



The market valuation of new route announcements

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ABSTRACT

Making use of event-study methodology, we assess how a new route announcement affects an airline's stock market value. In addition, it verifies that route strategy and entry strategy contribute to the direction and magnitude of the stock market reaction. With respect to route strategy, both opening a new domestic route and announcing multiple new routes achieve the greater financial gain. There are first mover advantages, whereby early entrants gain more than later entrants. Additionally, a price-discounting strategy contributes to market value. Airlines carrying out specific expansion activities (e.g., aircraft purchases or crew recruiting) have a high the potential for high profits. However, airlines do not benefit from developing alliances to acquire new routes.

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1. Introduction

There has been a significant increase in new airline routes over the past 20 years (Swan, 2002). New routes can strengthen an airline's market power and entice customers away from competitors (Burghouwt and Veldhuis, 2006; Lin et al., 2001), but they are not costless. For example, airlines need to cover the incremental operating costs of new routes and negotiation costs with airports and partners, and incur costs in overcoming entry barriers built up by incumbents (Schnell, 2004). Thus, the net effect of opening a new route is not always clear. After reviewing the history of airline route development, Swan found that route development is a complex matter with multiple tradeoff. This study develops a research framework based on cost and revenue factors to evaluate the net wealth effects of new routes and utilizes event-study methodology to quantify such effects.

Not all new routes are profitable and previous studies have looked at the roles of such things as competition (Schnell, 2004) and resource availability (Dresner and Windle, 2001) in determining commercial viability. Issue concerning the strategies airlines should consider has received less attention. In addition, research on new product development indicates that new product and entry strategies are closely related to a firm's earnings, market share and profitability (Chen, et al., 2002). Here, we examine new route and entry strategies affect the success of the former.

2. Background

New routes can affect an airline's profits depending on the costs incurred and the revenue earned. On the cost side, airlines have to take into account the incremental operating costs including fixed costs (e.g., facility installation and crew employment) and variable costs (e.g., facility maintenance and service provision), and also to consider the costs of negotiating with airports for the use of gates, slots, and terminals. On the revenue side, new routes may attract additional customers as well as win customers away from competitors (Seristö and Vepsäläinen, 1997). Airlines can also strengthen their relationship with existing customers by providing new flight options. Fig. 1 offers a stylistic chart of the interactions of these factors and an airlines stock market valuation.

2.1. Route strategy

- **Route destination.** Airlines may announce a new route connecting either international or domestic airports. Due to the generally higher expectations of international travelers, service connecting international airports usually have greater service costs (Aksoy et al., 2003) and also incur high-negotiation costs, because most new international routes have to be operated through international alliances and may involve restrictive air service agreements (Shumsky, 2006). Due to the higher costs of these routes, one would anticipate that the market valuation of an airline offering new international routes would be less sensitive than for one offering new domestic routes.

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- **Hub connection.** New routes may connect to a hub and airlines that deploying hubbing not only capture the direct economic benefits of the new service, but also may increase revenues by providing customers with added choices of destinations (Burghouwt and Veldhuis, 2006). Thus, airlines with a hub-and-spoke network are expected enjoy a more positive stock price reactions than those that do not hub.
- **Number of new routes.** Airlines may announce multiple new routes simultaneously and enjoy economies of scope (Gudmundsson, 1999). In addition, multiple new routes can contribute to an airline's revenues by providing customers with more choices. Thus, an airline announcing multiple new

routes is expected to experience a larger stock market reaction than one announcing a single new route.

2.2. Entry strategy

An entry strategy usually sets the foundation from which competitive advantages can be gained. We look at four strategies.

- **Entry mode.** Airlines may acquire new routes either by self-development or through alliances. Alliances usually often offer cost advantages through the sharing of airport facilities and workforces, but also provide benefits by extending their market presence into their partner's networks. However, they may have some disadvantages. Negotiation costs could be high because of ex-ante coordinating and ex-post monitoring costs (Kleymann and Seristö, 2001). Airlines may also lose flexibility of there is a simple and fixed revenue-sharing formula in the alliance agreements (Shumsky, 2006). These factors may impact on share values but just how is unclear.
- **Entry timing.** An airline may be the first entrant or a later entrant to routes. A first-mover is often able to reinforce its reputation, which functions as a purchasing cue for customers and maybe able to win customers from other airlines that do not offer these routes (Swan, 2002). Initially, the first entrant is thus, in a position to charge a higher price for the new routes which seems likely to have a positive affect on its stock valuation.
- **Expansion strategy.** When opening new routes, some airlines adopt an expansion strategy by acquiring extra aircraft, labor and so forth, whereas others utilize existing resources. Although an expansion strategy may increase costs, it can reinforce the image of an airline's commitments as well as enhance service quality and thus be attractive to potential customers (Garrow et al., 2007). This, in turn, may be expected to result in a positive stock price reactions.

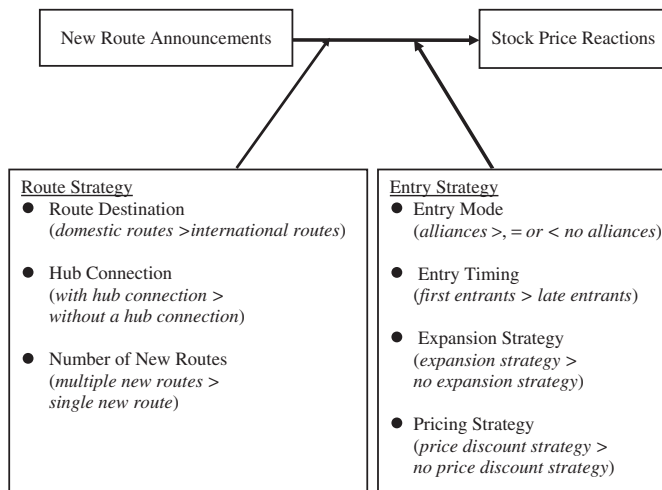


Fig. 1. Effects of new route announcements on stock price reactions and its moderators.

Table 1
Sample construction for new route announcements

Airline company	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	Total announcements
Air L.A.	-	1	-	-	-	-	-	-	-	-	1
AirTran Airlines	-	-	-	-	-	2	-	-	-	-	2
AirTran Airways	-	-	-	-	-	-	-	-	-	4	4
Alaska Airlines	2	-	-	-	1	1	1	1	-	-	6
America West Airlines	-	1	2	1	-	-	-	-	-	3	7
American Airlines	1	-	-	-	-	2	2	-	-	2	7
Atlantic Coast Airlines	-	-	-	-	-	-	1	3	-	-	4
Atlantic Southeast Airlines	1	-	-	-	-	5	-	-	-	-	6
Continental Airlines	1	2	-	6	3	4	1	-	-	-	17
Delta Air Lines	-	-	-	-	-	4	2	8	-	-	14
ExpressJet Airlines	-	-	-	-	-	-	-	-	-	7	7
Frontier Airlines	-	2	-	-	-	1	1	-	-	4	8
Great Lakes Aviation	-	-	1	-	-	-	-	-	-	-	1
Hawaiian Airlines	-	-	-	-	-	2	-	-	-	-	2
Mesa Air Group	-	-	-	-	-	-	-	-	1	1	2
Mesaba Airlines	-	-	-	-	1	2	2	1	1	2	9
Midway Airlines	-	-	-	-	-	5	2	6	5	-	18
Midwest Express Airlines	-	-	-	-	-	-	-	-	-	1	1
Northwest Airlines	-	-	-	-	-	3	5	5	11	10	34
SkyWest Airlines	1	-	3	-	-	5	3	3	-	-	12
Southwest Airlines	2	4	6	4	2	3	2	1	-	1	25
Trans World Airlines	-	-	-	-	-	-	-	2	-	-	2
United Airlines	4	2	2	-	-	2	3	-	1	-	14
Valujet Airlines	-	1	6	4	1	-	-	-	-	-	12
Vanguard Airlines	-	-	-	2	1	-	3	3	3	1	13
Western Pacific Airlines	-	-	-	1	-	-	-	-	-	-	1
World Airways	-	-	-	1	-	-	-	-	-	-	1
Total announcements by year	12	13	20	19	9	41	25	33	22	36	230

Table 2
Sub-samples of route strategy and entry strategy

Variable	Illustration	Code	Sample
Route destination	Airlines announce new international routes.	1	41
	Airlines announce new domestic routes.	0	184
Hub connection	Airlines announce new routes with a hub connection.	1	168
	Airlines announce new routes without a hub connection.	0	33
Number of new routes	Airlines announce multiple new routes.	1	132
	Airlines announce a single new route.	0	98
Entry mode	Airlines acquire new routes from alliances.	1	47
	Airlines do not acquire new routes from alliances.	0	183
Entry timing	Airlines are the first entrants in the new routes.	1	21
	Airlines are the late entrants in the new routes.	0	209
Expansion strategy	Airlines announce an expansion strategy.	1	82
	Airlines do not announce an expansion strategy.	0	148
Pricing strategy	Airlines announce a price discount strategy.	1	42
	Airlines do not announce a price discount strategy.	0	188

- *Pricing strategy.* When announcing new routes, some airlines combine this with a price discount. Price is usually a major consideration in choosing an airline with leisure travelers being particularly price sensitive (Mason, 2005). A price discount may effectively attract the growing price-sensitive market segments. Thus, airlines using a discount price strategy maybe expected to generate more positive stock reactions than those that do not.

3. Data and methodology

This study uses new route announcements made by US-based airlines between 1993 and 2002 taken from the LexisNexis News Wire database. An announcement is recorded when it is reported officially as a new route opening. The daily stock returns of each announcing airline are retrieved from the Center for Research on Securities Prices (CRSP). Airlines whose stock prices are not available from the CRSP are dropped. To avoid double counting, airlines that made other announcements (e.g., earnings, mergers and acquisitions) close to announcement dates are also omitted. A usable sample of 230 announcements made by 27 different airlines remains (Table 1).

To examine the impacts of route and entry strategies, the strategies contained in the announcements are isolated and the sample divided into two groups on the basis of the strategy used. The coding and the sample size of each variable are shown in Table 2. Because there are five announcements containing new routes for both domestic and international flights and 29 announcements containing new routes both with and without a hub connection, these announcements are excluded.

The analysis employs event study methodology to examine the stock market valuation of new route announcements. According to the market efficiency hypothesis, the change in a stock market price reflects the market's unbiased estimate of the wealth effects of that event (Fama et al., 1969). Through the extent of abnormal variation of stock price, one can examine whether and how the stock market reacts to the new routes announcements and their strategies.¹

¹ To avoid the problems of multiple shocks a number of actions were taken. First, to be sure that the abnormal return is attributed to new route announcements, observations that had other important announcements (e.g., earnings, mergers, or acquisitions) near the route announcement date. Second, a one-day event window is used to measure the announcement effect. The may reduce

Table 3
MAR and MCAR for new route announcements

Panel A. Event date				
Date	MAR (%)	Standard deviation	t-statistics	Proportion of positive MAR (%)
-5	0.45	4.20	1.60	52
-4	-0.01	3.24	-0.04	47
-3	-0.18	2.93	-0.94	45
-2	0.09	4.55	0.29	51
-1	-0.09	3.45	-0.37	45
0	0.64	4.50	2.13**	54
1	0.01	3.61	0.04	52
2	-0.13	4.43	-0.45	46
3	-0.03	3.39	-0.14	50
4	-0.18	3.08	-0.89	46
5	0.01	4.00	0.02	45
Panel B. Event windows				
Windows	MCAR (%)	Standard deviation	t-statistics	Proportion of positive MCAR (%)
(-1,-30)	-0.76	16.92	-0.67	49
(-1,-20)	-0.45	14.39	-0.46	46
(-1,-10)	0.03	10.58	0.05	50
(1,10)	0.83	10.65	-1.44	39
(1,20)	-1.41	13.84	-1.52	35
(1,30)	-1.14	18.67	-0.91	40

** Significant at 5% level; $n = 230$.

4. Results

Panel A of Table 3 presents the means of abnormal returns (MAR) for the main effects of new route announcements. The table shows that, on the new route announcement date, announcing airlines immediately receive a positive stock market reaction. In addition, as seen in Panel B, the means of cumulative abnormal

(footnote continued)

interference from the market to the minimum. Finally, a relatively large sample of new route announcements is used that may diversify away the noises of multiple shocks.

Table 4
MAR associated with route strategy and entry strategy on announcement date

Strategy	Sub-samples	N	MAR (%)	SD	t-statistics
Route destination	International routes	41	0.07	3.16	1.73*
	Domestic routes	184	0.73	4.82	
Hub connection	With a hub connection	168	0.70	5.03	−0.25
	Without a hub connection	33	0.52	3.00	
Number of new routes	Multiple new routes	132	1.20	5.88	−1.68*
	Single new route	98	0.19	3.66	
Entry mode	Alliances	47	0.26	3.34	1.78*
	No alliances	183	0.79	4.76	
Entry timing	First entrants	21	2.10	5.10	−2.15**
	Late entrants	209	0.47	4.41	
Expansion strategy	Expansion strategy	82	1.21	5.99	−2.12**
	No expansion strategy	148	0.17	3.43	
Pricing strategy	Price discount strategy	42	2.35	7.96	−2.38**
	No price discount strategy	188	0.24	3.18	

* Significant at 10%.

** Significant at 5%.

returns (MCAR) during 30-day period prior to and following the announcement date are insignificant implying that there is no information leakage or dissemination before or after the announcements. Therefore, the results demonstrate that the stock market generally reacts positively to airlines' new route announcements.

Although most announcements are evaluated positively, 46% of cases receive negative stock returns. Route and entry strategy may help explain this, and the results of sub-sample comparisons for each strategy are shown in Table 4.

For the route strategy, these show that airlines announcing new domestic routes receive a more positive stock market reaction than those announcing new international routes. This means that a route destination has an impact on financial performance. In addition, the data show that airlines announcing multiple new routes receive more positive reactions than those announcing a single new route; the number of new routes exerts positive financial impacts on airlines. However, the results do not support the expectation that new routes with hub connections may induce a larger stock market reactions than those without hub connections.

For the entry strategy, the stock market reacts more positively to new routes commenced by self-development than to those by alliances. Although the latter path is usually regarded as a shortcut to acquiring new routes, its disadvantages (e.g., high negotiation cost and inflexibility of alliance agreements) diminish the wealth effects of new routes. In addition, the notion that first entrants enjoy a larger stock market reaction than late entrants is supported.

The results also show that airlines with an expansion strategy receive higher stock market returns than those without implying that an expansion strategy is viewed as a positive investment by stock markets. In addition, airlines with a price discount strategy are found to gain higher market returns.

5. Conclusions

By utilizing event-study methodology, we find, that in general, new route openings yield positive stock market reactions for

airlines. Route and entry strategies pursued by the airlines affect the success of new routes with those that focus on developing new domestic, rather than international, routes benefiting more. In addition, hub connections should not be the focus when developing new routes and airlines do well when providing more route choices. Regarding entry strategy, first entrants in a route enjoy greater wealth effects than later entrants. In addition, airlines can benefit from expansion and a price discount strategies when announcing new routes. However, airlines acquiring new routes through alliances seem to create lower financial returns than routes originating from self-development.

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