PAD624 – Fall 2012

Experimentation with a Marketing Model:

Morecroft’s easyJet Customer Growth and Rivalry Simulator[[1]](#footnote-1)

easyJet started operations in November 1995 from London's Luton airport. In two years, it became the model low-cost European airline and a strong competitor to flag carriers. The company has clearly identifiable operational and marketing characteristics: one type of aircraft, point-to-point short-haul travel, no in-flight meals, rapid turnaround time, very high aircraft utilization, direct sales, cost-conscious customer segments and extensive sub-contracting.[[2]](#footnote-2)

easyJet (eJ) is a bright idea, but is it really feasible as the basis for new business a competitive industry? Before launch, eJ's managers identified three of its nearest low-cost competitors and the strategy of each. easyJet also experienced direct retaliation from large flag carriers like KLM and British Airways (and their subsidiary, Go). These challenges faced easyJet's owner, Stelios Haji-Ioannou, as he signed a $500 million contract with Boeing in July 1997 to purchase 12 brand-new 737s.

There are two dynamic strategic tasks ahead of you:

1. creating customer awareness
2. dealing with retaliation

As an entrepreneur you would need to understand these two tasks before committing to build an organization.

**Winning customers a new segment-creating awareness and a favorable impression**

* The company has to spread the word to millions of people if it is to fill 12 brand-new 737s day after day.
* Roughly how many passengers as the airline really need to be commercially viable?
* How does growth take place?

We start with a very small group of potential passengers, each represents the number of flyers were formed a favorable impression of the airline. Let's say that 5,000 have already heard about your new airline. That's just a drop in the ocean of awareness you'll need to fill 12 planes.



Let's assume each aircraft could, at maximum, carry 150 passengers and could make three round-trip flights per day. A fully loaded fleet of 12 planes means 10,800 passengers per day. If the plane’s average route is 1000 miles, and the planes are in service for 360 days per year, then there are nearly , or nearly 4 billion available passengers miles (and revenue generating) capacity. If we make the further assumption that each potential passenger attracted to the airline is likely to fly eJ twice a year round-trip, again for an average 1000 miles, then the startup airline needs to attract 1 million flyers to generate the loading each year. Fewer potential passengers than this level will create a shortfall in revenue, dimming future expectations.

How do we grow the potential passenger pool? Potential passengers increase through a combination of marketing spending (newspapers, media) and attractive pricing. The initial marketing model for the company rested on the belief that marketing can induce people who don’t fly now to try eJ. In particular, their calculations indicate that they can induce one passenger per year for every 20 pounds spent on marketing. Another way of expressing this is to define Marketing Effectiveness as .05 passengers per pound spent on advertising each year.



More subtle growth occurs though the feedback effect of word-of-mouth. The more people with a favorable impression of the airline, the more they will spread the word and win others over. Word-of-mouth is often coupled price, as a dramatically low price can induce powerful word-of-mouth.

Word-of-mouth is a kind of social contagion whose power to spread relies on the start-up company’s price being much lower than the incumbent rival’s price. The incumbents here are large established airlines, flag carriers, such as British Airways and KLM. Market analysis indicates that by landing at underutilized terminals, hiring personnel at lower than market prices, and other cost-containment practices, easyJet could reduce its operating costs to .09 pounds/ passenger / mile if planes operated at virtually full capacity. Flag carriers operate at costs between .25 and .39 pounds / passenger / mile, but provide a different level of service and are able to absorb variations in demand.

The greater the relative fare difference, the more individuals convert to being potential eJ passengers. If there is no price difference, there is no pressure to change from flag carriers.

**The growth potential: market size and saturation**

The introduction of a low-cost carrier into the marketplace adds capacity, but it does not guarantee demand. There needs to be an accounting for some anticipated maximal desire to fly, independent of pricing. One way to capture this is to estimate the potential for the market to grow beyond its current size. In this model we consider the current average number of carriers per route, the maximum growth possibility, and a limit on the size of the number of passenger miles available to any single carrier (a nod to possible anti-competitive regulation). The result is an estimate of the maximum number of passenger miles that any single carrier may achieve.



As eJ’s potential passengers grows, the number of flights taken and miles demanded increases. With ongoing growth, the capacity to service passengers approaches and saturates the maximum miles available in the marketplace, reducing further growth. This is something like the depletion effects of dropping susceptible in an infection model.



**The Empires Strike Back: Flag carrier responses and retaliation**

What happens if incumbents try to match the start-up company's low price? The incumbent’s price depends on their costs and their margin. These costs are modeled as an accumulation. The cost has lots of inertia, and it cannot be reduced quickly or easily. (Thinking point: Why are such costs modeled as an accumulation, rather than as a rate, even though they have units of pounds / year?)



Suppose the incumbents set themselves a target cost equal to eJ’s costs. This equalization task is the magnitude of the difference between the incumbent’s cost and the target cost. Changing costs represents restructuring of existing agreements with suppliers and budget priorities. The pace of restructuring depends on the size of the cost gap in the time required to adjust cost. The adjustment time can be many years.

Think about how long it would take a flag carrier like British Airways to become an exact clone of EasyJet. Fast response by rivals may depend on the startup visibility. For example, British Airways launched Go to compete with EasyJet. In other cases, other firms may see parallel opportunities in other markets. Thus large carriers may be beset by other challenges, and may want to attempt to reduce costs or absorb operating losses. What is the long term effect on the flag carriers?

**The easyJet Simulation Model**

The easyJet Simulation Model is organized into several different views. The Control Panel includes three sections:

* Scenario parameters (variables that define the situation, but are not known with certainty and over which you have limited causal control, such as the timing of rival’s responses to your actions),
* Policy parameters (variables representing the elements under control, such as resources for allocation), and
* Metrics and Indicators (graphical representations for monitoring and consideration):

Page down to see different sectors of the model, as well as a comprehensive view.

**Assignment**

1. Using the model supplied in class, run a series of experiments that illustrate the success of eJ’s growth model:

* A cautious marketing strategy for easyJet (.5 million Pounds/year)
* A bold marketing strategy (2.5 million Pounds/year)
* Is there a difference in their achievement of sufficient potential passengers to fill their planes?
* The base model assumes slow retaliation by competitors. What is the effect of a price war for both strategies, where competitors change their costs to meet those of eJ more quickly? Is there a difference in the achievement of sufficient potential passengers to fill their planes?

1. This model is intentionally incomplete, and does not include elements that are important to the successful growth of the airline.

* What growth dynamics are NOT accounted for in this model?
* What resources are needed for airline success besides aircraft?
* How does growth affect the demand and supply of these critical resources? Use the project model as a source of ideas.
* Add a plausible structure that captures these new dynamics and illustrates your conclusions. Add a new custom graph to the Control Panel that illustrates your findings.

Experiment with the original and your revised model. Write a short (5 pages maximum) description of your findings. Include any graphs you think illustrate your ideas and your VENSIM model, named easyJet2, for grading, along with appropriate runs.

1. This case is based on the Flyers min-simulator, distributed with Morecroft (2007), “Strategic Modeling and Business Dynamics: A Feedback Systems Approach”, Wiley. Permissions pending [↑](#footnote-ref-1)
2. For more information on easyJet and the European airline industry see Sull, D. (1999) “easyJet’s $500 Million Gamble”, European Management Journal 17, 1, 20-38.  
    [↑](#footnote-ref-2)