Store visits and information sources among urban Chinese children

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Abstract
Purpose – The purpose of this article is to examine how often urban children in mainland China interact with different types of retail shops, how they learn about new products and services, and their attitudes toward different sources of product information.
Design/methodology/approach – A survey of 965 urban children ages six to 13 in four Chinese cities, including Beijing, Guangzhou, Nanjing and Shanghai, was conducted in November 2003 to May 2004. Questionnaires were distributed through eight elementary schools and local researchers were appointed to administer the data collection.
Findings – The three most popular retail shops among urban Chinese children were bookstores/stationery stores, supermarkets, and restaurants and fast food shops. Store visits and consumption varied greatly with age and gender. Generally speaking, urban children perceived personal sources as useful as, and more credible than commercial sources in obtaining information about new products and services. Older children found commercial sources more useful and credible than younger children. Older children also found more information sources useful than younger children.
Research limitations/implications – Three of the four surveyed cities were highly advanced in terms of economical and advertising development when compared with all other Chinese cities.
Practical implications – A very useful advice for marketers and advertisers to select the right type of retail outlets and media to reach urban Chinese children. Internet and children's print media can be good potential media for promotion.
Originality/value – This paper offers insight to design retail and media strategies to disseminate new product information to urban children in China.

Keywords Consumer behaviour, Shopping, Children (age groups), Mass media, China

Paper type Research paper

An executive summary for managers and executive readers can be found at the end of this article.

Introduction

China, the country with the largest population of children in the world, adopted a single-child policy in 1979 (Zhang and Yang, 1992). In recent years, there is sign of relaxation of the policy in some cities. For example, Shanghai announced that divorcees, husband and wife coming from a one-child family could have two children (*Channel NewsAsia*, 2004). These only children have a substantial amount of their own money to spend and exert a great influence on their household spending (McNeal and Yeh, 1997). In the year 2001, there were almost 300 million children under age of 15 in China with approximately one-third urban, two-thirds rural (Population Reference Bureau, 2004). A number of global as well as local marketers are keen to design marketing communication campaigns to make the young consumers aware of their products, create a positive attitude toward the products, associate the products with certain symbolic meaning, or show where to buy the products. McNeal and Ji (1999) studied 460 urban Chinese children in grades 4 to 6 and found that television was a very important source of new product information. However, the study did not examine children's evaluation of credibility of information sources. Also, McNeal and Ji's (1999) study surveyed children in grades 4 to 6 only and thus unable to provide information about the development of shopping knowledge and perception of information sources with age. The study presented here remedies this limitation by extending the scope to cover children age six to 12 in urban China. Using John's (1999) framework of consumer socialization, the objectives of the current study are to compare older and younger children on the perceived usefulness and credibility of sources of information for new products. The second objective is to assess the degree to which age and gender factors have influenced children's store visits.

Besides the fact that China has the largest number of children, there are other important reasons to study this group. First, social and economic reforms are leading to a rapid increase in consumer incomes and demand for products and services (Batra, 1997). China's enormous population and growth in consumer demand are resulting in several new market segments with distinctive profiles including its children (Schmitt, 1999). In the ten-year period from 1990 to 1999, proportion of family income spent on children has increased dramatically. In 85 percent of urban families, children's average consumption is equal to one-third or more

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of the family's income. Resources are being directed to children's food and dietary supplements, toys, travel, computers and other electronic equipment, and educational resources (Ying, 2003). The children have enormous market potential, theoretically more than any other demographic group, since they have their own money to spend, they determine perhaps 67 percent of their parents' spending, and they have all of their purchases ahead of them (McNeal and Yeh, 1997). Also, it is important to know what information they use to guide their marketplace behavior since it will determine their purchases and their purchase requests to their parents. Chinese children's shopping behavior patterns together with their product information gathering are very important to the design of strategies of those marketers that target this large market.

Literature review

Urban consumer market in China

Since Premier Deng Xiaoping established the Open policy in 1979, the Chinese economy has been enjoying rapid growth. Its annual percentage increase in GDP for the period 1979 to 2000 averaged above 7 percent. During the initial five years from 1979 to 1984, the growth rates for the agricultural and industrial sectors were similar. For the period 1985 to 2000, agriculture continued to grow but at only one-third of the pace of industry and about half that of the service sector, due to rapid industrialization and the development of the special economic zones (Anderson *et al.*, 2002). Agriculture's share of employment dropped steadily from 69 percent in 1980 to 50 percent in 2000 (State Statistical Bureau, 2002). As a result, there has been a widening gap in income between the urban and the rural.

In the first six months of 2004, consumer retail sales of the nation were 2.5 trillion yuan. The urban residents that represent about one-third of the population contributed almost two-third of the total retail sales. The remaining two-thirds of the population residing in rural areas contributed one-third of the total retail sales (State Statistical Bureau, 2004). Under the planned economy in the past, wholesale and retail services were a state monopoly. This legacy has impeded the development of a nationwide market in China. Foreign companies have been playing a major role in the transformation of China's distribution system. Companies and supermarket chains like Walmart and Carrefour introduce high quality service, the use of information technologies in selling and marketing, and scientific management to the retail industry in China. WTO membership will force domestic Chinese companies to put more emphasis on sales and marketing, and as a result, facilitating expansion of consumer markets (Taylor, 2003).

Children as consumers

The process by which children acquire skills, knowledge, and attitudes relevant to their functioning as consumers in the marketplace is termed consumer socialization (Ward, 1974). Children learn consumer behavior patterns from various socializing agents including parents, peers, schools, stores, media, and the products themselves and their packages (Moschis, 1987).

There are two principal interpersonal sources from which children learn about products and their consumption: parents and peers. It has been shown for years in Western nations that the parents are probably most instrumental in teaching young people basic rational aspects of consumption such as understanding price-quality relationships, handling money wisely, and obtaining appropriate information before making purchases (e.g. McNeal, 1987; Ward *et al.*, 1977). Evidence suggests that the more often that parents or other caretakers take children shopping, the more conscious the children become of information about products such as their brands and prices (Shim *et al.*, 1995). A survey of Beijing children indicated that urban children often accompany their parents to the marketplace and make independent purchases (McNeal and Yeh, 1997). The most frequented store types were food stores, toy stores, and stationery stores, in this order. There is evidence to suggest that family communication processes modify the effects of other socializing agents, in particular the medium of television (McLeod *et al.*, 1982). In China, parents hold negative attitudes toward television advertising. They perceive that advertising is deceptive and annoying (Chan and McNeal, 2003a). Parents who engaged in high level of concept-oriented communication about consumption were more likely to discuss with children about television advertising (Chan and McNeal, 2003b).

Like parents, peers can directly and indirectly affect children's consumer socialization. Several studies suggest that children learn the symbolic meaning of goods or expressive elements of consumption from their peers at school and at play (Moschis and Churchill, 1978; Moschis and Moore, 1982). In addition, peers play an important role in the development of children's preference for stores, products, brands of selected products, media, and television programs. In China the prevalence of the single-child household would seem to give even more than normal regard to peers as playmates, and therefore, as influencers of children's consumer behavior patterns.

There are a number of commercial sources of information about products and their attributes, but two – retailers and media – have been empirically shown to be particularly important. Advertising media have probably received more attention in the research literature than any other socializing agent (Moschis, 1987). Both advertising and editorial/program content of the mass media provide children with knowledge and guidance in their consumer behavior development. McNeal and Ji (1999) found that Chinese children utilized a wide variety of information sources to learn about new products including parents, retail outlets, and the mass media, and that they considered television to be the most important. The researchers concluded that a new consumer generation is emerging in urban China that is more exposed to and more open to commercial sources.

Integrating Piaget's (1970) theory of cognitive development and Selman's (1980) theory of social development, John (1999) proposed a model of consumer socialization. In the model, consumer socialization is a developmental process from the perceptual stage to the analytical stage, then to the reflective stage. Children in the perceptual stage (aged three-seven) have limited awareness of information sources. Children in the analytical stage (aged seven-11) have an increased awareness of personal and mass media sources. Children in the reflective stage (aged 11-16) have contingent use of different information sources depending on the product or situation (John, 1999). As children grow older, they develop a greater awareness of different information sources and deploy these sources in a more flexible manner (Moore and Stephens, 1975; Moschis

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and Moore, 1979; Stephens and Moore, 1975; Ward *et al.*, 1977). They also develop preferences for specific information sources (Moore and Stephens, 1975). In John's (1999) model of consumer socialization, information sources refer to general product information sources. We think that the model should also be applicable to new product information sources, which is a specific category of product information. The current study adopts a consumer-oriented approach in defining an innovation (Rogers, 1995). A "new" product is any product that a potential consumer (a child) judges to be new. It can be products to be used by children or by adults.

The credibility of various information sources affects how young consumers receive and process the message. The sponsor of the communication, together with his or her perceived honesty and objectivity, has an enormous impact on how the communication is accepted by the receivers (Schiffman and Kanuk, 2004). When the source is perceived to be credible, the intended audience will be more likely to believe it, and vice versa. Credibility is grounded in the perceived intentions of the source. Informal informational sources such as friends and family members are often perceived as credible sources because they have nothing to gain from the product recommendation. On the other hand, commercial sources such as advertisements and salespersons are often perceived as incredible sources because they obtain material gain from the product recommendation.

Hypotheses

Previous research indicates that Chinese urban children rank television, parents, store visits, friends and newspapers most important new product information sources (McNeal and Ji, 1999). Among these five sources, three are commercial and two are personal. We therefore hypothesize that:

H1. Urban children will find commercial sources more useful than personal sources in getting information about new products and services.

H2. Urban children will find commercial sources more credible than personal sources in getting information about new products and services.

According to John's (1999) model of consumer socialization, children in different developmental stages will use different information sources for different product categories or situation. They also develop preferences and skepticism for specific information sources. Younger children acquire their consumer behavior norms through observing their parents and older siblings, while adolescents and teenagers are likely to look to their friends for consumption models. In a survey, kindergartners, third graders, and sixth graders were asked how they obtain information about new toys, snack foods, and clothing. The average number of information sources increased with age. Kindergartners relied most on in-store visits, while third and six graders added mass media advertising and interpersonal sources to their lists (Ward *et al.*, 1977). In a study to explore children's understanding of safe product use, interviews were conducted with 615 pairs of mothers and children. The children were either five, eight or 11 years-old. Data was collected as to whether the children knew they could get hurt using two specific products, i.e. toasters and aerosol spray cans and who warned them of the danger. The results show that mothers are the most important source of information about product safety (Faber and Ward, 1977). Adolescents favored peers and friends over parents and mass media for information (Moore and Stephens, 1975; Tootelian and Gaedeke, 1992). Adolescents also reported different preferences of information sources for different types of products. For high-risk products, adolescents still depended on parents. For products where peer acceptance was important, adolescents relied on peers (Moschis and Moore, 1979). Adolescents relied less on mass media as information sources probably because they have learned to be skeptical of advertising or because they consumed less television (Moschis and Moore, 1979). A survey of 1,758 grade 1 to 6 urban Chinese children found that skepticism of advertising increased with age. A total of 17 percent of children in grade 1 perceived that nearly all television commercials are true while only 6 percent of children in grade 6 thought so (Chan and McNeal, 2004). Therefore, we hypothesize that:

H3. Older children will find parents and grandparents less useful than younger children in obtaining new product information.

H4. Older children will find peers more useful than younger children in obtaining new product information.

H5. Older children will find more information sources useful than younger children in obtaining new product information.

H6. Older children will perceive commercial sources less credible for new product information than younger children.

Methodology

Participants and procedures

Respondents were 965 grade 1 to 6 students ages six to 13 years, who were recruited from eight schools in Beijing, Guangzhou, Nanjing and Shanghai. All the schools were situated in urban areas. There were nearly equal numbers of boys and girls. The mean age of the respondents was 9.3 years (SD = 2.0 years). A total of 82 percent of the respondents were the only child in the family. There was no relationship between sex and whether the respondent was a single-child (Chi-square = 1.4, $p = 0.1$). A draft questionnaire in Chinese was constructed based on previous studies (McNeal and Ji, 1999; Bu, 2001). The questionnaire was tested and revised. Four communication scholars in China were appointed as researchers to recruit elementary schools and conduct the data collection during the period November 2003 to May 2004. For children in grades 1 to 3, the researchers read out the questions as well as the answers, and asked the children to select the most appropriate answers on their own. Children in grades 4 to 6 were asked to fill in the questionnaires by themselves. All aspects of the research procedure were conducted in Chinese (Mandarin). Eight questionnaires were invalid as over half of the questions were not answered and the response rate was 99 percent.

Measures

Household ownership of media

Children were asked if they owned 11 types of media such as TV and children's newspapers in their homes on a dichotomy level.

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Store visits and consumption

Children were asked if they had visited or consumed at different types of retail shops by the question: "in the past month, have you ever been to the following shops (exclude street vendors) and bought things on your own?" There were a total of 12 types of retail shops (see Table I). Children chose from three answers, "no", "yes, visited the shop but did not buy things", and "yes, visited the shop and spent money there".

Perceived usefulness/credibility of new product information sources was measured by having respondents rate the usefulness or credibility for product information of 11 different sources (see Table II) on a four-point scale (1 = not helpful at all, 4 = very helpful; 1 = not trustworthy at all, 4 = very trustworthy). Respondents could choose "don't know".

Findings

Household ownership was very high for TV (96 percent) and children's books (93 percent), high for cassette player (79 percent), VCD player (75 percent), radio (74 percent), magazines (71 percent), children's newspapers (68 percent) and computer (67 percent), medium for DVD player (58 percent), video cassette recorder (46 percent), and electronic game player (42 percent). Figure 1 shows the popularity of different types of stores among urban Chinese children. The three most popular retail shops among urban children were bookstores/stationery stores, supermarkets, and restaurants and fast food shops. The percentages of children who had visited these shops in the past month were 78 percent, 72 percent and 68 percent respectively. These visits did not have to be in their cities. The visits could include those shops in another city, for example, on vacation or to visit their families or relatives in another place. The least popular shops were cyber cafes, electronic games centers, and computer stores. Only 9 percent, 15 percent and 26 percent children had visited these three types of shops respectively in the past month. This suggests that urban children generally are not familiar with shops selling computer hardware and software. Results indicated that when urban children visited retail shops, they did not often make independent purchases. In all 12 types of shops, the percentage of children who bought things on their own was less than 40 percent in the past one month for nine types of shops. But for the shops they frequently visit (i.e. bookstores/stationery stores, supermarkets, and restaurants and fast food shops), over half of the respondents had bought things on their own in the past month.

Table I shows the percentage of respondents visited the various types of shops by age and by sex. Two-way ANOVA and *F*-tests were used to investigate whether the pattern of children's store visits depended on demographic variables. To facilitate the test of models, the variables of store visits were recoded into two levels (0 = not visit, and 1 = visit). Age and sex were more or less equally important factors in affecting

Table I Store visits in the past month including with or without purchase

		Age group (%)				Total (%)	Partial *F*-statistics			
Type of stores		6-7 (n = 221)	8-9 (n = 276)	10-11 (n = 306)	12-13 (n = 156)	959	Age	Sex	Age*sex	*F*-stat of full model
Bookstores/stationery stores	Boys	63	66	77	79	71	5.5***	24.1***	0.4	6.3***
	Girls	79	83	90	88	85				
Supermarkets	Boys	63	63	74	78	69	5.7***	3.0	1.1	3.6***
	Girls	73	68	85	74	75				
Restaurants and fast food shops	Boys	53	66	72	71	66	5.4***	1.9	1.3	3.0**
	Girls	66	63	77	74	70				
Department stores	Boys	52	53	66	61	58	4.4**	0.2	0.1	1.9
	Girls	54	56	67	60	60				
Clothing stores	Boys	47	42	50	44	46	2.5	21.1***	0.8	4.6***
	Girls	71	54	62	56	61				
Toy stores	Boys	51	52	48	36	48	6.5***	6.2*	0.4	3.6***
	Girls	48	45	39	22	40				
Sport stores	Boys	41	41	57	42	46	4.1**	1.6	0.6	2.3*
	Girls	42	35	46	40	40				
Music/video stores	Boys	36	31	44	45	39	5.2**	0.1	0.4	2.5*
	Girls	39	27	39	46	37				
Food stores	Boys	34	30	39	37	35	2.0	2.4	1.0	1.5
	Girls	35	27	36	22	31				
Computer stores	Boys	22	28	39	44	33	2.4	25.2***	3.7*	6.1***
	Girls	22	16	21	14	19				
Electronic games centers	Boys	30	17	20	13	20	4.9**	21.9***	0.8	5.5***
	Girls	14	11	8	3	9				
Cyber cafés	Boys	14	12	11	11	12	1.6	12.7***	0.6	2.7**
	Girls	10	3	6	3	5				

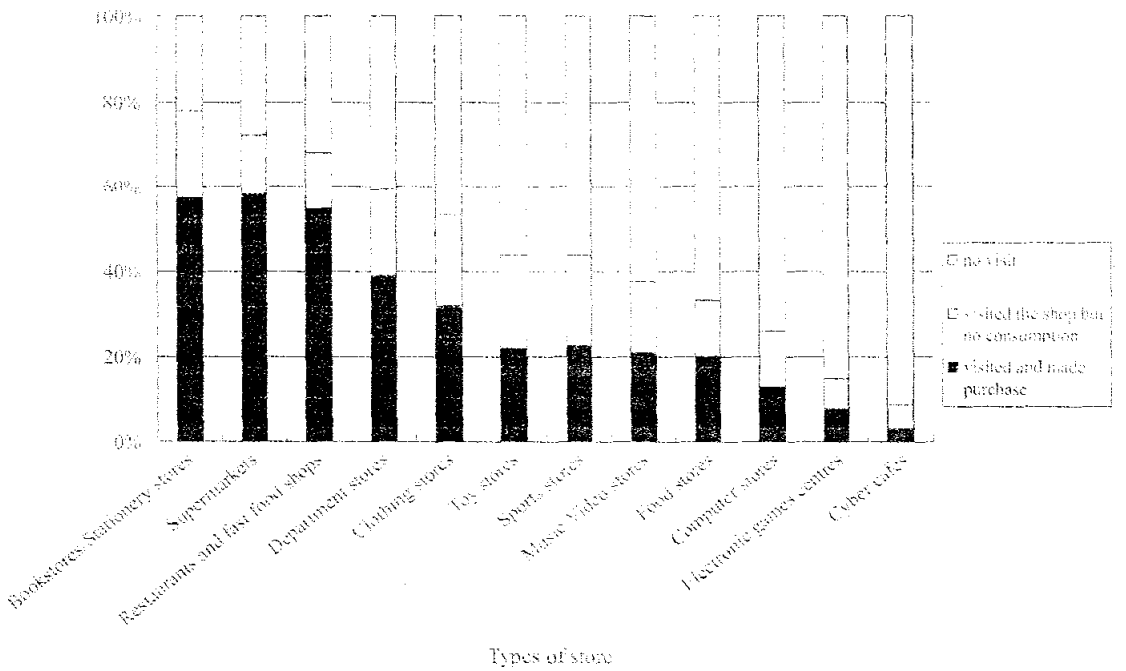
Notes: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Table II Store consumption in the past month

Type of stores		Age group (%) 6-7	8-9	10-11	12-13	Total (%)	Partial F-statistics Age	Sex	Age*sex	F-stat of full model
Clothing stores	Boys	31	22	33	32	29	1.5	3.4	0.6	1.4
	Girls	31	33	37	40	35				
Toy stores	Boys	29	30	29	26	29	0.3	26.1***	0.1	4.2***
	Girls	16	15	14	13	15				
Sport stores	Boys	24	16	35	31	26	9.7***	6.3*	0.8	5.5***
	Girls	11	13	26	27	19				
Music/video stores	Boys	19	15	27	38	24	11.1***	3.9*	0.1	5.5***
	Girls	15	11	20	32	18				
Computer stores	Boys	8	12	24	29	18	5.6**	25.8***	4.8**	8.2***
	Girls	6	7	8	7	7				

Note: Only those types of stores with age group and sex effects different from that of the store visits are shown here

Figure 1 Store visits and consumption in the past month



store visits. Out of the 12 types of shops, visits to food shops had no age or sex difference. That means children of all age group and both sexes had the same likelihood of visiting food shops. Visits to five types of shops including supermarkets, restaurants and fast food shops, department stores, sport stores, and music/video stores showed age differences but no gender differences. That means boys and girls are equally likely to visit these shops but older children and younger children have different likelihood's in visiting these shops. *Post hoc* Duncan pair-wise tests indicated that in general, older children were more likely to have visited these five types of shops in the past month than younger children. Visits to three types of shops including clothing stores, computer stores and cyber cafes showed gender differences, but no age differences. That means older and younger children are equal likely to visit these shops but girls and boys have different likelihood's in visiting these shops. Girls were more likely than boys to have visited clothing stores in the past month. Boys were more likely than girls to have visited computer stores and cyber cafes in the past month. For visits to computer stores, there were age differences for boys too. Older boys were more likely than younger boys to have visited computer stores in the past month. Three types of shops including bookstores/stationery stores, toys stores and electronic games centers showed both age and sex differences. That means boys and girls, and older and younger children had different likelihood's of visiting these stores. For bookstores and stationery stores, *post hoc* Duncan pair-wise tests indicated that older children were more likely to visit than younger children. Also, girls were more likely to visit bookstores and stationery stores than boys. Boys were more likely to have visited toy stores and electronic game centers than girls. Also, children aged 12 to 13 were

Table III Perceived usefulness and perceived credibility of various sources for new product information

Source	Perceived usefulness: Number of non-missing cases	Mean	SD	Ranking from pairwise t-tests	Perceived credibility: Number of non-missing cases	Mean	SD	Ranking from pairwise t-tests
Television	857	2.7	1.0	1	823	2.3	1.0	4
Friends/classmates	808	2.5	1.0	2	789	2.6	0.9	3
Parents	801	2.5	1.0	3	811	3.0	1.0	1
Newspapers	772	2.4	1.0	3	770	2.3	1.0	5
Shops	774	2.4	1.0	3	774	2.3	1.0	5
Internet	624	2.3	1.2	3	624	2.4	1.1	4
Teachers	717	2.3	1.1	4	720	3.0	0.9	1
Magazines	718	2.2	1.0	4	702	2.2	0.9	6
Radio	705	2.0	1.0	5	695	2.2	0.9	6
Street ads	732	2.0	1.0	5	756	1.9	0.9	7
Grandparents	675	1.9	1.0	6	695	2.7	1.0	2
Personal sources[a]	892[c]	2.3	0.8		901	2.8	0.8	
Commercial sources[b]	892[c]	2.3	0.8		905	2.2	0.7	

Notes: [a]Refers to teachers, parents, friends/classmates, and grandparents; [b]refers to the other seven sources; [c]if a respondent answered "don't know" for a particular source, the mean will be complied from the scores of the remaining sources

Table IV Perceived usefulness of various information sources for new product information by age group

Source	Age group: 6-7	8-9	10-11	12-13	F-value
Television	2.7^{ab}	2.5^{a}	2.8^{b}	2.8^{b}	3.9**
Friends/classmates	2.2^{a}	2.3^{a}	2.8^{b}	2.8^{b}	17.6***
Parents	2.5	2.5	2.5	2.3	0.7
Newspapers	2.2^{a}	2.2^{a}	2.6^{b}	2.7^{b}	8.8***
Shops	2.5^{b}	2.3^{a}	2.4^{ab}	2.5^{ab}	2.0*
Internet	2.0^{a}	2.0^{a}	2.5^{b}	2.7^{b}	12.9***
Teachers	2.5^{b}	2.2^{a}	2.2^{a}	2.2^{a}	3.2*
Magazines	1.9^{a}	2.1^{a}	2.4^{b}	2.5^{b}	11.0***
Radio	1.9^{a}	2.0^{a}	2.0^{a}	2.2^{b}	2.3
Street ads	2.0^{b}	1.8^{a}	2.0^{b}	2.1^{b}	3.8**
Grandparents	2.0^{ab}	2.1^{b}	1.8^{a}	1.9^{ab}	3.2*
Personal sources	2.3	2.3	2.3	2.3	0.3
Commercial sources	2.3^{ab}	2.2^{a}	2.4^{bc}	2.5^{c}	6.5***

Notes: Means of same subscripts indicate no significant difference between groups using Duncan paired comparisons, $p < 0.05$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

Table V Perceived credibility of various information sources for new product information by age group

Source	Age group: 6-7	8-9	10-11	12-13	F-value
Teachers	3.1	2.9	3.0	2.9	0.9
Parents	2.9^{ab}	3.0^{b}	3.1^{b}	2.8^{a}	3.0*
Grandparents	2.5	2.7	2.7	2.7	1.4
Friends/classmates	2.5^{a}	2.5^{a}	2.6^{ab}	2.7^{b}	2.9*
Internet	2.1^{a}	2.2^{a}	2.6^{b}	2.6^{b}	7.9***
Television	2.2^{a}	2.2^{ab}	2.4^{c}	2.4^{bc}	3.5*
Shops	2.2	2.3	2.4	2.4	1.4
Newspapers	2.3	2.2	2.3	2.3	0.7
Magazines	2.1	2.2	2.3	2.3	1.2
Radio	2.1	2.2	2.2	2.2	0.6
Street ads	1.8	1.8	1.9	2.0	1.4
Personal sources	2.7	2.7	2.8	2.7	1.0
Commercial sources	2.1^{a}	2.1^{ab}	2.3^{b}	2.3^{b}	3.6*

Note: Means of same subscripts indicate no significant difference between groups using Duncan paired comparisons, $p < 0.05$; $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$

credible than younger children. As a result, *H6* is not supported.

All the sources had significant and positive Pearson correlation values between perceived usefulness and perceived credibility, ranging from 0.35 ($n = 549$, $p < 0.001$) for grandparents to 0.60 for the internet ($n = 518$, $p < 0.001$). This suggests that children evaluate perceived usefulness and credibility on the same dimension, forming an attitude toward the specific information source.

Discussion and conclusions

The study reported here represents a continued effort at ascertaining the extent of consumer behavior of youth in urban China. Comparing with McNeal and Ji's (1999) study, the current study has expanded the scope to include younger children (grade 1 to 3) and specifically investigate usefulness and credibility of various information sources for new products. It shows that shopping experience including store visits as well as independent purchase is common among children in urban China. This further demonstrates that urban children in China have substantial money to spend and are willing to spend (McNeal and Yeh, 2003). We did find that shopping experience increased significantly among older children, apparently those that have some knowledge of products and more money to spend on them (as compared to the younger children). Bookstores/stationery stores are the retail outlets that most urban children have visited and made

urban children may consider adopting a dual-target approach. They should attempt to inform the children through mass media campaigns and to influence the opinion leaders, i.e. parents and school teachers, and encourage the influence to be passed on to the children through personal communication. The internet as a medium for informative and normative purposes should be encouraged. John's (1999) model of consumer socialization was partially supported for the prediction of children's perception of usefulness and credibility of new product information sources. As predicted by the model, older children found grandparents less useful and peers more useful than younger children. Contrary to the model, older urban Chinese children found commercial sources more useful and credible than younger urban children.

Managerial implications

The current study has provided insights for marketers and advertisers to select the right media as well as type of retail outlets to reach urban Chinese children. Other than television, marketers and advertisers can consider advertising on children's print media including children's books, magazines and newspapers. Currently, advertisers have not yet fully employed opportunities in the print media and very often advertisements in children's magazines and newspapers are geared toward parents. Marketers and advertisers can work with children's print media to create product-related editorials or develop stories around the use of the products or product categories.

According to the current study, shops that urban Chinese children most frequently visited and made independent purchases were bookstores/stationery stores, supermarkets, restaurants and fast food shops. Although Chinese retailing tends not to mix unrelated products, those stores that sell school items may want to consider expanding their total sales by also offering snacks and beverages such as is done in many bookstores in the USA. Other marketers of foods, clothing, and play items may want to make a deal with bookstores and stationery stores to advertise in them, for example on bulletin boards such as is done in western societies. Point-of-purchase materials, promotional counters at supermarkets and mega-stores should be used to enhance brand awareness, brand interest and brand trial among the young Chinese consumers. Sales personnel should be trained to greet children, to listen to them, and to interact with them in a friendly and efficient manner.

In view of the declining popularity of toy stores among older children (in particular boys), products for older children should be marketed through other retail outlets that gained popularity among them such as sports stores, music/video stores, and computer stores.

Children's perceived usefulness and credibility of various information sources for new products prompts the use of the two-step flow of communication and persuasion. Marketers and advertisers should identify influential parents, teachers and peers as opinion leaders for direct reception of information about new products, who in turn transmit the information to the other children. As older children are less skeptical about commercial communication than younger children, older children should be identified as opinion leaders for younger children. Testimonial advertising using older children as spokespersons should be adopted. In view of children's favorable perception of the internet, small marketers with limited resources should actively seek out advertising and promotional opportunities provided by the internet. First of all, companies should set up child-friendly web sites to disseminate new product information. Early adopters should be encouraged to give positive comments on the internet. Product sampling and event sponsorships can be conducted online. Companies should offer chat-room management services to its existing and potential customers. Satisfied young consumers should be stimulated to refer friends to trial out the products through well-organized incentive referral programs. To prevent negative word-of-mouth communications about products and services circulated on-line, companies should take proactive measures by regularly monitoring word-of-mouth communications on popular websites that urban Chinese children frequently visited and clarifying issues about product features and performance when necessary.

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Executive summary and implications for managers and executives

This summary has been provided to allow managers and executives a rapid appreciation of the content of this article. Those with a particular interest in the topic covered may then read the article in toto *to take advantage of the more comprehensive description of the research undertaken and its results to get the full benefits of the material present.*

Getting through to Chinese children

The rapid expansion of the Chinese economy, the associated increase in average incomes and the one-child policy of Chinese governments make for an almost unique set of circumstances. The Chinese youth market is very different from that in other countries at a similar stage in economic development. Partly this reflects China's sheer size with almost 300 million children aged below 15 years and partly it comes about from the peculiar social circumstances brought about by the one child policy. It is not just the number of young people (there are, for example, significantly more under

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15s in India) but the spending power and influence that those young people exercise.

It has been observed that China has a two-speed economy with the large urban areas of the coast and around Beijing growing swiftly while the interior of the country – urban and rural – lags behind. Certainly the Chinese government is very concerned about this differential rate of growth since it encourages internal migration and risks a society of geographically different "haves" and "have nots". However, for western marketers looking at the opportunities presented for the marketing of consumer goods in China it is the large and thriving coastal cities that attract attention.

Children as consumers in China

There is a growing body of evidence that indicates the influence that Chinese children exercise over purchases – both through their own spending and also through influencing the decisions made by adults. Here Chan reports that, for most urban families "... children's average consumption is equal to one-third or more of the family's income." Moreover, it seems that up to two-thirds of total consumer spending is determined – directly or indirectly – by the preferences of children.

This enormous market power is influenced by a variety of information sources – parents, peers, advertising and media, education and the products themselves. Chan reports that the media and the retailer are perhaps most significant as direct influencers of purchase preference – this is despite a general mistrust of advertising and TV advertising in particular. However, this situation is, to some extent, transference from western cultures – something that should be done with caution.

Chan examines how the different sources (personal and commercial) are seen by young people and how the use of these sources develops as children mature. We know that older children are more "media-savvy" and more able to arrive at product preferences without reference to parents or other formal sources of advice. It is also important to note that the retailer is more significant as an information source in China than is the case in the UK or the US. This reflects the traditional nature of Chinese retail and product distribution.

Advertising to children and young people

Most marketers, faced with a huge mass market such as we see in China, plump for getting their message out to the largest number of people. Typically this directs spending towards TV advertising rather than towards more targeted media, push strategies working with retailers or direct marketing. However, what Chan suggests is that children in China are not as reliant on TV advertising for product information. This may reflect some degree of parental disapproval but also suggests that traditional media and the retail environment merit more attention from western consumer marketers than has been the case to date.

As the Chinese consumer market develops we can expect that the consumer media will also grow. And in a market where children are so important we can look forward to media targeted and children and young people. Chan points out that "... advertisers have not yet fully employed opportunities in the print media and very often advertisements in children's magazines and newspapers are geared towards parents." There is a clear opportunity to target effective advertising directly to the decision-makers. Perhaps we may even see advertising for products more usually advertised to adults appearing in children's media – after all, in many cases these children are the most significant influence over the choice that their parents will make.

New media opportunities

Alongside the traditional media we should note that China's economy is growing in a very different environment from the past. Countries that have experienced a similar surge of growth (e.g. Japan in the 1960s and 1970s) did so in the old media environment. For Chinese business and, increasingly, Chinese consumers of the computer age means that the PC and the internet are part of entering a sophisticated consumer economy.

This means that marketers wanting to develop campaigns in China – especially when looking to target the better off urban consumers – need to consider web marketing. This is doubly important when looking at reaching young people since the Chinese education sector actively promotes knowledge and use of the internet and world wide web. As a means of influencing children this approach has considerable appeal since they tend to respond more positively to promotions in this environment than is the case with more traditional media.

Finally, marketers need to recognize the important influence exercised by retailers and to note that China's retail sector remains underdeveloped. Most shops are single retailers and Chan reports some resistance – perhaps cultural – to the idea of the multiple retailer. However, children spend considerable time in retail environments and this presents the opportunity for consumer marketers to communicate brand and product messages.

China is still a relatively poor country but the rate of growth it is enjoying at present means that its days of poverty are moving rapidly towards history. And we can expect that, with continuing economic growth, the internal rigidities that came from a monolithic communist dictatorship will begin to decline. The retail sector will change as western specialists target China and this presents the consumer marketer with a great opportunity to secure real brand benefits from active engagement in the retail sector. It is not just a means of getting our product to market but an important and significant element in brand and product promotion.

(A précis of the article "Store visits and information sources among urban Chinese children". Supplied by Marketing Consultants for Emerald.)

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Impacts of situational factors on buying decisions in shopping malls

An empirical study with multinational data

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Abstract

Purpose – To investigate the impact of situational factors on mall shoppers' buying decisions.

Design/methodology/approach – Based on Belk's framework on situational factors in a sales situation, the study employed a dataset of mall shoppers in the USA, China and Hong Kong and logistic regression for analysis.

Findings – It is found that, whether in the combined sample or in the individual samples, nine of the 13 situational factors considered significantly affected shoppers' purchases of food or non-food products. However, situational influences on purchases varied according to the types of products bought. More importantly, the findings on the impact of some factors were consistent across three or two samples, suggesting that their external validity may be extended to certain conditions.

Research limitations/implications – The study had a limitation in the selection of the malls where the interviews were conducted, so some of the findings may be mall-specific rather than representative of the general population of shoppers in the nations or regions.

Practical implications – The information disclosed here may help the practitioners to better understand shoppers' (especially Chinese shoppers') behaviour in malls and, as a consequence, to undertake more efficient marketing strategies in malls (especially in the malls in China).

Originality/value – The distinguished feature of this paper is that it simultaneously examined the impacts of 13 situational factors on mall shoppers' purchase decisions with multinational data. This allowed researchers to check both the internal validity and the external validity of the observed impacts of the situational factors.

Keywords Shopping centres, Buying behaviour, Distribution management

Paper type Research paper

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Introduction

Retailers and manufacturers are very interested in how shoppers make their purchase decisions, as well as when, why and whether a shopping trip leads to a purchase. Such information is critical in formulating marketing strategy (Kotler, 2000) and retailing planning (Levy and Weitz, 1992). Marketing literature has revealed that many factors may affect shoppers' purchase decisions, including individual and psychological characteristics, cultural, social and environmental variables and promotional strategies. Belk (1975) made a distinction between situational and non-situational factors. He suggested that situation factors, such as task definition, physical and social surroundings, temporal perspectives and antecedent states, may play a major role in sales situations, and thus deserve special attention from marketers.

This study, based on Belk's framework, focused on two important issues regarding the impact of situational factors – specifically on the significance of different factors when examined collectively rather than individually; and when conducted simultaneously in several countries/regions rather than in just a single country.

The impact of situational factors has been examined extensively (see the literature review below for details); however, most of these studies have focused on particular types of situational influences and have left the question, "What would happen if they were observed simultaneously?" unanswered. Would those previously tested factors still be significant if they were examined with other factors? The importance of this question lies in the internal validity[1] of a research study, i.e. the degree to which one can be sure that the observed effect is because of the variable(s) of interest. In other words, if different types of situational factors all play a significant role in sales situations, as suggested by Belk (1975), we should control other types of situational factors by explicitly incorporating them into the research design and measuring their impact in order to ensure the internal validity of the affect of the situational factor(s) we are interested in (Reynolds *et al.*, 2003). We found no studies exploring the factors in this way.

Previous studies of situational factors have been conducted in only one country at a time: what if the research was carried out in multiple countries/regions at the same time? Would there still be differences or similarities? The magnitude of the question is related to external validity, i.e. the degree to which one can draw correct inferences when generalizing beyond a particular study. Although external validity is not the goal of theory application research where the research objective is to test theory, "further studies (i.e. additional research) will always be needed to enhance external validity" (Reynolds *et al.*, 2003, p. 85). The present study not only provides additional evidence, but also furnishes multinational substantiation, on the impact of situational factors. Few studies on this subject containing multinational data have been unearthed in the literature.

To address these issues, we examined multiple situational influences on shoppers by conducting a survey study in a retail setting, i.e. shopping malls, in three different countries/regions. According to Bloch *et al.* (1994), shopping malls constitute appropriate sites for studying shoppers' behaviour, because they are a collection of stores with a wide variety of products where a considerable number of shoppers gravitate towards an extensive assortment of goods and services. In addition, mall shoppers' behaviours may reflect their lifestyles (Swinyard, 1998).

We start by reviewing the relevant literature and the development of our research hypotheses. We then describe the methodology used in the study. After reporting the

findings, we discuss their significance. In the last section, we present our conclusions, discuss implications of the findings and suggest future research directions.

Literature review and research hypotheses

Previous studies on consumer shopping behaviour demonstrate that many factors may influence shoppers' buying decisions. Belk (1975, p. 151) classified these influences into two broad categories: situational factors and non-situational factors, based on "a revised stimulus-organism-response paradigm".

Non-situational factors refer to those general and lasting characteristics of an individual or an object, for example, personality, intellect, gender and race for an individual; and brand image, quality, size and function for an object that can be purchased.

Situational factors, on the other hand, refer to "all those factors particular to a time and place of observation which do not follow from a knowledge of personal and stimulus attributes and which have a demonstrable and systematic effect on current behavior" (Belk, 1975, p. 152). Situational factors include physical surroundings, social surroundings, temporal perspective, task definition and antecedent states:

- Physical surroundings refer to geographical and institutional location, decor, sounds, aromas, lighting, weather and visible configurations of merchandise or other material surrounding the stimulus object.
- Social surroundings include the presence of other persons, their characteristics, apparent roles and interpersonal reactions.
- Temporal perspective is a dimension of situations that may be specified in units ranging from time of day to season of the year.
- Task definition refers to the features of situations, such as an intent or requirement to select, shop for or obtain information about a general or specific purchase.
- Antecedent states are momentary moods or conditions of buying such as acute anxiety, pleasantness, hostility, cash on hand, fatigue and illness.

Extensive effort has been made in investigating the situational impact on shoppers' buying decisions. For example, previous studies indicate that people have various motivations for shopping: some for a purely utilitarian purpose, others for hedonistic reasons (Arnold and Reynolds, 2003; Babin *et al.*, 1994; Batra and Ahtola, 1991; Baumann *et al.*, 1981). These various motivations for how a shopping trip is defined by a consumer affect his/her behaviour. It has been shown that utilitarian shoppers, strongly motivated by purchase considerations, are more likely to buy than hedonistic shoppers (Kenhove *et al.*, 1999). Similarly, purchases made during shopping trips may be either planned or unplanned; because of the nature of their task, shoppers with a purchase plan are more likely to buy than those without one (Engel *et al.*, 1995; Kollat and Willet, 1967; Holbrook and Hirschman, 1982).

As an example of social surroundings, the presence of friends or relatives may have an important role in consumers' purchasing decisions (Beardon *et al.*, 1989) or in their sensitivity to product prices (Wakefield and Inman, 2003). It may be much easier for accompanied shoppers to make difficult buying decisions when the suggestions of their companions reinforce their resolve to purchase. Researchers have observed that

mall patrons tend to buy more products and spend more money when accompanied (Nicholls *et al.*, 1994).

Temporal perspective can significantly alter shopping behaviour (Nicholls *et al.*, 1997). For instance, shortage of time may reduce both planned and unplanned purchases, and frequent customers, who are more familiar with a store's layout, may make fewer unplanned purchases (Iyer, 1989; Park *et al.*, 1989).

The impact of physical surroundings on shopping behaviour has also been well documented. Simonson and Winer (1992) found that purchase behaviour can be modified by the way in which inventory is arranged. Kumar and Leone (1988) maintain that point of purchase displays can be very useful in stimulating sales. The location of the store (Babin and Babin, 2001), the colour of the background (Bellizzi and Hite, 1992), the height of a product on a shelf (Hitt, 1996) and visual (décor) and auditory (music) stimuli, all influence shoppers' behaviour (Alpert and Alpert, 1990; Bruner, 1990). In addition, the assortment of merchandise (Stassen *et al.*, 1999), a neat and spacious atmosphere, scents and other elements of the physical surroundings of a shopping environment have been found to play a significant role in purchase behaviour (Koelemeijer and Oppewal, 1999; Bone and Ellen, 1999).

Furthermore, it has been shown that shoppers' emotional states have a significant effect on their shopping intentions and perceived shopping value (Babin and Babin, 2001). Shoppers' moods, a specific case of an antecedent state, can affect shoppers' purchases – happy shoppers have been found to buy more than unhappy shoppers (Curren and Harich, 1994; Knowles *et al.*, 1993).

Despite extensive efforts, previous studies have focused mostly on establishing the impact of specific situational factors within one country with little concern for how these factors fare in the presence of other situational influences across different countries. This void, as argued previously, left both the internal and external validity problems in limbo.

To fill in this gap, the present study simultaneously examined various situational factors with one set of multinational data. It derived evidence of internal validity for the significant situational factors by controlling other situational factors, and provided evidence of external validity for some of the significant situational factors by using multinational data.

Based on the literature and to guide the investigation, we proposed Hypotheses 1 and 2 as follows:

H1. Some of the situational factors examined demonstrate internal validity in shopping malls, that is, their impacts are significant when other major factors (including other situational factors) are present in the setting.

H2. Some of the situational factors examined demonstrate external validity in shopping malls, that is, the natures of their impacts are consistent across countries or regions.

Please note, we can only offer these loose hypotheses given the questions that the study is addressing. Our interest is, therefore, more in the information revealed by the research than in the hypotheses testing. However, the hypotheses are useful in guiding the investigation.

In addition to the above hypotheses, the impacts of situational factors on buying products should be considered separately in a research setting like a shopping mall,

where "a group of retail businesses planned, developed, owned and managed as a unit" (Kotler *et al.*, 1998), and where consumers can find almost all types of products. Given the perishable nature of most of the food industry's product lines and the limited amount of time available for food-related shopping (Lewison, 1997), the factors influencing a shopper to buy food products in a shopping mall may differ from those influencing a shopper to buy non-food products. Buying food products in shopping malls is driven more by impulse, while buying other products, especially those high in value, may involve more effort in search and processing of information (Bagozzi *et al.*, 1998). These arguments lead us to offer Hypothesis 3.

H3. The situational factors influencing shoppers to buy food or beverages differ from the situational factors influencing shoppers to buy non-food products in shopping malls.

Methodology

The sample

The dataset consisted of surveys administered separately in shopping malls in Xi'an (Shaanxi, Mainland China), Hong Kong and Miami-Dade County (Florida, USA). Part of the data has been previously analyzed and reported (see Li *et al.*, 2003, 2004).

The difficulties with sampling in international research have long been recognized (e.g. Berry, 1969; Kumar, 2000). At least two levels of sampling should be decided in the international context: sampling of countries and sampling of the individual respondents from within each country. According to Reynolds *et al.* (2003), in the international context, non-probability sampling is acceptable when the research objective is to test theory (theory application research).

At the level of sampling countries/regions, Xi'an, Hong Kong and Miami-Dade were selected, because they were thought to be representative of different cultures and different levels of economic development. On one end, Xi'an represents Eastern culture and a developing economy, and on the other, Miami-Dade represents Western culture and a developed economy. Hong Kong represents a culture and an economy somewhere in between. Table I is a summary of background information about Xi'an, Hong Kong and Miami-Dade.

At the level of sampling the respondents, the three malls that we used to collect the data were all covered malls. The mall in Xi'an was located in the centre of the city and featured about 120 specialty shops and three anchor stores. It was a two-layer underground building with only one entrance/exit. The mall in Hong Kong was connected to an underground railway station and had about 200 specialty shops and six anchor stores. It was a multiple-layer building with two major entrances/exits. The

Items	Xi'an	Hong Kong	Miami-Dade
Urban population (million)	3.93	6.80	2.25
City size (km^2)	1,066.00	1,100.00	5,037.50
Population density (per km^2)	2,842.40	6,181.81	446.69
Annual personal median income (US$)	549.06	15,384.62	32,287

Sources: *Yearbook of Xi'an Statistics* (2001); Census and Statistic Department, Hong Kong (2003); US Census, *Florida Quick Facts* (2000)

Table I. Some background information on Xi'an, Hong Kong and Miami-Dade

mall in Miami-Dade had four anchor stores and over 200 specialty shops. It was a multiple-layer building with many entrances/exits.

We considered two special sampling issues in the context of a shopping mall, namely time and location (Blair, 1983; Sudman, 1980). In terms of sampling time, we obtained the responses during working days and weekends with an approximate ratio of 5:2, and scheduled the sampling hours within each day following Blair's (1983) suggestion.

Given the different entrance/exit features of the three malls, we used two sampling location methods. Because the Xi'an and Hong Kong malls had only one or two exits, we adopted a systematic selection procedure when colleting data in them. Four interviewers were located at each exit. They asked every tenth shopper leaving the malls to complete the questionnaire. If a shopper refused, then the next tenth shopper was asked. Because the Miami-Dade mall had multiple exits, we adopted Sudman's (1980) procedure of respondent selection for collecting data in it. Several interviewers were located at the different mall exits. They rotated consecutively between doors at the exits, stopping each shopper as he or she left the shopping centre. All of the interviewers were trained undergraduate students.

In brief, the respondents in the three samples were selected based on a scheduled time and according to exit patterns rather than on other visual or demographical characteristics. Table II reports the demographics of the respondents and their purchase patterns.

The questionnaire

In this survey, we adopted an instrument developed by Nicholls *et al.* (1997). While the original version of the instrument was employed in the USA, it was translated from English into both simplified and traditional Chinese using a translation/back-translation procedure to ensure equivalence before it was employed in Xi'an and in Hong Kong. Some modifications were made to the translated versions in order to adapt them to the specific countries/regions involved. For example, "income" was originally measured as the total annual income of everyone in the respondents' household in US dollars; in the Xi'an version, it was changed to the total monthly income of everyone in the respondents' household in RMB yuan; in the Hong Kong version to the total monthly income of everyone in the respondents' household in HK dollars. As another example, in the original and Hong Kong versions, there was an alternative item "go movie" under the question "What was your main reason to visit the mall today?" The item was deleted in the Xi'an version since there was no movie theatre in the Xi'an mall.

The instrument was structured in four parts, with several extra questions concerning demographic attributes.

First, respondents were requested to report their shopping intention (main reason) for visiting the mall. They were instructed to choose from the following list: looking and browsing, making a specific purchase, bargain hunting, eating, shopping at a specific store or meeting friends. If a shopper chose "making a specific purchase" or "shopping at a specific store", he or she would be asked to indicate whether he or she had known what product and what brand hey intended to buy before the trip (two questions).

Second, respondents were asked to answer questions concerning their shopping processes and habits, e.g. the time they spent in travelling to the mall, the time they

Table II. Demographics and purchases of the three samples

	Total (n = 1,380)		US (n = 412)		CN (n = 459)		HK (n = 509)	
Gender								
Male	552	(40.0%)	169	(41.0%)	226	(49.2%)	157	(30.8%)
Female	828	(60.0%)	243	(59.0%)	233	(50.8%)	352	(69.2%)
Age								
Below 35	960	(69.6%)	269	(65.3%)	364	(79.3%)	327	(64.2%)
35 and above	420	(30.4%)	143	(34.7%)	95	(20.7%)	182	(35.8%)
Education								
Below college	354	(25.7%)	108	(26.2%)	177	(38.6%)	69	(13.6%)
College and above	1,026	(74.3%)	304	(73.8%)	282	(61.4%)	440	(86.4%)
Income[a]								
< US$10,000; RMB500; HK$10,000	61	(4.5%)	20	(5.0%)	13	(2.8%)	28	(5.6%)
US$10,000-14,999; RMB500-999; HK$10,000-14,999	145	(10.7%)	19	(4.7%)	77	(16.8%)	49	(9.8%)
US$15,000-24,999; RMB1,000-1,999; HK$15,000-24,999	243	(17.9%)	50	(12.4%)	153	(33.5%)	40	(8.0%)
US$25,000-34,999; RMB2,000-3,999; HK$25,000-34,999	272	(20.0%)	68	(16.9%)	145	(31.7%)	59	(11.8%)
US$35,000-49,999; RMB4,000-5,999; HK$35,000-49,999	192	(14.1%)	89	(22.1%)	42	(9.2%)	61	(12.2%)
US$50,000-74,999; RMB6,000-9,999; HK$50,000-74,999	158	(11.6%)	78	(19.4%)	16	(3.5%)	64	(12.8%)
US$75,000-99,999; > RMB9,999; HK$75,000-99,999	93	(6.8%)	42	(10.4%)	11	(2.4%)	40	(8.0%)
> US$99,999; > HK$99,999	196	(14.4%)	37	(9.2%)		n.a.	159	(31.8%)
Purchase								
Total buy	1,032	(74.8%)	368	(89.3%)	317	(69.1%)	347	(68.2%)
Buy food	755	(54.7%)	258	(62.6%)	233	(50.8%)	264	(51.9%)
Buy other products	608	(44.1%)	254	(61.7%)	176	(38.3%)	178	(35.0%)

Notes: [a] In the USA, income is the total annual income of everyone in the respondent's household (US$), in Mainland China, the total monthly income of everyone in the respondent's household (RMB) and in Hong Kong the total monthly income of everyone in the respondent's household (HK$)

spent in the mall, the frequency of their mall visits, the number of stores they visited during the trip and the number of companions they had.

Third, respondents were asked to indicate the major reason or reasons for visiting that particular mall using the question "Why did you choose to visit this mall?" The answers included the assortment of merchandise, favourite stores, atmosphere, access convenience, tour destination, quality of merchandise and price of products. In this part, they were also requested to report their general feelings about their visit with the question "How satisfied were you with your mall visit today?" The answers were scaled using five points with 1 being "very unsatisfied" to 5 being "very satisfied".

Finally, the respondents were asked to report the purchases they made in the mall, including purchases of food or beverages (food products) and all other products (non-food products) and the amount of money spent on each category. After the data was collected, we combined food or beverage purchases with non-food product purchases to form a measure of total purchases.

The data collected enabled us to consider the possible impacts of 13 situational factors, in four of Belk's (1975) five categories. Table III illustrates the variables included and how they were recoded. However, some of the factors needed to be justified. Assortment, Favoured stores, Atmosphere, Convenience, Tour and quality and/or price were considered as variables relating to task definition because they were the reasons the shoppers had selected the malls. When Assortment was included, for instance, it meant that the shoppers felt that variety was most important in finishing the task of shopping – no matter how wide an assortment the mall actually provided. When Tour was selected, it meant that the shoppers' visit to the malls was simply to enjoy themselves as tourists.

The "Number of stores visited" and "Satisfaction" were considered as factors of antecedent states because they indicated the momentary conditions of the shoppers before buying, such as their readiness to purchase (the more stores a shopper visits in a given time, the less ready the shopper is to buy), fatigue (the more stores a shopper visits in a given time, the more tired the shopper tends to be) and pleasantness (the more satisfied a shopper is, the more pleasant he or she is). However, it should be noted that both factors might be the results of buying. For example, shoppers may visit a smaller number of stores during a shopping trip as a result of their quick positioning – they found what they wanted quickly. They might feel satisfied as a result of their buying – they bought what they wanted.

The analytical techniques

For analysis we employed logistic regression. This examines the probability that a person or an organization is going to take an action under the influence of certain factors (Menard, 1995). Since the factors influencing shoppers to buy products may be different as argued above, we took total buying, buying food and buying non-food products as separate dependent variables. The situational factors were independent variables. Some non-situational factors such as gender, age, education, income and country/region were controlled. The analytical model was as follows:

$$\text{logit}(Y) = \beta_0 + \sum_{i=1}^{13} \beta_i X_i + \sum_{k=1}^{6} \alpha_k Z_k$$

Variable		Rules of coding	Nature
Total buy	Y_1	$Y_1 = 1$, if a shopper bought anything in the mall; $Y_1 = 0$, otherwise	Dependent variable
Buy food	Y_2	$Y_2 = 1$, if a shopper bought any food or drinks, including eating, in the mall; $Y_2 = 0$, otherwise	
Buy non-food product	Y_3	$Y_2 = 1$, if a shopper bought any non-food products in the mall; $Y_2 = 0$, otherwise	
Buying intention	X_1	First, shopping motive (MT), planning to buy a product (PP) and planning to buy a brand (PB) were coded in following ways: MT = 1, if a shopper was visiting the mall for buying, MT = 0, otherwise; PP = 1, if a shopper knew what product to buy, PP = 0, otherwise; PB = 1, if a shopper knew what brand to buy, PB = 0, otherwise. Then MT, PP, and PB were summed into an index of buying intention so as to avoid muti-collinearity among MT, PP and PB, and to reflect the extent of a shopper's buying intention	Task definition
Assortment	X_2	$X_2 = 1$, if a shopper indicated that assortment of merchandise was one of the reasons for which he visited the mall; $X_2 = 0$, otherwise	
Favourite stores	X_3	$X_3 = 1$, if a shopper indicated that he visited the mall because his favourite stores were there; $X_3 = 0$, otherwise	
Atmosphere	X_4	$X_4 = 1$, if a shopper indicated that the shopping atmosphere was one reason for the visit to the mall; $X_4 = 0$, otherwise	
Convenience	X_5	$X_5 = 1$, if a shopper indicated that the convenient access was one reason for visiting the mall; $X_5 = 0$, otherwise	
Tour	X_6	$X_6 = 1$, if the mall was a shopper's tour destination; $X_6 = 0$, otherwise	
Quality and/or price	X_7	$X_7 = 1$, if a shopper indicated that the quality or price of products was one reason for visiting the mall; $X_7 = 0$, otherwise	
Companion	X_8	$X_8 = 1$, if a shopper had any companions; $X_8 = 0$, otherwise	Social surroundings
Travel time	X_9	A continuous variable counted by the number of minutes a shopper travelled to the mall	Temporal perspective
Staying time	X_{10}	A continuous variable counted by the number of minutes a shopper stayed in the mall	
Frequency	X_{11}	$X_{11} = 1$, if a shopper was visiting the mall for the first time; $X_{11} = 2$, less than once a month; $X_{11} = 3$, once a month but less than once every two weeks; $X_{11} = 4$, once every two weeks but less than once a week; $X_{11} = 5$, once a week; $X_{11} = 6$, more than once a week	
Number of stores visited	X_{12}	A continuous variable counted by the number of stores or boutiques that a shopper visited on the shopping tour	Antecedent states

(*continued*)

Table III.
The variables and the rules for their coding

Variable		Rules of coding	Nature
Satisfaction	X_{13}	$X_{13} = 1$, if a shopper was satisfied or very satisfied with the whole shopping experience; $X_{13} = 0$, if otherwise	
Gender	Z_1	$Z_1 = 1$, if a shopper was male; $Z_1 = 0$, if a shopper was female	Control variable (non-situational factor)
Age	Z_2	$Z_2 = 1$, if a shopper was under 35; $Z_2 = 0$, otherwise	
Education	Z_3	$Z_3 = 1$, if a shopper's education level was above high school; $Z_3 = 0$, otherwise	
Income	Z_4	$Z_4 = 1, 2, 3, 4, 5, 6, 7, 8$, if a shopper's income < US$10,000, RMB500, HK$10,000;=US$10,000-14,999, RMB500-999, HK$10,000-14,999;=US$15,000-24,999, RMB1,000-1,999, HK$15,000-24,999;=US$25,000-34,999, RMB2,000-3,999, HK$25,000-34,999;=US$35,000-49,999, RMB4,000-5,999, HK$35,000-49,999;=US$50,000-74,999, RMB6,000-9,999, HK$50,000-74,999;=US$75,000-99,999, RMB10,000 or more, HK$75,000-99,999;=US$100,000 or more, HK$100,000 or more	
USA	Z_5	$Z_5 = 1$, if the shopper was in the US sample; $Z_5 = 0$, otherwise	
Mainland China	Z_6	$Z_6 = 1$, if the shopper was in the CN sample; $Z_6 = 0$, otherwise	

Table III.

where $\text{logit}(Y) = \ln\{P(Y = 1)/[1 - P(Y = 1)]\}$ meant the probability of making a purchase, X_i was the ith situational factor considered, Z_k was the kth non-situational factor controlled, β_0 was a constant, β_i was the coefficient of the situational factor i (our special concerns) and α_k was the coefficient of non-situational factor k.

Results

We will present the results in two parts:

(1) the results of the analysis of the combined sample with two dummy variables (USA and China), and

(2) the results of the analysis of the three individual samples.

Figure 1 illustrates the structure of the results and the purposes of each part or each subpart in the results.

As illustrated, *H1* can be tested by the combined sample (the first part) and each of the individual samples (the second part) with the three separate models, namely models for "Total buying", "Buying food" and "Buying others", because internal validity may appear at different levels in different countries or regions for buying different products. *H2* could only be tested by comparing the results of individual samples (the second

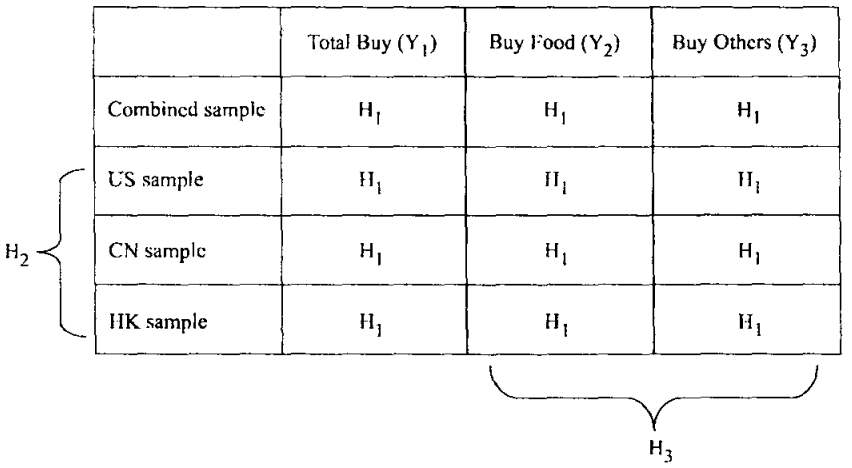

Figure 1.
The structure of the results and hypothesis testing

part). *H3* could be tested by comparing the patterns of buying food and buying non-food products with the information revealed in both the first and the second part.

The results of the analysis of the combined sample

There were three initial models and three final models in this first part. The three initial models developed were three logistic regressions that fit with all of the factors considered in this study. They showed the impact of each situational factor when the other factors (including other situational factors) were controlled (see Table IV). The final models, determined by using the "backward-conditional" function of the logistic regression program in SPSS applied to the initial models, contain factors that were significant at $p < 0.1$ after the other factors were dropped. The following analyses focused on the final models.

The Chi-squares for the three final models were 259.503, 128.555 and 270.610. These indicated that, in the models, the independent variables as a whole had a significant impact on the dependent variables ($p < 0.05$; Menard, 1995). Among the models, the first and third (final models Y_1 and Y_3) were superior to the second (final model Y_2) in terms of variance explanation: $R^2_{CS} = 0.187$ and $R^2_N = 0.278$ for final model Y_1 and $R^2_{CS} = 0.194$ and $R^2_N = 0.260$ for final model Y_3 compared with $R^2_{CS} = 0.098$ and $R^2_N = 0.130$ for final model Y_2.

To determine the significance of the factors, we first looked at the regression coefficients and their significant levels in final model Y_1. Six out of 13 situational factors, (Buying intention, Assortment, Staying time, Frequency, Number of stores visited and Satisfaction) were significant at $p < 0.05$ when other major factors were present (supporting *H1*), and their impacts were all positive except for that of X_{12}, "Number of stores visited".

We then compared the significant factors in final model Y_2 with those in final model Y_3. Different patterns appeared between the decisions to buy food and the decisions to buy non-food products (supporting *H3*). Out of the 13 situational factors, Favoured stores, Companion, Staying time and Frequency, were found to be significant in buying food (supporting *H1*), while Buying intention, Assortment, Tour, Companion, Staying

		Initial models			Final models		
		Total buy (Y_1)	Buy food (Y_2)	Buy others (Y_3)	Total buy (Y_1)	Buy food (Y_2)	Buy others (Y_3)
Buying intention	X_1	0.576*	−0.039	0.617*	0.580*		0.625*
Assortment	X_2	0.448**	0.152	0.338**	0.437**		0.367**
Favourite stores	X_3	0.185	−0.421**	0.209		−0.513*	
Atmosphere	X_4	−0.272	0.127	0.076			
Convenience	X_5	0.144	0.249***	−0.108			
Tour	X_6	−0.308	0.094	−1.114**			−1.093**
Quality/price	X_7	−0.362	−0.010	0.330			
Companion	X_8	−0.172	0.431*	−0.400*		0.468*	−0.394*
Travel time	X_9	0.001	0.002	0.001			
Staying time	X_{10}	0.014*	0.010*	0.006*	0.013*	0.010*	0.006*
Frequency	X_{11}	0.110**	0.087**	−0.031	0.113**	0.090**	
Number of stores visited	X_{12}	−0.022**	−0.011***	−0.012***	−0.022**		
Satisfaction	X_{13}	0.530*	0.127	0.577*	0.510*		0.560*
Gender	Z_1	0.109	0.172	−0.042			
Age	Z_2	−0.360**	−0.195	−0.063	−0.379**		
Education	Z_3	0.194	0.336**	−0.026		0.384*	
Income	Z_4	0.179*	0.026	0.135*	0.191*		0.127*
USA	Z_5	1.204*	−0.020	1.079*	1.077*		1.139*
China	Z_6	0.932*	0.079	0.500***	0.570*		0.550*
Constant		−2.306*	−1.700*	−2.459*	−2.096*	−1.393*	−2.586*
χ^2		266.692*	141.568*	275.128*	259.503*	128.555*	270.610*
R^2_{CS}		0.192	0.107	0.197	0.187	0.098	0.194
R^2_N		0.285	0.143	0.264	0.278	0.130	0.260
Correct class		80.0%	65.0%	70.3%	79.2%	64.0%	70.5%

Table IV.
The results of logistic regression: combined sample

Notes: * $p < 0.01$, ** $p < 0.05$, *** $p < 0.1$
R^2_{CS} is Cox and Snell R^2, and R^2_N is Nagelkerke R^2 (Norusis, 1997)

time and Satisfaction, were found to be significant in buying other products (supporting *H1*). Only Companion (in the opposite direction) and Staying time were shared.

The shoppers' different patterns in buying products were further confirmed by examining the impacts of the controlled variables (supporting *H3*). Education was only significant in buying food, while Income was only significant in buying other products. In addition, the dummy USA variable was positively significant in buying other products, suggesting that shoppers in the USA sample (US) buy more non-food products than the shoppers in the combined China (CN) and Hong Kong (HK) sample. The dummy China variable, on the other hand, was significant in buying both food and non-food products but with opposite signs. This suggested that the shoppers in the CN sample bought less food but more non-food products than their counterparts in the combined US and HK sample.

The results of the analysis of the individual samples

The results of the analysis of the individual samples reveal more information about the impacts of the situational factors (see Table V). There are three sections: the final model of the US sample, the final model of the CN sample and the final model of the HK sample.

Table V.
The results of logistic regression: three independent samples

		Final models of US sample			Final models of CN sample			Final models of HK sample			
		Total buy (Y_1)	Buy food (Y_2)	Buy others (Y_3)	Total buy (Y_1)	Buy food (Y_2)	Buy others (Y_3)	Total buy (Y_1)	Buy food (Y_2)	Buy others (Y_3)	Factor shared by or significant in
Buying intention	X_1	0.441*	−0.249**	0.497**	0.597**		0.730**	0.718**		0.744**	ALL
Assortment	X_2	2.017***		0.683*				0.651***		0.945**	US, HK
Favourite stores	X_3		−0.712**							0.763*	US, HK[a]
Atmosphere	X_4	−0.815*					0.509***				US, CN[a]
Convenience	X_5								0.463*		HK
Tour	X_6			−1.835***			−0.811***				US, CN
Quality/price	X_7										
Companion	X_8								0.960**	−0.576*	HK[a]
Travel time	X_9										
Staying time	X_{10}	0.023**	0.010**	0.009**	0.011**	0.010**		0.011**	0.010**	0.005**	ALL
Frequency	X_{11}			−0.168*	0.229**	0.185*				0.205**	ALL[a]
Number of stores visited	X_{12}	−0.146**			−0.019*	−0.019*				−0.027***	ALL
Satisfaction	X_{13}	1.673**		1.386**				0.768**	0.674**		US, HK
Gender	Z_1				0.490*		0.512*				CN
Age	Z_2	−0.995*				−0.674*					US, CN
Education	Z_3		0.519***						0.761*		US, HK
Income	Z_4							0.218**		0.202**	HK
Constant		−0.354	−0.462	−1.538**	−1.020*	−0.716*	−1.924**	−2.192**	−2.292**	−3.496**	
χ^2		67.986**	49.406**	77.105**	61.416**	33.473**	70.60**	91.975**	80.644**	91.169**	
R^2_{CS}		0.161	0.120	0.181	0.143	0.080	0.171	0.179	0.159	0.177	
R^2_N		0.336	0.163	0.246	0.200	0.107	0.234	0.252	0.212	0.244	
Correct class		90.4%	69.5%	71.8%	73.4%	59.6%	70.7%	73.7%	67.2%	72.4%	

Notes: [a] stands for opposite signs
* $p < 0.05$; ** $p < 0.01$; *** $p < 0.1$
R^2_{CS} is Cox and Snell R^2, and R^2_N is Nagelkerke R^2 (Norusis, 1997)

First, in every model of each section, there were at least three situational factors that were significant with $p < 0.1$, one factor with $p < 0.05$, all when other factors were present. Therefore, in every situation, the results showed supporting evidence for *H1*.

Of the 13 situational factors considered, four were shared to some degree by the three samples, including Buying intention, Staying time, Frequency and Number of stores visited. Their impacts were basically consistent in nature across the samples (supporting *H2*) except for Frequency. Buying intention tends to increase shoppers buying of non-food products, Staying time tends to increase shoppers buying of both food and non-food products, and Number of stores visited tends to decrease shoppers buying. Frequency, on the other hand, tends to increase shoppers buying food products in the CN sample, to increase shoppers buying non-food products in the HK sample, and to decrease shoppers buying non-food products in the US sample.

Five situational factors (Assortment, Favourite stores, Atmosphere, Tour and Satisfaction) were shared by two samples. Assortment and Satisfaction were positively associated with shoppers purchasing either food or non-food products in both the US sample and the HK sample (supporting *H2* across two samples). Tour was negatively associated with shoppers purchasing non-food products in both the US sample and the CN sample (marginally, $p < 0.10$) (supporting *H2* across two samples). Favourite stores was negatively related to shoppers purchasing food in the USA sample and positively related to shoppers purchasing non-food products in the HK sample. Atmosphere was negatively associated with shoppers purchasing non-food products in the US sample and positively associated with shoppers purchasing non-food products in the CN sample.

The remaining four situational factors were either unshared or insignificant. Convenience only had a positive impact on shoppers purchasing food in the HK sample, and Companion had a negative impact on shoppers purchasing food but a positive impact on shoppers purchasing non-food products in the HK sample. Quality/price and travel time were not significant in any of the three samples.

Finally, the results of all three samples demonstrate different patterns in buying food and non-food products (supporting *H3*). For instance, in both the US and the HK samples, only two factors were shared (Buying intention and Staying time in the US sample and Companion and Staying time in the HK sample); however, one had the opposite impact (Buying intention in the US sample and Companion in the HK sample). In the CH sample, no single factor was shared by two types of buying.

Hypotheses testing

H1 expected that some situational factors would have significant impact on shoppers' buying decisions in shopping malls when other major situational and non-situational factors were present. We observed that, in the combined sample, six out of 13 situational factors were significant at $p < 0.05$, all when other major factors were present, and there were at least three situational factors that were significant with $p < 0.1$, and one factor with $p < 0.05$, all in presence of other factors in every model of each individual sample. *H1* was, therefore, supported.

H2 predicted that the significant impact of some situational factors on shoppers' buying decisions would be consistent across countries or regions. We observed that, by comparing the results of analysis on individual samples, four of the 13 situational factors considered were shared by the three samples, and the impacts of three factors

among them were basically consistent in nature across the samples. This provided supportive evidence for *H2*.

We also found five situational factors, apart from the four factors above, which were shared by two samples (supporting *H2* across two samples). The impact of three factors among them was consistent in nature across two samples, providing supportive evidence for *H2* across two samples.

H3 anticipated that the situational factors influencing shoppers to buy food products differ from the situational factors influencing them to buy non-food products in shopping malls. We observed different patterns of significant situational factors between the decisions to buy food and the decisions to buy non-food products both in the combined sample and in each of the individual samples. *H3* was, therefore, supported.

Discussion

To allow us to discuss the information revealed by the research in more depth, we summarized the results in Tables IV and V into Table VI based on Belk's (1975) situational framework. Next, we will separately discuss the major findings on each of the significant situational factors and their external validities in the order of task definition, social surroundings, temporal perspective and antecedent states.

Task definition factors

Among the seven factors of task definition considered, four significantly affected shoppers in buying all products in the combined sample. Specifically, Buying Intention and Assortment had a positive impact on shoppers buying non-food products. Favourite stores had a mixed impact on shoppers buying food and Tour had a marginally negative impact on shoppers buying non-food products.

Buying intention. Buying intention had a positive impact on buying non-food products and was externally valid in this research. This is understandable; Buying intention is measured by shopping motivation and planning to buy; thus, the higher a shopper's buying intention, the more likely he or she will buy no matter in what country or region they are in. Therefore, we should not wonder why previous studies reported similar findings for the impact of buying intention (Babin *et al.*, 1994; Batra and Ahtola, 1991; Baumann *et al.*, 1981; Engel *et al.*, 1995; Holbrook and Hirschman, 1982), because its influence is externally valid. However, its external validity was limited to buying non-food products in the retail setting of shopping malls. The present study found that, in malls, the impact of buying intention on shoppers purchasing food or beverages is either insignificant (CN and HK samples) or negative (US sample).

We believe the difference has an explanation. Most buying behaviours fall under one of three categories: impulse buying, habitual buying or consumption problem solving buying (Bagozzi *et al.*, 1998). Impulse buying generally occurs because an external (e.g. display in a store) or internal (e.g. hungry) stimulus has caught the shopper's attention, and the product is easy to acquire. An impulse buying decision is made with very little thought. Under habitual buying, prior learning is crucial. "Although needs usually initiate the purchase in such instances, cognitive processes predominate and include the execution of action sequences and the evaluation of limited decision criteria" (Bagozzi *et al.*, 1998, p. 168). Extensive searching, processing information and integration with one's needs are involved in consumption problem solving buying.

Table VI.
A summary of the findings

Category and factor		Combined sample	Individual samples	Findings
Task definition				
Buying intention	X_1	Total buy +*	Total buy +* (ALL)	A positive impact on shoppers buying non-food products; external validity across three samples
		Buy food	Buy food −* (US)	
		Buy others +*	Buy others +* (ALL)	
Assortment	X_2	Total buy +**	Total buy +*** (US, HK)	A positive impact on shoppers buying non-food products; external validity across two samples
		Buy food	Buy food	
		Buy others +**	Buy others +** (US, HK)	
Favourite stores	X_3	Total buy	Total buy	Mixed impact on shoppers buying food
		Buy food − *	Buy food −* (US) +* (HK)	
		Buy others	Buy others	
Atmosphere	X_4	Total buy	Total buy −** (US)	
		Buy food	Buy food	
		Buy others	Buy others +*** (HK)	
Convenience	X_5	Total buy	Total buy	
		Buy food	Buy food +** (HK)	
		Buy others	Buy others	
Tour	X_6	Total buy	Total buy	A marginally negative impact on shoppers buying non-food products; external validity across two samples
		Buy food	Buy food	
		Buy others −**	Buy others −*** (US, CN)	
Quality/price	X_7	Total buy	Total buy	
		Buy food	Buy food	
		Buy others	Buy others	
Social surroundings				
Companion	X_8	Total buy	Total buy	A positive impact on shoppers purchasing food and a negative impact on shoppers purchasing non-food products in some context
		Buy food +*	Buy food +* (HK)	
		Buy others −*	Buy others −* (HK)	
Temporal perspective				
Travel time	X_9	Total buy	Total buy	
		Buy food	Buy food	
		Buy others	Buy others	

(*continued*)

Table VI.

Category and factor		Combined sample	Individual samples	Findings
Staying time	X_{10}	Total buy +*	Total buy +* (ALL)	A positive impact on shoppers buying both food and non-food products; external validity across three samples
		Buy food +*	Buy food +* (ALL)	
		Buy others +*	Buy others +* (US, HK)	
Frequency	X_{11}	Total buy +**	Total buy +* (CN)	A positive impact on shoppers buying food in some context and a mixed impact on buying non-food products
		Buy food +**	Buy food +** (CN)	
		Buy others	Buy others −** (US) +* (HK)	
Antecedent states				
Number of stores visited	X_{12}	Total buy −**	Total buy −** (US, CN)	A negative impact on shoppers buying food or non-food products in some context; some degree of the external validity
		Buy food −***	Buy food −** (CN)	
		Buy others −***	Buy others −** (HK)	
Satisfaction	X_{13}	Total buy +*	Total buy +* (US, HK)	A positive impact on shoppers buying food or non-food products in some context; some degree of the external validity
		Buy food	Buy food +* (HK)	
		Buy others +*	Buy others +* (US)	

Notes: * $p < 0.01$, ** $p < 0.05$, *** $p < 0.1$
"+" stands for positive impact, and " − " stands for negative impact

Buying food in malls is more like impulse buying, especially when people can easily get food from nearby markets or supermarkets, so it is often driven by a shopper's external or internal impulses rather than by any prior buying intention. This is why "Buying intention" did not have significant impact on shoppers buying food or beverages, as the CN and HK samples show. Furthermore, "Buying intention" may negatively affect shoppers buying food in malls when these shoppers are focused on the products that they intend to buy, as the US sample demonstrates.

On the other hand, buying other products in malls, especially those with a high value, is more analogous to "problem solving buying". Shoppers need to put greater effort into searching for information and processing it in order to make a purchase, so the better prepared and the more strongly motivated shoppers are, the more likely they are to buy during a shopping trip.

Assortment. The positive impact of Assortment on buying non-food products across the US and HK samples offered evidence of external validity of the factor across two samples. It suggests that the wide range of assortment in malls primarily refers to the variety of non-food products and having a wider variety of products in a mall means shoppers having more non-food product choices. This, in turn, made those who were looking for a wide assortment more likely to buy non-food products.

In addition, the insignificant impact of Assortment on buying non-food products in the CN sample might be due to two reasons. First, the mall in Xi'an was smaller than those in the USA and Hong Kong (as described earlier), and the assortment offered by the mall might well be smaller. This resulted in fewer local people in Xi'an visiting the mall because of its assortment. Second, the prices were apparently higher in the mall than in nearby department stores (there were two large department stores close to the mall). Given the competitive environment and the relatively low income of the local people, shoppers did not buy something simply because they could find it in the mall.

These arguments lead us to infer that the external validity of Assortment can only be extended to those retail settings where a wider range of assortment of non-food products is offered, and the prices of the products are acceptable based on local people's income and not magnificently higher than those of the nearby competitors.

Favourite stores. The impact that "Favourite stores" as a reason for shoppers visiting a mall had on "Buying food" was mixed. The effect was negative for the US sample, positive for the HK sample and insignificant for the CN sample. Why this is the case is not clear. More specific information is needed to explain what was observed here.

Tour. The marginal negative impact of Tour on buying non-food products was valid externally across the US and CN samples. The reasons for the impact in the two samples are that, on one hand, the shoppers with a higher tour intention treated malls more as an attraction to visit than a place to purchase; and on the other hand, buying food in malls was more like impulse buying, driven by external or internal impulses (as argued above). This made shoppers visiting the malls as tour destinations less likely to buy non-food products and showed no difference in buying food products.

The insignificant impact of "Tour" in the HK sample may be explained by the special features of the Hong Kong retail environment. Unlike Xi'an and Miami-Dade, Hong Kong is a big city but a small region, sized about 1,100 km^2 (see Table I). There were many covered shopping malls, however it was easy for local people to visit any of them. Therefore, few local people really treat a mall as a tour destination.

All of these considerations make us infer that the external validity of Tour on buying non-food products can be extended to retail settings which some people treat as tour destinations to visit rather than places to buy.

Social surroundings factors

The only social surroundings factor considered in the research was "Companion". We found that being accompanied by others only had a significant impact on shoppers in Hong Kong. This factor affected Hong Kong people with a greater likelihood of buying food and a lesser likelihood of buying non-food products. The results, in general, contradict the observation that mall shoppers tend to buy more products and spend more money when accompanied by other people (Nicholls *et al.*, 1994).

The null findings in the US and CN samples lead us to infer that the presence of companions may affect buying decisions either positively or negatively. For example, a companion might help a shopper make a decision to buy, and he or she might also help the shopper make a decision not to buy. That is, being accompanied by others might encourage a person to buy, or it might inhibit an individual from buying, depending on the companion's role in the particular shopping expedition. For example, the presence of a companion may turn the emphasis of the mall visit from a purchase to a social orientation, or vice versa. In the end, different impacts may offset each other and leave social companions showing no significant effects on buying decisions. As for the positive impact of "Companion" on "Buying food" in the HK sample, we believe that this can be explained by Hong Kong people's eating habits. Hong Kong people like to eat with friends outside their homes, including mall restaurants. They might decide to eat with others first, and then spend the money eating in a mall.

Temporal perspective factors

Of the three temporal perspective factors, "Staying time" had a positive impact on shoppers buying both food and non-food products, and Frequency only had a positive impact on shoppers buying food in the CN sample. Moreover, the impact of Frequency on shoppers buying non-food products was negative in the US sample and positive in the HK sample although it was insignificant in the combined sample.

Staying time. The positive impact of "Staying time" on shoppers' buying decisions was externally valid in the study. This can be explained as follows: the more time a shopper spends in a mall, the more likely he or she will make unplanned or impulse purchases of products regardless of which country/region they are in. This is why previous studies have reported similar results for their different settings (Iyer, 1989; Park *et al.*, 1989). However, the relationship between staying time and planning to buy may be reversed – the more a shopper plans to buy, the more likely it is that he or she will spend a longer time in the mall. We eliminated this possibility by controlling the factor "Buying intention" when considering the impact of "Staying time".

Frequency. The impact of Frequency was complicated. Its impact on shoppers buying food in the CN sample was positive, which may be explained by the nature of the food products, the distance the shopper's home was from the mall and the condition of transportation in Xi'an. Food is something people need every day; convenience is a consideration, as are hygiene and healthy foods. Accordingly, people will not travel a long distance to buy food, if they can buy equally hygienic and healthy food near their homes. In the CN sample, shoppers who often visited the mall were those who lived

nearby. It was, therefore, equally or more convenient for them to buy food or beverages in the mall. In contrast, the infrequent visitors were those who lived a longer distance away. Given the transportation conditions in Xi'an, i.e. few people owned cars and public transportation was inefficient, it was too costly and inconvenient for long distance shoppers to buy food in the mall. Thus, frequent shoppers were more likely to buy food than infrequent shoppers in the mall.

On the other hand, Frequency's impact on shoppers buying non-food products was negative in the US sample but positive in the HK sample. Obviously, the opposite direction of the impact in these two samples neutralized the factor in the combined sample. Its impact in the US sample might be explained by the negative impact of Frequency on unplanned buying (Iyer, 1989; Park *et al.*, 1989), while the impact of Frequency in the Hong Kong might be explained, again, by the special environment of shopping malls in Hong Kong. There were many malls in Hong Kong, and there was little difference in terms of assortment among them. It was, therefore, not necessary for people to buy anything in a distant mall. Even if a shopper came across something special in a remote mall, he or she might buy it later, more easily, in a mall near his or her home. Convenience played the most important role in Hong Kong shoppers' buying in malls – the more convenient a mall was for a shopper, the more frequently he or she would visit the mall, and the more likely he or she would buy.

The complicated impact of Frequency suggests that although Frequency may be a significant situational factor influencing shoppers' buying decisions in a retail setting like a shopping mall, the nature of its impact is situation-specific.

Antecedent states factors

Two factors of antecedent states were considered. Generally, the "Number of stores visited" had a negative impact, while "Satisfaction" had a positive impact, on shoppers' purchases in malls. However, the two factors were not significant in all individual samples.

Number of stores visited. The impact of "Number of stores visited" was negatively significant on food purchased in the CN sample, on non-food purchased in the HK sample and on total buying for both the US and CN samples. When the impact of "Staying time" was included, the findings suggest that, given a particular length of staying time, the more stores or boutiques that a shopper visited in a mall, the less likely he or she would be to make a purchase. This may reflect a consistent behaviour pattern of "window shoppers" – shoppers who like looking at things more than buying them. Their focus on browsing may make them visit more stores and make them less likely to buy in malls.

However, the external validity of the influence of this factor was questionable owing to the differences of the impact that existed among individual samples and between buying food and non-food products. It seems that, in general, the number of stores visited within a given period of staying time (i.e. the impact of staying time was controlled) would have a negative impact on a shopper's decision to buy, but the affect may appear in buying different products in different situations.

Satisfaction. The impact of Satisfaction was positively significant in the US sample in buying non-food products and in the HK sample in buying food products. The findings are consistent with the previous studies (Curren and Harich, 1994; Knowles *et al.*, 1993), i.e. the more satisfied a shopper is in a mall (with either the general environment or the services), the more likely he or she will buy. However, we cannot

eliminate the alternative possibility that the more a shopper buys what he or she wants, the more likely he or she will be satisfied.

Why Satisfaction was not significant in the CN sample is not clear. We can only assume that the shoppers in Xi'an did not buy simply because of pleasant shopping experiences. They might have paid more intention to bargain prices, which made them less responsive to the feelings of satisfaction when buying in the mall.

The results suggest some degree of the external validity of the factor. It seems that the positive impact of satisfaction on a shopper's decision to buy would appear unless the shopper feels the prices are too high relative to his or her income.

An additional note on the issue of differences in culture and economic development

The data were collected from countries/regions different in terms of culture or subculture and economic development. Is it, therefore, possible for us to draw any inferences about the impact of culture or economic development on the patterns of situational factor influences?

We cannot infer any cultural impact on the patterns of situational factor influences because many variables such as the size, location and competitive environment of shopping malls, and population, personal income and transportation conditions of cities were uncontrolled. There were, indeed, different patterns of situational factor influences in individual samples, but we cannot separate the cultural impact from the impacts of other factors. It is our task to explore the culture effect on the patterns of situational factor influences in future investigations on this topic.

Nevertheless, we may draw an inference about the impact of economic development. We observed that more situational factors in Miami-Dade and Hong Kong had effects on shoppers' decisions to buy in shopping malls than they did in Xi'an. Counting the numbers of the significant situational factors in Table VI, we found that there were 16 counts total (the codes HK and ALL) for the HK sample, 15 counts (the codes US and ALL) for the US sample, and nine counts (the codes CN and ALL) for the CN sample. The counts for the CN sample were apparently lower than those for the HK and the US samples. Given the differences in economic development among the three samples (see Table I), this seems to suggest that the more developed an economy, the more situational factors would have significant effects on shoppers' decisions to buy in shopping malls.

The inference is supported by theories and research findings. Economic development is positively related to hedonic consumption values (Tse *et al.*, 1989). The famous Engel's law suggests when income rises, the proportion of income spent on food falls. The growth of personal wealth enables people to have more spare money and leisure time to spend on recreational activities (Trafton, 1985). Shopping is viewed as a common leisure activity in many economically developed cities (Tse, 1996). Hedonic shoppers may enter a mall not because of utilitarian (i.e. making planned purchases) reasons, but as a means to look for recreation, fun and social pleasure (Bellenger *et al.*, 1977). Hedonic shoppers also make purchases, but they are more influenced by situational factors such as physical and social surroundings rather than pre-recognized buying needs (Rushkoff, 1999). Our findings are consistent with this notion: shoppers in more economically developed countries/regions (America and Hong Kong) are more influenced by situational factors than their counterparts who are living in a less economically developed city (Xi'an).

Conclusions and implications

In this study, by testing hypotheses and through discussion of the analytical results, we examined the possible impacts, based on Belk's (1975) framework , of 13 situational factors on shoppers buying decisions in malls using multinational data. The factors included those of task definition, social surroundings, temporal perspective and antecedent states.

First, we found that, as expected, the impacts of some situational factors indeed demonstrated internal validity, i.e. the factors had significant influence on shoppers' buying decisions in shopping malls when other major factors were present, both in the combined sample and in each of the individual samples. Further, the impact of some situational factors demonstrated external validity, i.e. a significant bearing of the factors on shoppers' buying decisions in a shopping mall was consistent in nature across the samples. Finally, the patterns of the situational factor influences on shoppers to buy food products and non-food products in shopping malls were indeed different both in the combined sample and in each of individual samples.

Second, among the seven factors of task definition considered, Buying Intention exhibited a positive impact on shoppers' buying non-food products, and its influence was externally valid, which means that we should observe the same impact of Buying intention on shoppers' buying non-food products, no matter in which country or region; Assortment had a positive impact on buying non-food products, too, but its external validity can only be extended to the retail settings where a wider assortment of non-food products is offered, and the prices are not too high relative to the local people's income and to those of the nearby competitors; Favourite Stores had a mixed impact on shoppers buying food; Tour had a marginally negative bearing on shoppers buying non-food products, and its external validity can be extended to the retail settings treated as tour destinations by some people.

Third, being accompanied by others (Companion), the only factor of social surroundings considered in the research, was found to be significant in just the HK sample. It made Hong Kong shoppers more likely to buy food and less likely to buy non-food products.

Fourth, of the three factors relating to temporal perspective, Staying time had a positive impact on shoppers buying both food and non-food products, and its impact was externally valid; that is, the more time a shopper spends in a mall, the more likely he or she will be to make purchases of all types of products, regardless which country or region they are in; and Frequency had a complicated impact on shoppers buying food or non-food products in the three individual samples, suggesting that the nature of its impact on shoppers' buying decisions in retail settings like shopping malls is situation-specific.

Finally, of the two factors in the category of antecedent states, "Number of stores" visited had, in general, a negative impact on shoppers' purchases in malls, but its impact may appear in buying different products in different situations; satisfaction had a positive relationship with shoppers' purchases in malls, the external validity of its impact can be extended to the retail settings where shoppers do not feel that prices are too high relative to their incomes.

In addition to these major findings, we also observed the possible affects of economic development on the patterns of situational factor influences: there were more situational factors having significant impacts on shoppers' purchases in more developed economies

than in less developed economies. This may reflect the reality that shoppers in more economically developed countries/cities are more influenced by situational factors than their counterparts who are living in a less economically developed city.

This study has made a number of distinct research contributions. First, it simultaneously considered the impacts of 13 situational factors on mall shoppers purchase decisions. This approach increases the internal validity of what was observed because, when we examined the impact of a situational factor, the influence of other major factors (including many situational factors) were controlled by explicitly incorporating them into the research design and measuring their impact (Reynolds *et al.*, 2003). We have found no other study that has approached the topic in this way.

Second, the study examined the situational factors in the setting of shopping malls with multinational data. This allowed us to check the external validity of the observed impacts of the factors across countries or regions. It provided not only additional evidence but also multinational evidence for the external validity of some situational factors such as "Buying intention" and "Staying time". We have found no other study investigating the situational factors in this manner.

Third, the study provided evidence that the situational factors influencing shoppers' purchases of food or beverages differ from those influencing shoppers to buy non-food products. This implies that we should examine the behaviour of buying food separately from that of buying other products when investigating consumer behaviour in retail settings such as shopping malls, and we should be very careful to infer consumer behaviour on buying food from the results of research on consumer behaviour of buying non-food products.

Fourth, the study speculated a possible consequence of economic development on the patterns of situational factor influences. We believe that the relationship between economic development and the pattern of situational factor influences deserves further exploring for the purpose of both theory development and practice. In terms of theory development, this type of research helps us better understand how shoppers' behaviour evolves with the development of an economy. In terms of practice, it will help marketers plan better marketing strategies in a retail setting, depending on the developmental level of the economy.

Practitioners, particularly those from European countries, can benefit from this study in several ways. In general, marketers can take situational factors into consideration when designing promotional programs targeted to mall shoppers. Marketers' promotional efforts may be geared to creating or altering particular purchase or consumption situations, e.g. to increasing shoppers' buying intentions. The developer of a shopping mall can, on the other hand, increase shoppers staying time in its mall by providing more entertainment facilities. Retailers in malls can attract more shoppers with clear buying plans by developing a particular image, attractive to particular consumer segments.

In the context of shopping malls, all practitioners should pay more attention to shoppers' buying intentions and the time they spend in the mall. According to our findings, raising shoppers' buying intentions and lengthening shoppers' time in the mall can significantly increase the likelihood of them purchasing. However, food retailers should consider situational factors differently from retailers of other products. Buying Intent may not be as an important factor in the case of buying food as in

buying other products. Instead, in-store displays or promotions are more important given the tendency to make food purchases based on impulse.

The information disclosed here may help the practitioners from European countries, in particular, to better understand Chinese shoppers' behaviour in malls and, as a consequence, to undertake more efficient marketing strategies in malls in China. Many European companies, including retailers, such as Carrefour, Metro, B&Q, OBI, and a large number of specialty stores, have now opened their businesses in, or export their products to, the Chinese market. Given its potential, more companies will, indubitably, conduct their business in or with that market. Many of them are selling their products through the channel of shopping malls, and some retailers are even operating in such malls. However, little has been done concerning Chinese shoppers' behaviour in their malls. Our study shows that, compared with Hong Kong and US samples:

- mainland Chinese were affected by fewer situational factors when shopping in a mall (see Tables V and VI);
- shoppers with a higher intention to buy and looking for a better retail atmosphere were more likely to buy non-food products than others in a mall (see Table V); and
- more frequent visitors and shoppers staying a longer time were more likely to buy food than others in a mall (see Table V).

This information may help the European companies to reduce uncertainty when making marketing or retailing strategies targeted to mall shoppers.

A limitation of the current study lies in the selection of the malls where the interviews were conducted. Some of our findings may be mall specific rather than representative of the general population of shoppers in the USA, the Mainland China and Hong Kong. Thus, caution should be taken in interpreting and utilizing our results.

Note

1. Please note that the internal validity and the external validity here refer to the validity of findings, not the validity of measurement. More specifically, internal validity is the extent to which an observed relationship actually, and only, reflects the relationship between the variables of interest; and external validity is the degree to which one can generalize an observed relationship between the variables of interest beyond a particular study (Reynolds *et al.*, 2003).

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