and a shift towards open skies. Three countries and airlines dominate the European skies because they have been able to develop their hub airports as hubs for the whole of Europe. These are British Airways in London, Air France (in the process of merging with KLM) in Paris, and Lufthansa in Frankfurt. Most of the major growth in Europe is from the low cost carriers, in particular Easyjet and Ryanair. The former is based at Stanstead in London, whereas Ryanair is Dublin based. However both are increasing their point-to-point (ie not through a hub) route network aggressively. In addition, the UK and Germany have significant charter air travel markets based on summer and winter sun package holidays.

In the Far East, flag carriers continue to dominate, although a number of countries are moving towards more open skies – India, Korea, Japan and even China. Moreover low cost carriers are just entering this market – in India, Thailand and potentially Korea.

2.1 Europe[2]

In Europe, the following is evident:

- 540 m. passengers flew in this region in 2003
- This represents potential total meal production of 625 m. meals
- 50% of passenger demand originates in three countries, the UK, Germany and France, as they have major hubs for intercontinental flights (Figure 1)
- 70% of meals are served on intra-European flights
- Most of the growth in demand is from the low cost carriers, who have a buy-on-board approach to catering

Figure 1 European markets (percentage and millions)

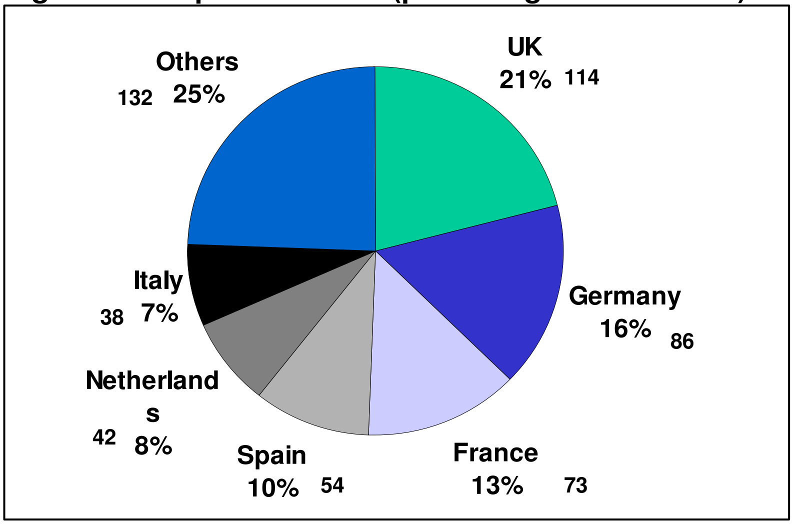
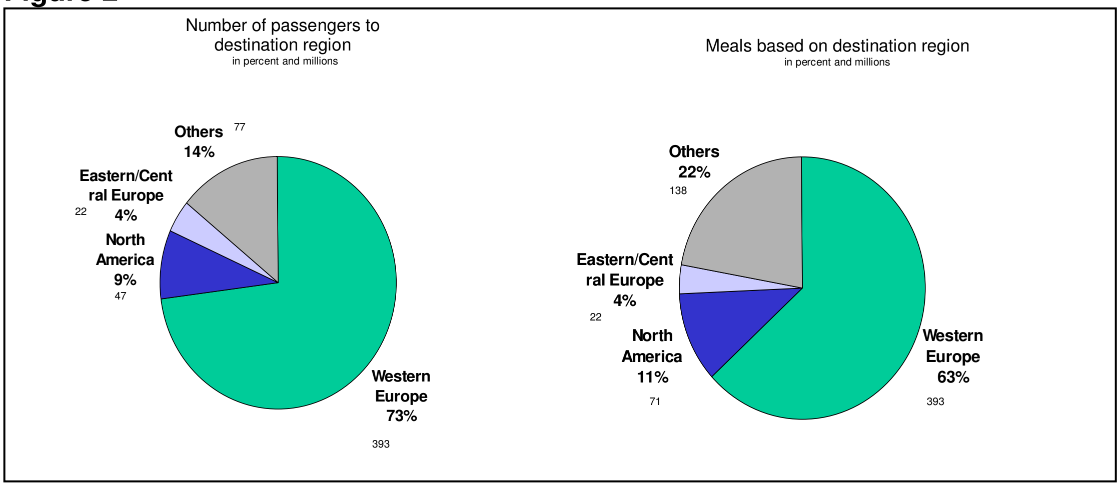


Figure 2



In this market, some segments are very stable and predictable, whereas others are not.

---

[2] The passenger statistics quoted in this and the next two sections was provided by IATA for the calendar year 2003. Meals statistics are estimates made by the TCRC, based on the IATA data. These estimates are based on simple assumptions about how route length affects the number of meals served. All passengers are assumed to have a 'meal' (even if it is only a snack), but long haul passengers are assumed to have two. Hence the number of meals is greater than the number of passengers.

2.1.1 Long haul catering
This represents roughly one-third of the total meals prepared. This market is relatively stable and is likely to continue to offer complimentary full meal service. However there are changes in seat class segmentation. The demand for first class is in decline and this seat class is being merged with business class. Also some airlines have developed a seat class that has some features of business class (usually leg room) and some of economy (the onboard service offer) – BA call this 'Economy Plus'.

2.1.2 Short haul catering
This segment is the most dynamic at the moment. Rising fuel prices and competition from low cost carriers have lead to airlines reducing their costs. Different airlines have adopted different approaches to this, similar to the North American market (see below). Thus it is possible for a passenger flying out to Switzerland from the UK to fly out with one carrier and be given a complimentary meal, but to fly back on a co-share flight with another airline and be asked to pay for their meal. This situation is unlikely to be sustainable in the long run and may put pressure on co-share agreements and airline alliances.

2.1.3 Low cost carriers
These airlines are growing rapidly. They have the buy-on-board approach to catering. Currently it is estimated that 7% of revenue is generated by on board sales.

2.1.4 Charter airlines
These are significant especially in UK, Germany and Scandinavia. For instance the three largest package holiday companies in the UK serve nearly 20 million meals per annum. To speed up turn round time, maintain quality, and simplify contracting these meals are all back catered ie meals are loaded for both the out-bound and return flight.

Until 2004 these meals have also been complimentary (ie included in the package price). In the 2004 season some operators unpackaged the inflight meal from the total package price. Customers were offered a menu to choose from and asked to pay for a meal, if they wanted it. From the airline's point of view this significantly reduced waste, as only meals that were ordered were loaded on board, and it also created an additional revenue stream. However it is unlikely to be continued due to the problem of implementing it on board. For instance, passengers who had not ordered meals would claim that they had and seat allocation was unreliable - so the wrong meals may be given to the wrong passengers[3].

[3] This model is described in some detail here as the technology exists to enable this to be delivered on regular schedule flights. Indeed, some airlines are already doing this, such as Air India (http://www.airindia.com/meal.asp), who make it possible to pre-book your meal via the internet up to 24 hours before flying. It is entirely conceivable that passengers whilst travelling to the airport could use their mobile phones to access the airline's website, look at the menu, select their meal, and order it only 2 hours prior to departure. So long as the transportation time from 'kitchen' to aircraft is short, carts could be configured to reflect pre-ordered meals. The development of internet-based information systems by the caterers makes this a real possibility.

2.2 North America

In North America the following is evident:

- 446 m. passengers flew in this region in 2003
- 6 airlines have nearly 90% of the market (Figure 3)
- There are significant differences between the onboard service provision of the six major carriers
- 75% of flights are within continental North America (Figure 4)
- 'Meal' provision on domestic flights is difficult to estimate
- 170 m. meals are estimated to have been served on long haul flights out of North America in 2003

Figure 3 Passengers by airline

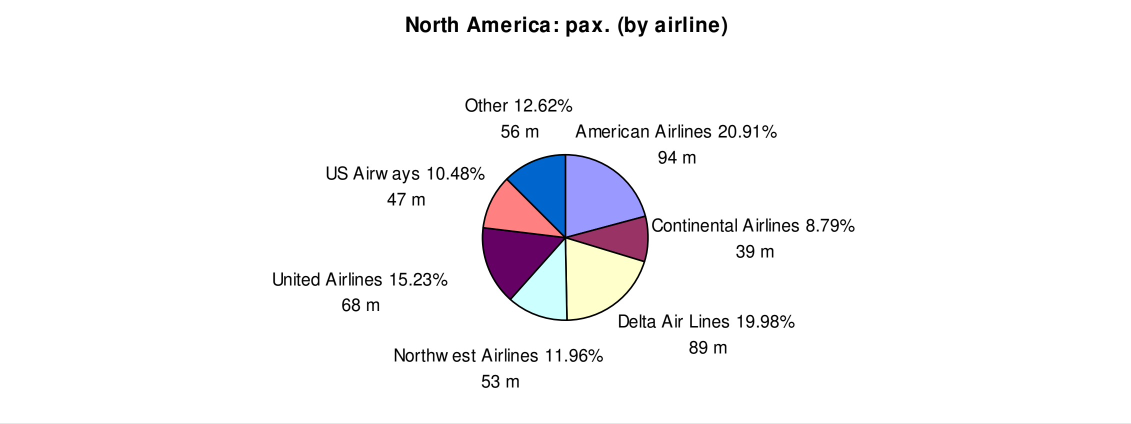


Figure 4 Number of passengers to destination region

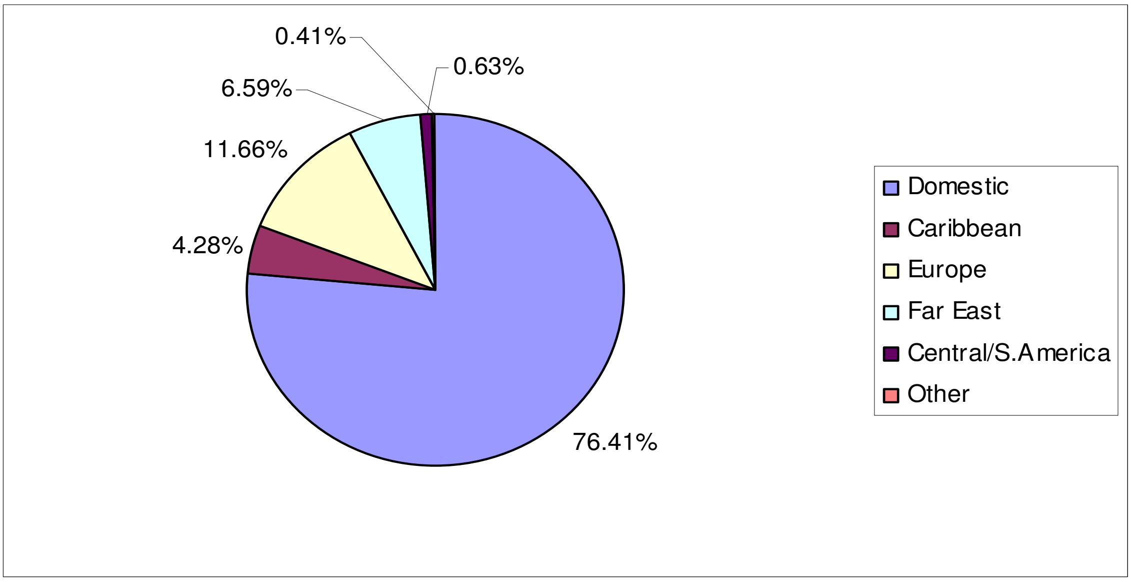
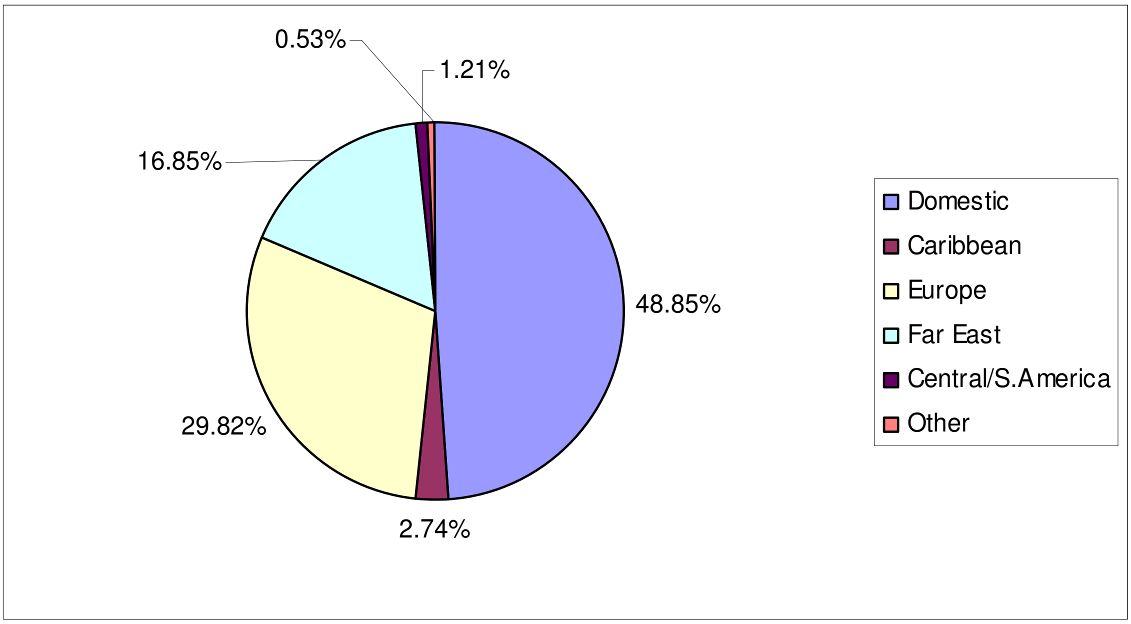


Figure 5 Meals based on destination region



A review of the six major carriers websites in January 2005 identified the following:

- Some airlines are promoting branded products, others are not
- One airline is promoting 'buy-at-the-gate'
- Two airlines have introduced buy onboard
- All airlines restrict complimentary meal service on flights to reflect the duration the flight – but they each apply different times
- All airlines restrict complimentary meal service to designated 'meal' periods of the day

This is summarised in a separate attachment.

2.3 Asia

The following is evident in the Middle East and Far East:

- 219 m. passengers flew in 2003
- 308 m. meals were estimated to have been produced
- Nearly two thirds of passenger volume is from four countries, i.e. China, Japan, Singapore and Thailand (Figure 6)
- A high proportion of flights are long haul (compared with other regions)
- Japan has the highest meal production in region (22% of total) (Figure 8)

Figure 6 Passengers by country

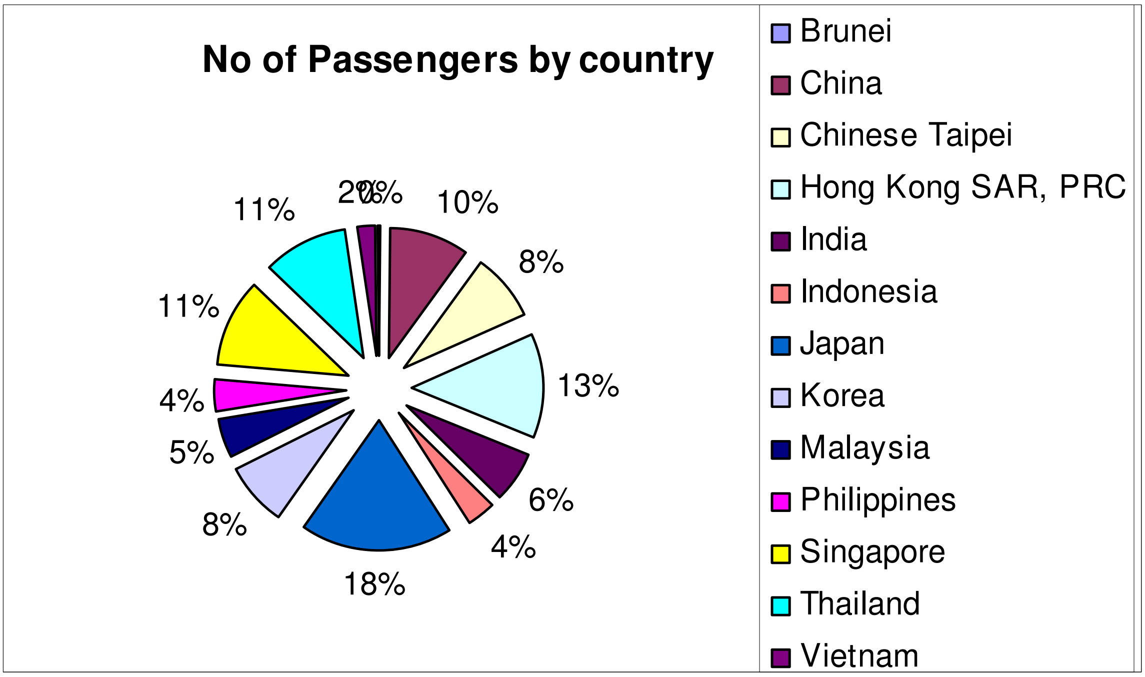


Figure 7 Meals by destination

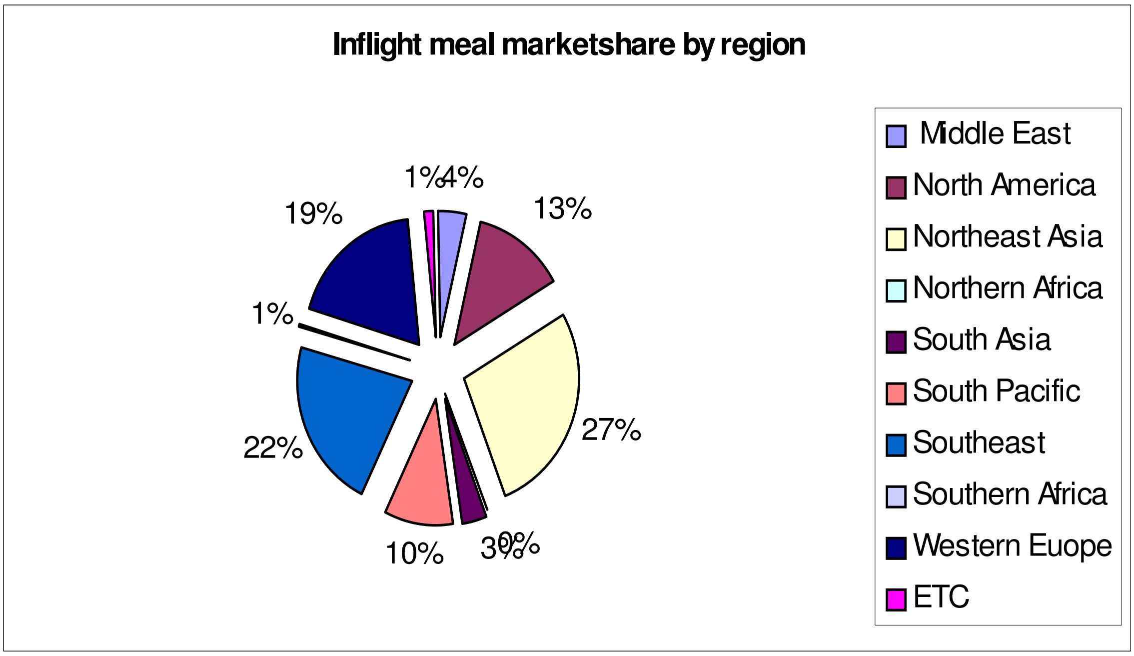
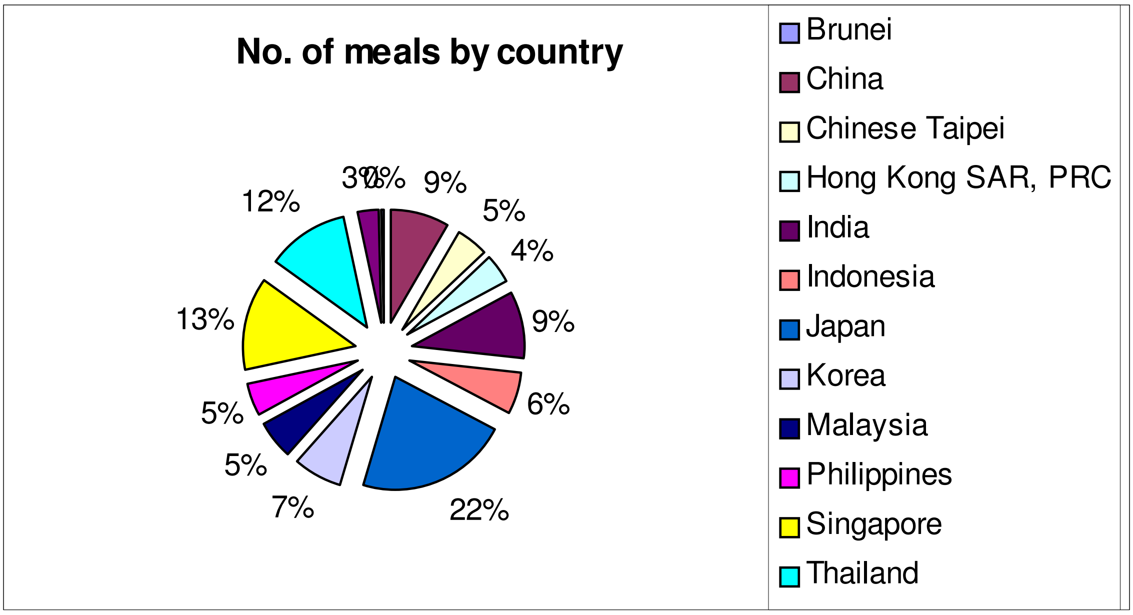


Figure 8 Meals by country



This market has the most 'traditional' model of flight catering. Many airlines still operate their own flight kitchens out of their main hub airport, such as Singapore Airlines (http://www.sats.com.sg/sats/newlook1/services/cateringcabin.html) and offer full service, complimentary meals. As a result these carriers – Emirates, Cathay Pacific, Singapore Airlines – now dominate the annual recognition awards for onboard service quality (http://www.passengersurveys.com/Airlines/AOY_2004.htm).

The other key issue in this region is that it is the most rapidly growing market in the world. China is reported to be investing considerable effort in developing airport infrastructure, including many new airports the same size as London Gatwick.

2.4 Limitations

A major limitation of this analysis is that I have no access to financial data. Both airlines and caterers have always preferred to keep such information highly confidential.

I would also emphasise that the estimates of demand for meals is still very approximate. One of the first problems is what constitutes a 'meal'? It can be anything from coffee and a muffin up to a first class gastronomic feast. We have taken the approach that the starting point has to be the number of passengers flying, as each of them potentially could be served a 'meal'. We then argue that the next factor is duration of the flight – short haul (up to 6 hours) will have one meal, long haul (over 6 hours) will have two. Fortunately this data is available from an independent and highly reliable source – IATA.

In 2005 we are going to work on further refining this by taking into account the type of carrier (schedule, LCC or charter) and seat class. Our intention is to produce a market intelligence report that will identify for instance the number of meals served in first class – globally and regionally (and maybe even by country in some cases), and likewise other classes on flag carriers; meals served or carts prepared for LCCs (or both); and etc. As the data for this kind of analysis is not as easily available as the IATA data this involves quite a lot of effort and may require us to do some modelling in order to develop reasonably accurate estimates.