

Short communication

## The in-flight shopper

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### Abstract

This paper examined how in-flight shoppers differ from non-shoppers in terms of socioeconomic, motivational, and attitudinal characteristics. A telephone survey revealed that in-flight shoppers do not differ from non-shoppers in education and gender. In-flight shoppers, however, are older and earn more money than the average airline passenger. Additionally, in-flight shoppers are more impulsive, more brand conscious, more price conscious, and less risk perceptive than non-shoppers. They are no different from non-shoppers when it comes to convenience and variety-seeking. The in-flight shopper also has a positive attitude towards advertising.

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*Keywords:* In-flight retailing; Brand consciousness; Price consciousness; Advertising

### 1. Introduction

Each year, more than 1.6 billion people travel by air, and one-third of these travel internationally (International Air Transport Association, 2004). Air travel has expanded into the mass market and is no longer a luxury for the rich. Millions of people criss-cross the globe every single day. People who could not afford to travel in the past are now able to do so, while others may be encouraged to travel even more. Boeing (2004) estimated that air travel will grow at about 6.2% annually over the next 20 years. During this period, the Asia-Pacific region is projected to grow the fastest, at 7.5% annually. In-flight retailing, therefore, provides a considerable growth area for the airlines and for many multi-channel retailers. Cathay Pacific Airways, the no. 1 in-flight retailer in the Asia/Pacific region, reports that their high-altitude sales are booming, with air travelers spending between €1.05 and €1.26 million a month. Their sales grew at a rate of 20% per year between 1994 and 2002. On some routes, it is worthwhile to put on extra crew just to do sales (Chung, 2004).

The concept of duty free retailing began in Shannon, Ireland, in 1947 when duty free liquor and tobacco was

sold to trans-Atlantic passengers while airplanes were being refueled (Newman and Lloyd-Jones, 1999). This successful model was then implemented worldwide. Nowadays, shopping at 30,000 ft up in the air on an international flight has become as much a part of in-flight entertainment as movies and food. O'Connor (1994) indicated that in-flight entertainment is just one of the factors determining which airline to fly with. Hence, carriers are seeking to make more use of new technology to install in-flight entertainment systems (e.g., air shopping channel) to improve their in-flight service. In addition, airlines have greatly expanded their duty-free product line by adding new and improved products to their selection over the years. Compelled to be proactive in their generation of revenue, many airlines now derive more income from their on-board commercial activities than from their transportation business. Retail and related income has become of central importance to the competitiveness and long-term survival of the airline industry (Mar and Young, 2001).

However, considering its importance, the literature concerning in-flight retailing is sparse indeed, with little research having been conducted profiling the in-flight shoppers. Airline passengers, unlike shoppers on a main street, are a captive audience who must remain seated for hours at a time with very little to do but to look for what's put in front of them while suffering from a certain degree of anxiety or anticipation about their journey. Many

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passengers view flying as an integral part of a holiday. Their time on the airplane is leisure time. Wakefield and Blodgett (1994) suggest that “in any leisure service setting where the customer has to wait for any extended amount of time before something stimulating would ordinarily happen...measures should be taken to enhance stimulation and relieve boredom”. This can be interpreted as justification for the provision of shopping on airplanes. To improve the distinctive features of in-flight shopping service, managers need to know more about their consumers. Good marketing through an understanding of consumers has already been identified as a key factor in the survival and competitive success of air carriers (Aksoy et al., 2003).

This exploratory study is thus intended to gain insights to better understand how in-flight shoppers differ from non-shoppers (people who do not make purchases while on an airplane) in terms of socioeconomic (e.g., age, education, income, and gender), motivational (e.g., convenience, risk perception, variety-seeking propensity, impulsiveness, brand consciousness, and price consciousness), and attitudinal (e.g., attitude toward advertising) characteristics. The term “in-flight shopping” for the purpose of this paper

covers all forms of retailing, including products and services sold in the sky. Results of this study will assist in the development of effective in-flight marketing strategies.

## 2. Method

A telephone survey was conducted in February 2005. Trained interviewers called 2000 household telephone numbers selected randomly from the telephone directories of Taiwan. Seven hundred and fifty four interviews were completed successfully with “one of the adults” (at least 16 years old) in the household who had been an international flight passenger. The rest refused to participate, were not available by phone, had not been a passenger on an international flight, and/or had their answering machines on.

Respondents were first asked some general questions about their international travel experiences and demographics. Then, they were asked to respond to questions about their non-store shopping behaviour (use of catalogues, Internet shopping and television shopping channels to purchase goods and services). Next, they were asked

Table 1  
Constructs measured<sup>a</sup>

Construct	Questions	$\alpha$
Importance of convenience	I hate to spend time gathering information on products I do not like complicated things It is convenient to shop in the flight	0.73
Risk perception	The product would fail to perform to my satisfaction I would incur low maintenance costs My friends and relatives would think more highly of me if I buy products online The product fits well with my image I would not have to waste time and effort getting the product repaired or replaced when it fails Using the product would not cause danger to my health or safety	0.77
Variety-seeking propensity	I like to try different things I like a great deal of variety I like new and different styles	0.83
Impulsiveness	I usually do not think before shopping when I am in the flight “Just do it” describes the way I buy things I often buy things without thinking I always stick to my shopping list <sup>b</sup>	0.80
Brand consciousness	I usually purchase brand name products Store brands are of poor quality <sup>b</sup> All brands are about the same <sup>b</sup>	0.72
Price consciousness	I usually purchase the cheapest item I usually purchase items on sale only I often find myself checking prices A person can save a lot by shopping for bargains	0.70
Attitude toward advertising	Advertisements provide useful information I think that advertisements are often deceptive <sup>b</sup> I usually pay attention to advertisements	0.84

<sup>a</sup>Responses to all questions were on seven-point scale ranging from “strongly agree” to “strongly disagree.” Responses to multiple-item scales were averaged.

<sup>b</sup>Reverse scaled.

whether they had ever purchased products on international flights.

Finally, they were asked a series of short questions to measure their importance of convenience, risk perception, variety-seeking propensity, impulsiveness, brand consciousness, price consciousness, and attitudes toward advertising. The constructs measured by this series of questions and the Cronbach alpha coefficients of reliability are reported in Table 1<sup>1</sup>.

### 3. Findings

#### 3.1. Profile of the respondents

Of the 754 respondents, approximately 41% had a college education, 53% were male, 62% earned an annual income of €7500–€17,500, and the average age was 33 (Table 2). Respondents had an average experience of 5–6 international trips.

While a variety of goods are sold through in-flight catalogues, alcohol and cosmetics remain the dominant items, accounting for approximately 46% of sales. A majority of respondents (63%) shopped for their families and themselves, 46% of the amounts spent per in-flight shopping were under €50 and 39% were between €51 and €100. The main reasons they made the purchases were: duty-free (40%), felt cheaper than domestic shops (22%), did not allow time for shopping prior to departure (11%), airline's exclusive products (10%), and attracted by catalogues (7%). On the contrary, reasons for respondents not making any purchases were: did not find anything worth buying (28%), have bought something before flight (23%), too expensive (11%), problematic after-sale service (8%), worry about return service (7%), and quality (7%). In addition, 82% of respondents read duty-free magazines when they were on a flight. The median time of reading duty-free magazine was 16 min. Motives for browsing were: to fill in time (37%), to see what is available (25%), to start enjoying the trip (10%), etc.

#### 3.2. Socioeconomic, motivational, and attitudinal characteristics of in-flight shoppers

Respondents were divided in two groups (Table 3): a group of 342 in-flight shoppers, those respondents who had purchased goods or services in air shops, and a group of 412 in-flight non-shoppers, those who had never purchased in air shops. *T*-tests ( $\chi^2$  test in the case of ordinal-scaled variables) were conducted for each of the variables (age, education, income, gender, convenience, risk perception, variety-seeking propensity, impulsiveness, brand consciousness, price consciousness, and attitude toward advertising) in order to confirm or reject the significant

Table 2  
Profile of the respondents ( $n = 754$ )

Characteristic	%	Characteristic	%
<i>Gender</i>		<i>Education level attained</i>	
Male	53	Elementary school	2
Female	47	Junior high school	5
		Senior high school	28
<i>Age (years)</i>		Vocational qualification	32
16–24	8	University graduate	24
25–34	60	Postgraduate	9
35–44	23		
45–54	6	<i>Frequency of flying abroad</i>	
Over 55	2	Over 3 times a year	2
		Twice a year	6
<i>Experiences of flying abroad</i>		Once a year	29
Less than 3 times	54	Uncertain	63
3 and less than 10 times	33		
10 and less than 20 times	8	<i>Personal annual income (Euro)</i>	
20 and less than 30 times	1	Under 5000	7
30 and over 30 times	3	5001–7500	17
		7501–12,500	34
<i>Experiences of in-flight shopping</i>		12,500–17,500	28
Yes	45.4	17,500–25,000	10
No	54.6	Over 25,000	4

Table 3  
In-flight shopper versus non-shopper

Construct	In-flight shopper ( $n = 342$ )	In-flight non-shopper ( $n = 412$ )	Significance of the difference
Age <sup>a</sup>	2.53	2.17	0.000*
Education <sup>b</sup>	4.02	4.11	0.234
Income <sup>c</sup>	3.34	3.05	0.005*
Gender <sup>d</sup>	1.73	1.67	0.201
Importance of convenience	4.32	4.41	0.302
Risk perception	3.56	4.00	0.000*
Variety-seeking propensity	4.98	4.97	0.942
Impulsiveness	4.63	4.01	0.000*
Brand consciousness	4.59	4.30	0.001*
Price consciousness	3.74	4.35	0.000*
Attitude toward advertising	4.83	4.16	0.000*

Note: \*indicates a significant difference between the in-flight shopper and non-shopper at  $p < 0.05$  levels.

<sup>a</sup>1 = 15–24; 2 = 25–34; 3 = 35–44; 4 = 45–54; 5 = > 55.

<sup>b</sup>1 = Elementary school, 2 = junior high school, 3 = senior high school, 4 = vocational qualification, 5 = university graduate, 6 = postgraduate.

<sup>c</sup>1 = < 5000, 2 = 5001–7500, 3 = 7501–12,500, 4 = 12,500–17,500, 5 = 17,500–25,000, 6 = > 25,000.

<sup>d</sup>1 = Male, 2 = female.

difference between the in-flight shopper and non-shopper. The results showed that in-flight shoppers do not differ from non-shoppers in education and gender. Although generally speaking air passengers are of a younger age, it is older passengers who have the higher purchasing power and actually shop in flight.

<sup>1</sup>These questions have been used in several previous studies (Alford, 2002; Bhatnagar et al., 2000; Bush et al., 1999; Donthu and Garcia, 1999; Omar, 2001; Tan, 1999).

In terms of motivational characteristics, in-flight shoppers are less risk perceptive, more impulsive, more brand conscious, and more price conscious than non-shoppers. In-flight shopping risks arise because consumers are concerned about buying something without touching or feeling it (or have only limited time to check the products), and the product is difficult to return if it fails to meet their expectations. Nevertheless, in-flight shoppers are less concerned with the risk involved with their purchases than non-shoppers. This low risk perception may partly result from their high brand consciousness and high price consciousness. Since the key product suppliers on the duty-free catalogs are well-known companies and strong brand names such as Chanel, Dior, Gucci, Marlboro, Olympus, Sony, Swatch, etc. As a result it seems to them that it is less necessary to worry about the quality of these brand name products. Besides, as the term “duty-free” implies to shoppers, there is a price advantage in comparison to prices charged by other retailers. The in-flight shoppers may therefore believe that they have the benefits from both the brand name products as well as the duty-free prices, and which decreases their feelings of risk. Besides, recent marketing and retail researchers have classified impulse buying a very powerful and real influence in the consumer buying process (Crawford and Melewar, 2003). The concept of impulse purchasing behaviour defined by Engel and Blackwell (1982) is: “...a buying action undertaken without a problem previously having been consciously recognized, or a buying intention formed prior to entering the store.” In terms of in-flight shopping, once in the sky, the target passengers have nowhere to go and have little to do for diversion except to read the duty-free magazines. It is believed that the characteristics of the in-flight shopping environment influence impulsive shoppers more strongly than non-impulsive shoppers. The findings in this paper confirm that.

However, the in-flight shopper is no different from a non-shopper when it comes to convenience and variety-seeking. Although in-flight shoppers may perceive three types of convenience: (1) reduction of time spent shopping, (2) saving the physical effort of visiting a store, (3) saving of aggravation. The results imply that convenience and variety-seeking are less important than the other benefits provided by in-flight shopping. That is, the in-flight shoppers are not mainly looking for shopping convenience or a variety of products on the flight, they are looking for brand products with the best deals. In addition, in-flight shoppers have a more positive attitude toward advertising than non-shoppers. Studies have suggested that consumers’ attitudes toward individual advertisements are influenced by their attitude toward advertising in general. People who have more favourable feelings about advertising in general found specific advertisements more acceptable, informative, and enjoyable (Lutz, 1985). Prior researches also suggest that the attitude of consumers toward advertising influences purchasing behaviour (Khairullah and Khairullah, 1999). In other words, the more in-flight shoppers

like a certain advertisement the more likely they purchase the advertised product.

#### 4. Conclusions

From a marketing/advertising point of view, it is important to understand who the in-flight shoppers are and what their motivations and attitudes are. The evidence reveals that the typical in-flight shopper is different from a typical air passenger; he/she is older and earns more money, is more impulsive, more brand conscious and price conscious, and less risk perceptive than non-shoppers. However, the in-flight shopper is no different from a non-shopper when it comes to convenience and variety-seeking. The in-flight shopper also has a positive attitude toward advertising.

#### Acknowledgements

This research is supported by a grant from the Chung Hwa Educational Foundation in Taiwan (Rotary Club of Sanchung). The authors want to thank Kenneth Button as well as the anonymous reviewers for their valuable comments on an earlier version of this manuscript.

#### References

- Aksoy, S., Atilgan, E., Akinci, S., 2003. Airline services marketing by domestic and foreign firms: differences from the customers’ viewpoint. *Journal of Air Transport Management* 9, 343–351.
- Alford, B.L., 2002. The effects of discount level, price consciousness and sale proneness on consumers’ price perception and behavioral intention. *Journal of Business Research* 55, 775–783.
- Bhatnagar, A., Misra, S., Rao, H.R., 2000. On risk, convenience, and Internet shopping behavior. *Communications of the ACM* 43, 98–105.
- Boeing, 2004. *World Air Cargo Forecast 2004*. The Boeing Company, Seattle.
- Bush, A.J., Smith, R., Martin, C., 1999. The influence of consumer socialization variables on attitude toward advertising: a comparison of African-Americans and Caucasians. *Journal of Advertising* 28, 13–24.
- Chung, D., 2004. Cathay’s high-altitude sales booming. *The Standard*, October 2005.
- Crawford, G., Melewar, T.C., 2003. The importance of impulse purchasing behaviour in the international airport environment. *Journal of Consumer Behaviour* 3, 85–98.
- Donthu, N., Garcia, A., 1999. The Internet shopper. *Journal of Advertising Research* 39, 52–58.
- Engel, J., Blackwell, R., 1982. *Consumer behaviour*. Dryden Press, Chicago.
- International Air Transport Association, 2004. Annual General Meeting and World Air Transport Summit, [http://www.iata.org/ps/events/agm/2004/newsroom/keynote\\_address\\_pm.htm](http://www.iata.org/ps/events/agm/2004/newsroom/keynote_address_pm.htm)
- Khairullah, D.Z., Khairullah, Z.Y., 1999. Relationships between acculturation, attitude toward the advertisement, and purchase intention of Asian-Indian Immigrants. *International Journal of Commerce & Management* 9, 46–55.
- Lutz, R.J., 1985. Affective and cognitive antecedents of attitude toward the ad: a conceptual framework. In: Alwitt, L., Mitchell, A. (Eds.), *Psychological Processes and Advertising Effects: Theory, Research and Applications*. Erlbaum, Hillsdale.
- Mar, P., Young, M.N., 2001. Corporate governance in transition economies: a case study of two Chinese airlines. *Journal of World Business* 36, 280–302.

- Newman, S., Lloyd-Jones, T., 1999. Airport and travel terminal retailing: Strategies, trends and market dynamics. Ravenfox Publishing, London.
- O'Connor, A., 1994. Airlines take a gamble. *Airfinance Journal* 163, 22–24.
- Omar, O., 2001. Airport retailing: examining airline passengers' impulsive shopping behavior. *Journal of Euromarketing* 11, 87–105.
- Tan, S.J., 1999. Strategies for reducing consumers' risk aversion in Internet shopping. *Journal of Consumer Marketing* 16, 163–180.
- Wakefield, K.L., Blodgett, J.G., 1994. The importance of servicescapes in leisure service settings. *Journal of Services Marketing* 8, 66–76.