THE RELATIONSHIP BETWEEN THE PERCEPTION OF RISK AND THE DECISION MAKING PROCESS OF TRAVEL OF FRENCH TOURISTS: THE CASE OF EGYPT

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This exploratory study was conducted in order to investigate the impact of sociodemographic variables "age, sex, familial situation, qualification, profession, income per capita", international tourism experience, and tourism experience in Egypt on the decision making process of travel under the effect of the risk factor "terrorist attacks of last April, 2006, in Sinai, Egypt». For this purpose, a two decision making process probabilities have been estimated by the ordinal logit model.

Keywords: Risk, tourism experience, Decision making process of travel Socio-

demographic variables, tourist behaviour.

JEL Classification: L83, M1, O1

INTRODUCTION

When tourists perceive travel to be less pleasurable due to actual or perceived risks, they exercise their freedom to select other destinations (Green *et al.*, 2003).

As with risk perceptions, when safety concerns are introduced into travel decisions, they are likely to become the overriding factors, altering the context of conventional decision-making models and causing travellers to amend travel plans (George, 2003).

(Sonmez *et al.*, 1999; Floyd and Gray, 2004) note that travel statistics from around the world clearly suggest that tourism demand decreases as the perception of risks associated with a destination increases (Floyd *et al.*, 2003).

It is expected that risk-averse consumers will purchase more prepackaged trips and spend fewer nights abroad visiting fewer destinations.

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Tversky and Shafir (1992) showed that buyers who have hard decisions to make would delay making those decisions (Money and Crotts, 2003).

Roehl and Fesenmaier (1992) determined that risk perception, although it is considered as a situation specific, has an impact on travel behaviour. Indeed, the risks that potential travellers associate with a destination can contribute to forming lasting images of that destination. Changing such as image will require long and costly marketing efforts.

Risk perceptions and feelings of safety during travel appear to have stronger influence on avoidance of regions than likelihood of travel to them. If a tourist feels unsafe and threatened during his or her stay, he or she is not likely to return to that destination (Dimanche and Lepetic, 1999).

As a form of protective behaviour, travellers can alter their destination choices; modify their travel behaviour; or if they decide to continue with their travel plans, acquire information on terrorism, political turmoil, heavy crime, and health risks. Those who decide to travel despite risks are advised by various sources "i.e., travel magazines, government advisories, internet" to avoid displays of wealth, to keep a low profile, to vary daily routines during lengthy business trips, and to fly economy class, since hijackers are known to prefer first class to establish their temporary headquarters (Sonmez *et al.*, 1999).

Sonmez (1998) suggests that when faced with the threat of terrorism, tourists tend to engage in a number of behaviours including substituting risky destinations with safer alternatives and generalizing potential risks to other countries in the region affected. She also notes that tourists exhibit cultural variations in their reactions, with US tourists most likely to perceive higher levels of risk in foreign destinations (Floyd and *al.*, 2003).

Tourist decisions to stay home or choose safer destinations are translated into significant losses for the tourism industry of the country suffering from terrorism (Sonmez *et al.*, 1999).

Individuals planning their holidays are less likely to choose a destination with a higher threat of terrorist attacks. Host countries providing tourism services, which can be easily substituted are therefore, negatively affected by terrorist attacks to a substantial extent (Frey *et al.*, 2004).

It is likely that tourists may postpone their visit until the situation appears to have calmed down. But, more likely, activity will be redirected to destinations, which appear to be safer. The extent to which this occurs is likely to vary with the market segment. Thus, for business travellers or

those visiting friends and relatives in a specific place, the ability to relocate is likely to be less than for those who are on vacation and are travelling for pleasure (Wall, 1996).

Sonmez (1998) noted that the reaction to terrorism among tourists is frequently delayed by about three months as people have already made their plans and are willing to change them (Floyd *et al.*, 2003).

The immediate effect of a terrorism event is likely to be cancellation of bookings to the location in which the event took place. Those scheduled to pass through the destination may try to re-route. There is also likely to be a reduction in new bookings. Although it is uncertain how long the effect of a terrorist event is likely to last, the immediate result is likely to be a reduction in the number of visitors. The corollary of this situation is that for those who persist in visiting the area, there may be bargains, cheap flights, reduced accommodation rates and lack of crowding (Wall, 1996).

Terrorist attacks against tourists now represent the Egyptian tourism industry's greatest challenge. The Dahab bombing on April 24 was the fifth attack against tourists or tourism infrastructure in Egypt within the space of 18 months. Since October 2004, over 125 people have been killed and many hundreds injured in the five attacks. The three most serious incidents occurred on the Sinai. Terrorist attacks over the past 18 months represent the resumption of a pattern of terrorism which targeted tourists during the 1990s and culminated in the Luxor massacre of November 1997 in which 58 foreign tourists were shot dead.

The lengthy pause in terrorist attacks against tourists in Egypt between late 1997 and late 2004 marked a period of significant international inbound tourism growth to Egypt. Tourist arrivals more than doubled from 3, 9 million to 8, 1 million during the seven year period. After Luxor, Egypt's government and tourism industry instituted a broad range of major security measures for tour groups, hotels and resorts, the transportation network and major attractions (Beirman, 2006).

Five suicide bomb attacks hit the Sinai Peninsula in April 2006, three rocked the Southern Sinai resort of Dahab on April 24, 2006 and two occurred at Al-Gurah in North Sinai on April 26.

The Dahab bombing killed 20 people, including six foreigners, and injured some 90 others, among them 27 foreigners, while the Al-Gurah bombing killed no one but the two bombers themselves (Xinhua News Agency, 2006).

The latest bombings were followed by Twin suicide attacks targeting members of the multinational force and observers "MFO" peacekeeping mission near the "MFO" base in the town of Al-Gura, approximately 15

miles west of Gaza. The "MFO" was established following the 1979 Camp David Accords. The first attacker ran in front of a passing vehicle carrying Egyptian police and MFO officers. The second attacker rode a bicycle and detonated a bomb he was carrying after Egyptian police rushed to the scene following the initial attack. In both instances, only the bombers were killed. Significantly, two MFO officers were after the deadly attacks in Sharm El-Sheikh in August 2005 (Zambelis, 2006).

The impact of the bombings on tourism in the town Dahab is likely to be devastating, at least in the short term. Mohamed Amin, a receptionist at the beachfront Ali Baba Hotel, who was sitting at the front desk when the force of an explosion rocked him from his chair, says that "with the exception of one room booked by journalists here to cover the explosions, all the other reservations have been cancelled though this is our high season and we were booked till mid-June.

Security was immediately tightened following the attacks, with extra forces manning checkpoints around the resort (Halawi, 2006).

This research investigates French tourist behaviour in period of risky situations. This study was conducted in the Department of Charente-Maritime in France about 21 days after the Dahab attacks which happened on 25 April 2006.

The purpose of this study is to investigate the impact of sociodemographic and economic variables "age, sex, familial situation, qualification, profession, yearly income per capita", international tourism experience, and tourism experience in Egypt on the perception of risk and on the decision making process of travel under the risk factor "terrorist attacks of last April, 2006, at Dahab, Sinai, Egypt". We try to answer to the following questions: Do respondents' socio-demographic and economic characteristics have an impact on their perception of risk and the decision making process of travel to Egypt? Could the international experience of travel of respondents be used as a mean to measure the reaction of individuals towards risk? Could the experience of travel in Egypt be a predictor of the perception and the decision making process of travel to Egypt under the effect of the risk factor? And finally, could the policy of prices-cuts in the case of the existence of risk of travel to Egypt be an effective way to attract individuals to travel to Egypt?

Sample and variables

The survey instrument consisted of three sections: the first one measures the socio-demographic and economic characteristics of respondents "sex, age, familial situation, qualification, profession, income

per capita", the second one measures individuals' international tourism experience, past tourism experience in Egypt and the extent of information sources about the Egyptian destination and finally the third one measures information about the decision making process of travel to Egypt after the terrorist attacks of last April, 2006, in Sinai, Egypt against foreign tourists and tourist establishments.

The population consisted of French citizens. From 15 May to 13 June 2006, a total 231 randomly selected through the combination between direct interviews, mail, and electronic mail. Places of distribution were the following:

- Hotel Mercure "La Rochelle", Maritime museum "La Rochelle", Aquarium "La Rochelle", The University La Rochelle "Direct interviews".
- Website of the University La Rochelle.
- The department 17 "Charente Maritime": envelopes were sent to samples randomly selected according to the Annuary of France Telecom "included the official letter of the Faculty of Flash, University La Rochelle, three papers questionnaire and paid envelope for the answer". Only 165 questionnaires are valid.

Profile of respondents

Table "1" gives some descriptive statistics about socio-demographic and economic variables. One counts more women than men having answered the questionnaire. Women play an important role in the selection of a destination and the collection of information. So, it is not surprising to obtain more women. Since about an individual on two lives in couple "married or not", one can think that women who answer for the household

Cosenza and Davis (1981) show that the influence of each one of the couple is different according to the family cycle life. However, some studies show that women play an important role in the decision to travel after 45 years. So, the role of the wife in the family concerning holiday's decision-making changed across stages in the family life cycle. Moreover, holiday's decision is most often the result of a joint decision-making process between husband and wife (Nickerson and Jurowski, 2001).

Among the various types of diplomas, the "other diploma" corresponds to persons having obtained a professional diploma of a level lower than the baccalaureate. One quarter of the population has a diploma lower than the baccalaureate. The number of the superior diplomas is

relatively high; it is primarily that this population takes more vacations abroad.

 Table 1. Descriptive statistics about sociodemographic variables

| | Number | Percent | |
|-----------------------------|--------|---------|--|
| Sex | | | |
| Female | 97 | 58.8 | |
| Male | 68 | 41.2 | |
| | | | |
| Age | | | |
| Less than 36 years old | 99 | 60.0 | |
| Between 36 and 45 years old | 29 | 17.6 | |
| Between 46 and 55 years old | 46 | 27.9 | |
| More than 55 years old | 20 | 12.1 | |
| | | | |
| Familial situation | | | |
| Bachelor | 75 | 45.5 | |
| Married – coupled | 72 | 43.6 | |
| Widow – divorced | 18 | 10.9 | |
| Qualification | | | |
| Without diploma | 16 | 9.7 | |
| Bac; bac+2 | 59 | 35.8 | |
| Bac+3; bac+4; bac+5 | 55 | 33.3 | |
| PhD, Post Doc | 11 | 6.7 | |
| Other diploma | 24 | 14.6 | |

Table (2) gives some descriptive statistics about professional variables. One third of the population circled an annual income lower than $10,000 \in$ and nearly 10% have an annual income higher than $40,000 \in$.

More than one individual on three is a worker or employee and nearly one on 5 is a chef of a company or belongs to the Superior class. Some studies (Tocquer and Zins, 1999) for example, show that the relation between professional status and tourism is not clear. However, wages are generally proportional to professional status and incomes play a big role in the tourism consumption. High-income earners are more susceptible to travel (Weaver and Opperman, 2000). So, it seems that a relation between professional status and holidays exists (Raboteur, 2000).

Table 2. Descriptive statistics about professional variables

| | Number | Percent |
|------------------------------------|--------|---------|
| Income "in 1000 €" | | |
| Less than 10 | 44 | 26.7 |
| Between 10 and 20 | 38 | 23.0 |
| Between 20 and 27 | 30 | 18.2 |
| Between 27 and 40 | 22 | 13.3 |
| More than 40 | 16 | 9.7 |
| No answer | 15 | 9.1 |
| | | |
| Professional status | | |
| Worker – employee | 61 | 37 |
| Artisan – commercant – farmer | 7 | 4.2 |
| Liberal profession | 11 | 6.7 |
| Superior cadre – chef of a company | 37 | 22.4 |
| Out-of-labour force | 12 | 7.3 |
| Other "included unemployed" | 37 | 22.4 |

 Table 3. Descriptive statistics about travel

| 1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 | Number | Percent |
|--|--------|---------|
| Travel experience in Egypt | | |
| Yes | 23 | 13.9 |
| No | 142 | 86.1 |
| | | |
| International travel experience "number" | | |
| None | 42 | 25.5 |
| 1 | 30 | 18.2 |
| 2 | 33 | 20.0 |
| 3 | 23 | 13.9 |
| 4 | 8 | 4.8 |
| 5 and more | 29 | 17.6 |
| Source of information about Egypt | | |
| Travel agency | 29 | 17.6 |
| Internet | 45 | 27.3 |
| Television | 72 | 43.6 |
| Friends | 47 | 28.5 |
| Brochures | 24 | 14.5 |
| Books | 89 | 40.0 |

Table (3) gives some descriptive statistics about travel experience abroad en general and Egypt en particular in addition to individuals' sources of information about Egypt. Whereas, one individual on four didn't make any trip, one individual on five carried out during the last three years at least 5 international trips. However, very few numbers of respondents went to Egypt "hardly one individual on six".

Television and books are the principal sources of information used to recognize Egypt followed by internet and the conversations with friends. The booklets and travel agencies are the least solicited.

Descriptive analysis of the impact of a terrorist attack on the decision making process of travel

In order to measure a modification of behaviour following an attack such as the last terrorist attack of April 2006 in Sinai "Egypt", several questions were asked to respondents. The first type of information relates to the decision of travel to Egypt following a terrorist attack. Three possibilities are considered:

- Travel to Egypt is maintained and no modification is made to the potential trip.
- Travel to Egypt is maintained but its characteristics were modified: its duration was reduced or its date of departure was delayed.
- Travel to Egypt is cancelled, the individuals having decided not to visit Egypt or to modify their destination.

Table 4. Impact of the price and terrorist attacks on the decision making process of travel to Egypt

| | Number | Percent |
|--|--------|---------|
| Decision making process of travel to Egypt under the | | |
| effect of a terrorist attack | | |
| Any change | 47 | 28.5 |
| Delay reservation or/and reduce the length of stay | 60 | 36.4 |
| Cancel the travel to Egypt | 58 | 35.1 |
| | | |
| Decision making process of travel after a drop in | | |
| prices | | |
| Yes | 46 | 27.9 |
| No | 66 | 40.0 |
| No answer | 53 | 32.1 |

With regard to the decision of modification of travel plan following the attack, one notes that approximately an individual on four maintains his trip without any modification and one on three decides to cancel his trip "this does not mean that he will not travel, but he can have changed the destination".

The problem of security in a country seems to lead to relatively important changes of behaviour. From this analysis, we try to determine the characteristics which can have an effect on this decision. For this purpose, the ordinal logit model.

Once this first information obtained, a wave of question relating to the prices was posed. The question is then to know if, a fall in the prices could modify the decision to maintain, modify or cancel travel to Egypt.

One person on three did not answer the asked question (table 5).

Among the respondents, less than one person out of three would modify his decision following a fall in the cost of the trip. In the continuation of the analysis, conditionally in the decision of modification of travel, I are interested in the effect of a fall in the price of travel. In particular, I measured the various probabilities of modification of decision following this fall.

In relation to answers. For lack of information, we removed the respondents not having answered the question relating to their behaviour following a fall in the price of travel, although that can introduce a bias. Table 6 gives the distribution.

Table 5. Sample repartition between the two decisions

| After a drop in | After a terrorist attack decision process | | | | Percent |
|-----------------|---|------|------|----|---------|
| prices, the | to tr | | | | |
| decision | | | | | |
| making | | | | | |
| process is: | | | | | |
| | Unchanged | | | | |
| Unchanged | 12 | 18 | 36 | 66 | 46,8 |
| "row %" | 18,2 | 27,3 | 54,5 | | |
| "colomn %" | 34,3 36,7 63,3 | | | | |
| Changed | 23 | 31 | 21 | 75 | 53,2 |
| "row %" | 30,7 | 44,3 | 28,0 | | |
| "colomn %" | 63,2 63,3 36,8 | | | | |
| Size | 35 | 49 | 57 | | |

A little more than one person out of two did not modify his behaviour following a fall in the price of travel.

Among the people who indicated not to modify their behaviour following a fall in the price of travel, nearly four respondents out of five, had stated to modify or cancel their travel following an attack in the case of a fall of prices.

At the same way, among the respondents who were eager to modify their behaviour following a fall in the prices, one on five stated to cancel his trip following an attack and one on three stated anything to modify.

More half of the respondents having stated not to modify their trip initially, stated to modify it following a fall in the prices. This answer does not seem coherent. There are two explanations could be advanced.

Perhaps, the first one is related to an increase in the duration of the stay; the second one is related to for example, an expectation of low levels of the quality of the potential tourist services.

Only one respondent on four was ready to reconsider his decision of cancellation of travel following a fall in the price. Safety thus seems more important than the price. About half of the respondents having stated to modify their behaviour were ready to modify it again following a fall in the price of travel.

Econometric analysis of the decision making process of travel

The two decision making process probabilities have been estimated by discrete choice models.

Effect of terrorist attack on the decision making process of travel

First, the aim of the model is to estimate the probability of travel to Egypt under the effect of the risk factor represented in the Dahab terrorist attacks: any change, delay reservation, reduce length of stay or seek another destination than Egypt or cancel travel. So I use an ordinal logit.

Socio-demographic and travel characteristics have been introduced. Estimated results are given in table 4.9.12.

When woman answers the questionnaire, the probability of cancelling travel increases. It seems that woman is risk – adverse more than men so, she prefers to change travel.

Some socio-demographic variables such as the marital status, the age, the level of studies, the socio-professional category or the income per capita seem to have an effect on the probability of travelling to Egypt following an attack. This result is not surprising because we saw that these variables can influence the decision of travel.

The divorced or widower individuals as well as the individuals who are still living in couple have a stronger probability to cancel travel than the single ones. This result is compatible with the idea according to which the couples, divorced or the widowers have generally, a family and children or little children. They thus feel more in responsibility than the single people and are consequently more risk-adverse than the single people.

All things being equal, the fact of being old between 36 and 45 years increases the probability of cancelling travel. In this case, one could attribute this result to the family. On average, when these people have children, the latter are still young and under the responsibility of their parents.

Information on the family structure "the number and the age of the children" would have made it possible to perceive these effects. This result is compatible with the fact that the inactive people tend not to cancel their travel.

Table 6. Estimation of the probability of travelling to Egypt under the effect of a terrorist attack

| | Coefficient | Standar d error | T-test |
|---|-------------|--------------------|--------|
| Intercept 1 | 1,54 | 0,29 | 5,28 |
| Intercept 2 | 1,20 | 0,10 | 12,42 |
| Familial situation reference :Bachelor" | | | |
| Widow – divorced | 0,72 | 0,27 | 2,64 |
| Married – concubain | 0,49 | 0,18 | 2,71 |
| Sex "ref: man" | | | |
| Woman | 0,33 | 0,16 | 2,09 |
| Age "Ref :less than 36 years" | | | |
| Betwen 36 and 45 years | 0,56 | 0,22 | 2,57 |
| Between 46 and 55 years | -0,48 | 0,25 | -1,91 |
| More than 55 years | -0,54 | 0,35 | -1,56 |
| "Ref: with diploma" | | | |
| Without diploma | -0,73 | 0,41 | -1,8 |
| Professional diploma | 0,13 | 0,32 | 0,42 |
| Professional status | | | |
| Worker – employee | -0,90 | 0,23 | -3,9 |

| Other "included unemployed" | -0,63 | 0,26 | -2,44 |
|-----------------------------------|-------|------|-------|
| Artisan – commercant – farmer | -0,57 | 0,52 | -1,09 |
| Out-of-the labour force | -1,43 | 0,37 | -3,9 |
| Income "ref: less than 10000€" | | | |
| Between 10000 and 27000 € | 0,18 | 0,22 | 0,85 |
| Between 27000 and 40000 € | -0,99 | 0,26 | -3,8 |
| More than 40000 € | -0,56 | 0,32 | 0,03 |
| No answer | -0,23 | 0,31 | -1,76 |
| Travel experience | | | |
| Travel to Egypt | -0,28 | 0,25 | -1,13 |
| Number of international travel | -0,17 | 0,05 | -3,49 |
| Source of information about Egypt | | | |
| Travel agency | 0,58 | 0,22 | 2,63 |
| Internet | -0,35 | 0,17 | -2,13 |
| Television | 0,14 | 0,16 | 0,86 |
| Friends | -0,25 | 0,16 | -1,54 |
| Brochure | -0,06 | 0,21 | -0,29 |
| Books | -0,31 | 0,15 | -2,04 |

Note: Coefficients significance levels: 10 per cent, 5 per cent and 1 per cent.

The effect of the diploma is less significant. It appears that only respondents having no diplomas feel not concerned by the attacks. These last have a larger probability to maintain their travel than others. In this context, this result is compatible with the fact that workers and employees tend not to cancel their travel.

It may be that, the latter having on the one hand, a few chances to travel and, on the other hand, prepared their travel from a long - time "for reason of price and/or timetable" they are ready to travel in spite of the risk related to the insecurity.

The international experience of travel is rather favourable to any change of travel plan. The more the number of trips carried out abroad is important, the more the probability of maintaining travel to Egypt is great. This probability would be stronger in the case if respondents visited Egypt before.

These individuals, having certain experience of travel to foreign countries, do not fear of the attacks and the political instabilities. May be also, these individuals travel for professional reasons. They can cancel their travel with difficulty.

Lastly, the means used to acquire information about Egypt do not have all the same effect. Obtaining information by a travel agency increases the probability of cancelling travel to Egypt. But, the information acquired using Internet or through the books increases the probability of not modifying travel.

People who seek with themselves specified information about a country, perhaps they could be more motivated than others to go to it. They prepared well their travel and do not wish really to modify it, even following an attack.

Effect of fall in prices on the decision making process of travel after a terrorist attack

Once this estimate carried out, we estimate the probability of being able to modify once again their choices following a fall in prices of travel. Persons not having answered the question relating to the fall in prices were removed from this second analysis because of the possible bias of selection.

In this second stage, the objective is to see how the decision taken following a fall in the prices can evolve/move. Here, the idea is to calculate the probability of reconsidering the decision of modification or cancellation of travel. I work conditionally with the first decision.

Maddala (1981) shows that an effective estimate is obtained by replacing the decisions to modify or cancel travel following a terrorist attack by the probabilities estimated to modify or cancel travel, calculated starting from the preceding estimate.

The considered model is probit. The results of this estimation are given in the table (7).

The larger the probability of cancelling travel to Egypt is, the more the probability of not modifying this decision following a fall in prices is.

The decision taken initially to cancel travel is thus independent of the price of travel. Following the shock undergone "in our case, the terrorist attack" the demand for travel for these households becomes null.

But, the probability of modifying his behaviour will increase with the probability of modifying his travel. The modification considered is not specified in the investigation but it can be of two types: positive or negative. The fall in the prices is associated with maintenance of travel such as it had been considered before the attack "not to reduce the length of stay or not to delay the date of departure". Here, one considers a positive modification of the decision.

Table 7. Estimation of the probability to travel to Egypt after the drop of prices

| | | Standard | |
|---|-------------|----------|--------|
| | coefficient | error | t-test |
| Intercept | -0,14 | 0,74 | -0,19 |
| Probability of decision making process | | | |
| of travelling | | | |
| to Egypt under the effect of a terrorist | | | |
| attack: | | | |
| no change "reference" | 1.40 | 1.22 | 1.06 |
| Delay reservation or/and length of stay | 1,40 | 1,32 | 1,06 |
| Seek another destination than Egypt or | 1.00 | 0.55 | 1.00 |
| cancel the travel | -1,08 | 0,55 | -1,98 |
| Familial situation "reference : Bachelor" | | | |
| Widow – divorced | 0,48 | 0,29 | 1,51 |
| Married – concubain | -0,39 | 0,20 | -1,97 |
| Professional status | | | |
| Worker – employee | 0,04 | 0,20 | 0,2 |
| Artisan – commercant – farmer | -0,33 | 0,63 | -0,52 |
| Out-of-the labour force | -0,84 | 0,45 | -1,88 |
| Income "ref: less than 10000€" | | | |
| Between 10000 and 27000 € | 0,49 | 0,26 | 1,85 |
| Between 27000 and 40000 € | -0,13 | 0,26 | -0,5 |
| More than 40000 € | 0,32 | 0,31 | 1,02 |
| No answer | 0,90 | 0,47 | 1,93 |
| Travel experience | | | |
| Information about Egypt | 0,20 | 0,06 | 3,17 |
| Many travels | -0,34 | 0,21 | -1,62 |
| Egypt | -0,17 | 0,27 | -0,64 |

Note: Coefficients significance levels: 10 per cent, 5 per cent and 1 per cent.

Travel to Egypt is thus an ordinary good, i.e., following a fall in the price of the good, the demand of the good increases. The substitution effect is thus higher than the revenue effect. The fall in the prices is associated with a complete cancellation of travel. One considers here a

negative modification of the decision. When the price of travel drops, the demanded quantity drops and is cancelled.

One is here in the presence of a good of Giffen. This reasoning is true if it is supposed that the households associate this fall in the prices to a bad quality of services. Another explanation is possible; it could be that the households associate this fall in the prices to a strong insecurity, fear to go in a country not very safe in their eyes leads them to cancel travel.

The instability of the decision i.e. probability of modifying his behaviour following a fall in the prices of travel concern rather the households having weak incomes "between 10000 and 27000 euros" divorced, widowers and people having used several sources to inform themselves about at the destination "Egypt".

The decision taken about travel following a terrorist attack is more stable for the couples, the artisans, the commercants, the inactive ones and also those who have great experience of travel. Here, this last result can be associated to professional constraints.

Some simulations

From the results obtained, simulations were computed. The explanatory variables associated to the income, the professional status, the marital status and the experience of travel were taken at the average value of the sample.

Concerning the probabilities of decision of travel to Egypt following a terrorist attack, 6 scenarios were considered (table 8). The three first ones are associated to the 3 extreme situations: the probabilities of maintaining, of modifying, of cancelling travel are respectively fixed at 1.

One notes that, among the people not modifying, in a certain way "with a probability of 1, the probabilities associated with the two other alternatives being null" their travel following the attack, one respondent on two could travel following the fall in prices of travel.

When an individual decides to modify his travel plan in a certain way, 9 times out of 10, a fall in the prices would lead to a new modification of his travel plan. Lastly, knowing that the travel is cancelled with probability "one", less than two respondents out of ten reconsider their decision.

The 3 other scenarios are based on the minimal, maximal or average values "S1" of the probabilities of changes following a terrorist attack. The results validate those obtained by scenarios from 1 to 3.

The larger the probability of modifying travel plan is, the more the probability of reconsidering this choice is great. If this probability is fixed, one notes that the larger the probability of cancelling the voyage is, the more the probability of modifying his choice following a fall in the prices is weak.

Table 8. Simulation of the probability to change the decision after the drop of prices according to different scenarios

| | After a terrorist attack travel to Egypt is: | | | Probability of change the decision after a drop in prices |
|-----------|--|---------|-----------|---|
| Scenarios | Unchange d | Changed | Cancelled | |
| S1 | 1 | 0 | 0 | 0.50 |
| S2 | 0 | 1 | 0 | 0.92 |
| S3 | 0 | 0 | 1 | 0.14 |
| S4 | 0.84 | 0.15 | 0.01 | 0.59 |
| S5 | 0.28 | 0.45 | 0.27 | 0.64 |
| S6 | 0.00 | 0.08 | 0.92 | 0.19 |

CONCLUSION

This exploratory study was carried out in order to investigate to look at the impact of socio-demographic variables "age, sex, familial situation, qualification, profession, income per capita", international tourism experience, and tourism experience in Egypt on the decision making process of travel under the effect of the risk factor "terrorist attacks of last April, 2006, in Sinai, Egypt".

For this purpose, the two decision making process probabilities have been estimated by the ordinal logit model.

Effect of fall in prices on the decision making process of travel after a terrorist attack has been estimated by the probit model.

The study reveals that women are more sensitive than men in relation to the decision making process of travel under the effect of the risk factor, as the econometric analysis confirmed that the more travel to Egypt in period of terrorist attacks is risky, the more the probability that women would cancel travel is great.

This result is conformed to the results of many studies concerned with the investigation of the perception of risk's difference between men and women, for example the study conducted by Carr (1999).

In addition, the study revealed that single people are less likely to cancel their decision of travel than those live in couple or even divorced or widowers.

It was revealed that those aged between 36 and 45 years old are more likely to cancel their travel.

It appears that only the people having no diploma feel not concerned with the attacks. These last have a larger probability to maintain their travel than others. This result is compatible with the fact that the workers and the employees tend not to cancel their travel.

It was found that those who have more international experience of travel tend not to modify their decision of travel to Egypt despite the existence of the element of risk. As observed that the more the number of trips carried out abroad is important, the more the probability of maintaining travel to Egypt is large.

With regard to the effect of information sources individuals used to recognise the Egyptian destination, one could observe that those who have information about Egypt through a travel agency are likely to cancel travel, whereas information acquired by internet or through books is related to the probability to modify travel.

In fact, this result is very important for decision-makers in promoting Egypt abroad. They have to pay more attention to their relationships with French travel agencies who play an important role in forming the attitude of the French tourist demand. They have to exert more effort in collaborating with these intermediaries of travel and try to provide them with sufficient information about Egypt in order to avoid their negative reactions towards Egypt en particular in period of crises.

With regard to the effect of fall in the prices on the decision making process of travel after a terrorist attack, the results revealed that the larger the probability of cancelling travel to Egypt is, the more the probability of not modifying this decision following a fall in the prices is strong.

Also in the context of the effect of fall the in prices of travel, the results revealed that the more the revenue is low, the more the probability to modify his behaviour is high as respondents having weak incomes "between 10000 and 27000 euros yearly" expressed their desire to change their decision in the case of falling in the prices. With regard to the familial status, the results revealed also that divorced, widowers individuals had participated those having lower incomes in the possibility to modify their behaviour because of fall in the prices of travel. Finally, it was clear that using different sources of information about Egypt had a significant effect on the probability to modify their decisions of travel to Egypt as a result of fall in the prices.

On could deduce from this result that the strategy of price-cuts which could be conducted by Egyptian tourism professionals could be applicated in order to attract certain types of French tourists who could accept to travel despite the high level of risk. But, we have to pay attention in this matter as this type of tourists belongs to inferiour levels of incomes who would not be profitable for the tourism affaires, from the one hand, may be these tourists would not concerned with the level of quality of tourist services and from the other hand their power of purchase is weak. In the long tem, this could deform the image of the Egyptian destination as it could be perceived as a destination of low-level of quality. Consequently, that could make other important types of tourists who search for the quality, give up travelling to Egypt at all.

The results revealed also that decision taken about travel following a terrorist attack is more stable for the couples, the artisans, the commercants, the inactive ones and also those who have a great experience of travel. Here, this last result can be associated to professional constraints.

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