ITALIAN FAMILIES ON VACATION: A QUANTITATIVE ANALYSIS OF HOLIDAY EXPERIENCES

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1. Introduction

Since the beginning of the twentieth century, low-cost travel, new associations that organize spare time, and mass tourism have played an important role in the growth of family holidays. Several studies into families and holidays showed that tourist activities and leisure time shared with family members help to maintain and consolidate family systems and improve communication between family members (Shaw and Dawson, 2001; Orthner and Mancini, 1990). Some scholars have probed the relationship between the level of participation in leisure activities of family members and indicators of "functioning" of the family, such as cohesion, communication, and satisfaction. Orthner and Mancini (1990) argue that the sharing of leisure and activities during holiday periods and detachment from everyday life help to keep family relationships firm. Nevertheless, this relationship between families and tourism reflects the changes in the family framework of Western countries, because these transformations in demographics have implied important changes in tourists' behaviour (Schänzel, Smith, and Weaver, 2005).

In this paper, we analyze travel choices of Italian families and their profiles. Information provided by market segmentation allows marketers to improve specific marketing efforts to more profitable customer segments (D'Urso, De Giovanni, Disegna, Massari, 2013). The literature shows us two typologies of market segmentation (Chandra and Menezes, 2001):

1)   A-priori or common-sense segmentation: this approach leads to the examination of groups derived from dividing the population on the basis of prior information (Dolnicar, 2002, 2004);

2)   Post hoc or data-driven segmentation: In this case, subjects are classified into groups according to their similarities. Consequently, with this approach, the researcher doesn't recognize in advance the number and composition of segments produced analytically.

So, in both approaches, market segmentation is realized through the support of different statistical methods. A lot of techniques can be applied (Boone, Roehm,

2002), but it is impossible to define the best method or algorithm for dividing the market (Dolnicar and Grün, 2008), because it depends both on the nature of the data and on the objectives of the research.

2. Data

From the quarterly multipurpose survey "Trips and Holidays" produced by the National Institute of Statistics (ISTAT) since 1997, we analyze a sample of 14,024 Italian families. Our analysis focused on the four quarters of 2013: January-March, April-June, July-September, and October-December. In each quarter, information about family members and travels done in the referring period is collected.

"Trips and Holidays" is a CATI (Computer Assisted Telephone Interview) survey collected on a sample of around 3,500 households and 8,000 individuals per quarter; the main objective pf this survey is to allow the Institute to investigate tourism activities of Italian residents, both tourists and non-tourists. Specifically, the collection of the data makes it possible to quantify the flow of Italian tourists not only within the country but also abroad; furthermore, it examines the characteristics and the patterns of Italians' journeys. According to the purpose of the survey, its target population consist of Italian families, defined as sets of people who live together, connected through marriage, family relationship, affinity, adoption, or protection (ISTAT, 2014).

From this survey, we obtained a final sample of 2,279 households, selecting the families who have at least holiday in one of the quarter of 2013. To describe Italians' holidays, we chose fifteen variables (Table 1; to illustrate the socio-demographic characteristics of households, we selected five indicators (Table 2).

In 2013, 78.54 percent of families made at least one trip to Italy, while 24.31 percent of families went to Europe and 5.44 percent went to the rest of the world, commonly by means of car or bus.

Over half of the travelers made a trip for pleasure (64.24 percent) or to visit relatives (29.88 percent). Only a small part of the sample travelled for religious tourism (3.12 percent) or health reasons (2.76 percent).

The four-quarter format shows a significant difference between the third quarter and the others: in fact, the summer season is predominantly characterized by long-standing and local holidays, staying in privately owned structures (second homes or relative's houses) and travelling by car or similar (Table 3).

Table 1 − *Travel habits variables*

Variables	Meaning	Levels
Trim	Quarter	January-March/ April-June/ July-September/ October-December
Dest_Ita	At least one holiday in Italy	No/Yes
Dest_Eu	At least one holiday in Europe* (not Italy)	No/Yes
Dest_Rest	At least one holiday in extra-European countries	No/Yes
Mezzo	Principal mean of transport	Plane/Train/Ship/Road
Motvac	Principal motivation of the holiday	Leisure/Visit to relative/ Religion/ Wellness
Mean_Dur	Average night of holidays	From 1
Orgall	Reserved accommodation	No/Yes
Iorgall	Internet reserved accommodation	No/Yes
Orgtra	Reserved transport	No/Yes
Iorgtra	Internet reserved transport	No/Yes
All_Hot	Percentage of vacations spent in payment structures	From 0 to 1
Fbreve	At least one short holiday	No/Yes
Flunga	At least one long holiday	No/Yes
Fnvac	Number of holidays	From 1

Note: (*) European countries are selected by UNWTO classification

Table 2 − *Demographic variables*

Variables	Meaning	Levels
Ncomp	Number of family's components	From 1
Rip	Geographical division (area of residence)	North-East/North-West/ Middle/South/Islands
Istr	Highest qualification in family	PhD/4-years degree/ Master's degree/ Bachelor's degree/ Associate degree/ Academy/5-years High School/3-years High School/Middle School/ Elementary/ No title
Eta_Mean	Average family's profile	From 15
Cond_	Percentage of workers in family	From 0 to 1

Table 3 − *Holidays of Italian families in 2013*

Quarter	Sample*	Short holidays**	Long holidays**	Holidays in Italy**	Holidays in Europe**	Holidays in rest of the world**	Nights average
1	411	62.04%	45.26%	76.16%	21.90%	12.17%	5.09
2	522	58.05%	49.81%	77.20%	23.75%	5.17%	5.04
3	974	23.92%	84.39%	82.34%	24.13%	3.39%	10.79
4	372	65.05%	41.67%	73.12%	28.23%	3.76%	4.38

Families that have at least one holiday in one of the four quarter of 2013
*** One at least in 2013*

The chi-square tests (X2) show an association between the quarter variable and short-holidays variable (X2=318.916, p-value<0.001), long-holidays variable (X2=355.888, p-value=0.000), Italian destination variable (X2=16.778, p-value<0.001), and extra-European destination variable (X2=46.209, p-value<0.001), while there is no association between the quarter and the European destination variable (X2=4.505, p-value=0.212).

4. Methods

We applied Multiple Correspondence Analysis (MCA – Greenacre & Blasius, 2006) to detect and represent underlying structures in the data set. We used twelve active variables: Dest_Ita, Dest_Eu, Dest_Rest, Mezzo, Motvac, Orgall, Iorgall, Orgtra, Iorgtra, Fbreve, Flunga, Fnvac (see Table 1), and three supplementary variables: Rip, Istr, and Ncomp (see Table 2). We employed FactoMineR an R package dedicated to multivariate data analysis (Husson, Josse, Le Mazet, 2015).

To study how close the categories are to one another, on the first factors of MCA we applied several clustering algorithms: complete, *k*-means, and PAM (Partitioning Around Medoids). To select the optimal partition and the best algorithm, we applied the Calinski-Harabasz, Dunn, and Silhouette indexes to validate the results, using the R package clusterCrit (Desgraupes, 2014).

5. Main results and discussion

MCA detects two latent dimensions for each quarter, explaining from 80 to 90 percent of the inertia. The first dimension represents the vacation destination and mode of travel and the   in every quarter: mean of transport, transportation reservation, online or offline booking, Italian destination or not. By contrast, the second dimension describes different variables: in the first two quarters, it defines the motivation and the accommodation type for the holiday, while in the third quarter, it circumscribes the duration of the vacation. By contrast, in the fourth quarter, the second latent dimension describes the motivation, the type of accommodations, and the duration of the holiday combined (Figure 1).

The results on the Calinski-Harabasz, Dunn and Silhouette indexes for *k*-means, PAM, and complete hierarchical methods show that the optimal algorithm is *k*-means for three classes in the third quarter — the first three — and four classes in the others (Table 4).

Figure 3 shows that, in the third quarter, the clusters are well defined, while in other periods the groups have a clear degree of overlap, especially in the second quarter.

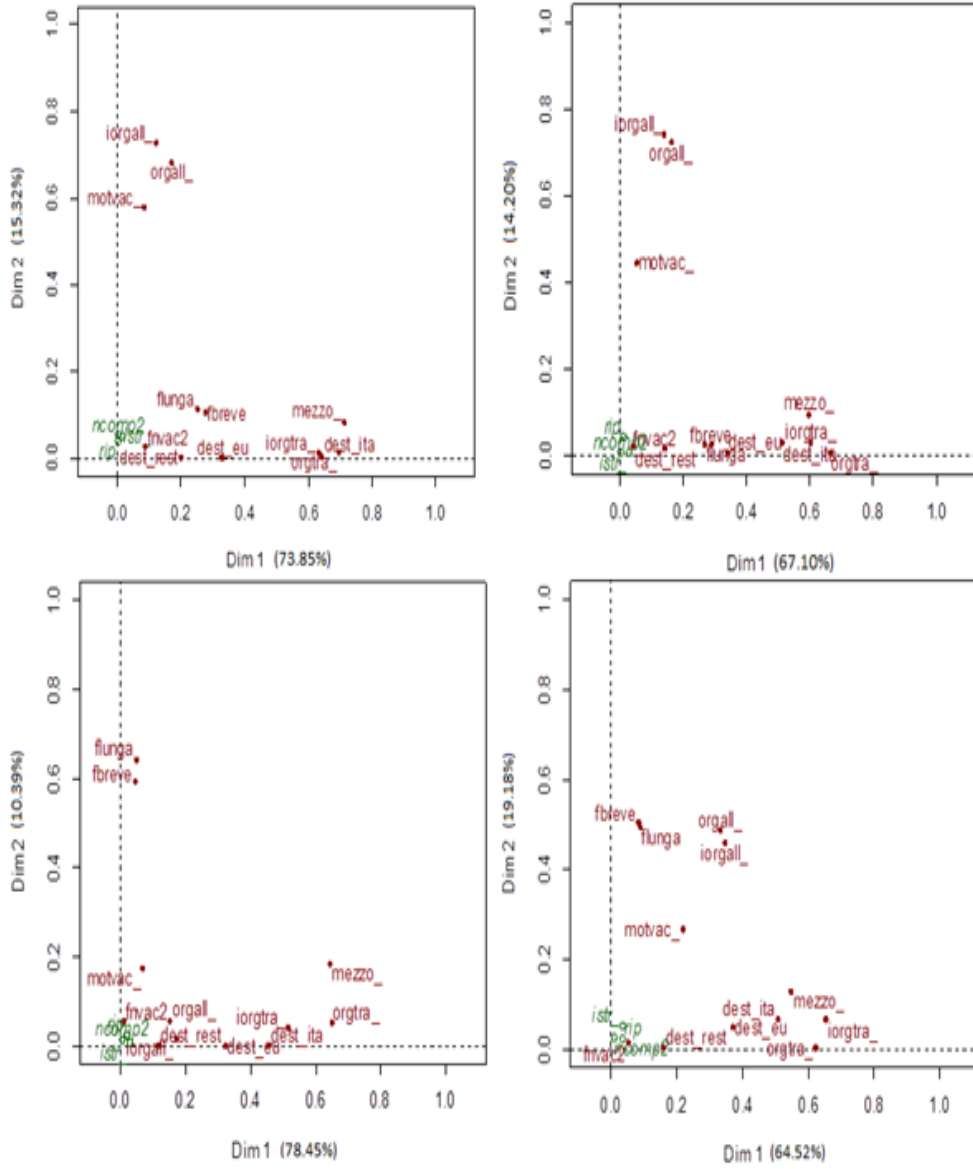**Figure 1** − *Latent dimensions for each quarter of 2013*

Table 4 – *Validation indexes (Calinski-Harabasz, Dunn, and Silhouette) for k-means method from 2 to 6 clusters*

	N. cluster	*Calinski-Harabasz Index*	*Dunn Index*	*Silhouette Index*
	2	235.0861	0.0524	0.4064
	3	339.3986	0.0412	0.5149
1st *quarter*	***4***	***644.3808***	***0.0601***	***0.5207***
	5	627.5495	0.0405	0.4864
	6	576.2869	0.0566	0.4654
	2	484.2257	0.0130	0.4431
	3	439.8450	0.0271	0.5075
2nd *quarter*	***4***	***891.6496***	***0.0307***	***0.5531***
	5	803.9428	0.0273	0.5257
	6	855.7503	0.0367	0.4812
	2	982.1707	0.0143	0.5180
	3	***1542.5701***	***0.0350***	***0.5756***
3rd *quarter*	4	1373.1012	0.0296	0.4661
	5	1216.9989	0.0226	0.4220
	6	1527.2886	0.0167	0.4789
	2	307.5190	0.0292	0.4163
	3	302.6841	0.0344	0.4705
4th *quarter*	***4***	***509.7991***	***0.0690***	***0.5133***
	5	507.6316	0.0591	0.5093
	6	500.8173	0.0269	**0.5166**

Figure 2 - *Plane of the first two axes from the MCA and clustering of families*
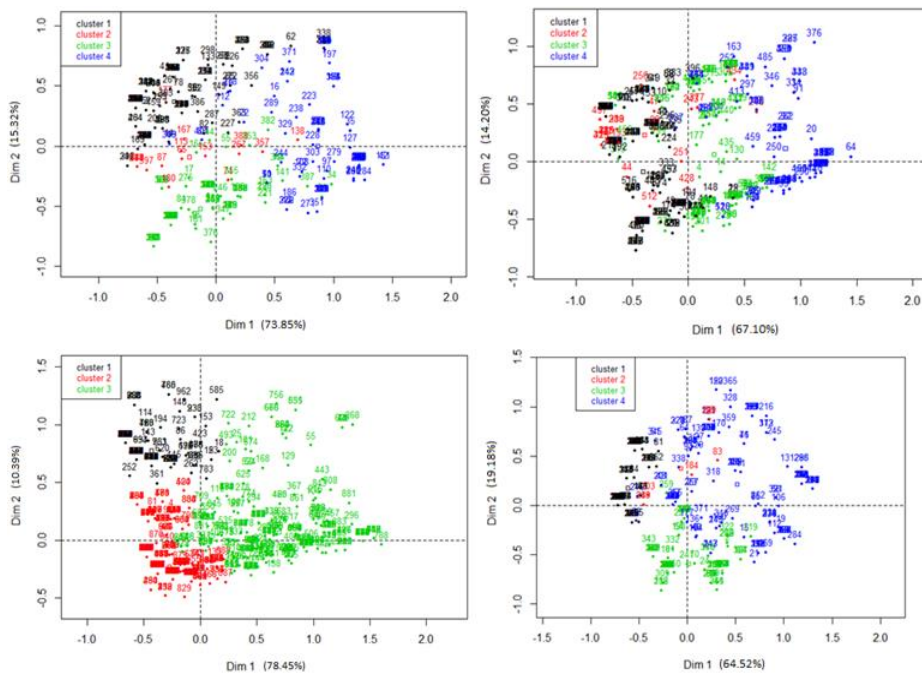
We detected the following four family tourism profiles:
1) CONVENTIONAL HOLIDAY-MAKERS: they often spent their holidays in private owners' or relatives' houses for a long time period, they mainly travel to visit relatives, they haven't a specific destination, they use different means of travel, and they are chiefly older and/or people who may be unemployed and belong to small families.
2) ONLINE USERS: they travel for long periods, their holidays have leisure as the motivation, they plan their holiday entirely through the Internet, they travel principally by air and go abroad, and they choose the highest level of accommodations. Their families are made up three or four young people, comprised by members who have jobs.
3) QUICK HOLIDAY-MAKERS: they plan short vacations in Italy, they travel by car or train, and they choose an intermediate level of accommodations. Their families are composed of fewer and older people, with an intermediate percentage of employed workers.
4) DELUXE VACATION CUSTOMERS: they move to short holidays in Italy, they have a higher level of Internet use, they travel largely by train or car, and they choose a higher level of accommodations. Their families are younger and more numerous, with a high number of employed workers.

6. Conclusions

The parallel study of the four quarters shows a clear definition of patterns of Italian tourists. In 2013, Italian family profiles on holidays are well-defined: the clusters are strongly linked to family composition, ages of the members, and financial resources. On the other hand, vacations inside the segments are distinctly in duration — long or short — and by the use of the Internet for accommodation and transportation booking.

In the third quarter, Italian families' holidays coincide with the summer holidays, which are longer than other times of the year; the motivation that drives them to leave is linked basically to pleasure and visiting relatives. In other quarters, families decide to travel for various reasons, e.g., to visit shrines or places of worship or for work. In fact, four profiles are present in the first, second, and fourth quarters, while the cluster "deluxe vacation-customers" is not present in the third quarter.

The results demonstrate the rationale of a market segmentation of Italian tourists; in addition to a sociological interest, this group definition can help

marketing strategies of companies that want to optimize the personalization of tourism products, also with a maximization of revenues.

Acknowledgements

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SUMMARY

Italian families on vacation: a quantitative analysis of holiday experiences

In last decades, the rapid expansion of the tourism sector and the major differentiation of the tourism products have stimulated several studies in segmentation of tourism markets, but the applications of those techniques frequently focus on single consumers, while often the real "buyer" is the family. In this paper, we detect the profiles of Italian families compared to their travel choices; for the analysis, a sample of around 14,000 Italian families, from the National Institute of Statistics survey "Trips and Holidays," is used. The main goal of this paper is to investigate holiday strategies of Italian families in connection with recent changes in family structure, in order to individuate different profiles and different customs in travel patterns.

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