Economic recession, job vulnerability, and tourism decision making: a qualitative comparative analysis

Economic Recession, Job Vulnerability and Tourism Decision-Making: A Qualitative Comparative Analysis

Abstract

Occupational uncertainty has a considerable effect upon consumer decisions during a recession, especially with respect to discretionary products and services such as tourism. Using Qualitative Comparative Analysis (QCA), the study examines the complex relations among job vulnerability, disposable income for tourism, marketing activities, price and quality issues for Greek holidaymakers returning from their vacations. The paper also compares QCA with the two dominant linear methods of analysis (i.e. correlation and regression) and highlights the suitability of QCA when dealing with complexity in tourism. The results reveal four configurations explaining the attributes of Greek residents' tourism decisions characterized by value-for-money orientation; achievement of best available purchase; psychological strengthening; and price sensitivity. The study also employs predictive validity for the presented models. The findings are valid from both a methodological and managerial perspective suggesting new research insights.

Keywords: Complexity Theory; Qualitative Comparative Analysis; economic crisis; consumer behavior; Greece.

Introduction

Consumers in many Western economies especially in the European South have been severely hit by the outcomes of the economic crisis since 2009. Their purchasing power has considerably decreased due to rising unemployment; their nominal and/or real income streams have been reduced as a result of lower salaries, pensions and capital returns as well as a rise in taxation; and they have also suffered from savings insecurity partly related to the depreciation of share values in the stock exchange markets (Ferguson, 2014; Ifanti, Argyriou, Kalofonou, and Kalofonos, 2013; Murphy and Scott, 2014; Ritchie, Molinar, and Frechtling, 2010; Smeral, 2010; Song and Lin, 2010). Job vulnerability and work-related income are considered to be the dominant factors affecting consumer decisions since sustainable employment provides adequate job opportunities, job security, and purchasing power, as well as rewarding, meaningful and safe employment (Ashford, Hall, and Ashford, 2012). Moreover, employment itself includes a psychological connotation due to the ability of people to engage with others whilst at work (International Monetary Fund, 2011), and the development of a creative environment to enhance workers' self-esteem (Eurofound, 2005).

The current economic crisis has also impacted tourism resulting to a significant decrease in the number of travelers originating from developed countries (Alegre et al., 2013; United Nations World Tourism Organization, 2011). Even though the current recession has been widely discussed in the media and examined by a series of studies, the evaluation of tourism attributes and behavior is still limited (Sheldon and Dwyer, 2010; Smeral, 2009) due to the unavoidable time-lag between the crisis per se and the subsequently emerging research opportunities concerning manuscript journal

submissions and publications (Brooner and de Hoog, 2014). In any case, it is evident that a fall in disposable income results in a decrease in consumption of discretionary goods and services such as tourism during periods of economic turmoil (Eugenio-Martin and Campos-Soria, 2014; Papatheodorou, Rosselló and Xiao, 2010). Nevertheless, the literature is scant in terms of the relationship between consumers' job status and the demand for tourism (Alegre, Mateo, and Pou, 2013) let alone the effect of job vulnerability on tourism and its perceived travel benefits (Chen and Petrick, 2016) and implications for public well-being (Neal, Uysal, and Sirgy, 2007)

From a methodological point of view, the majority of business-oriented and almost all tourism studies evaluate statistical relationships from a linear perspective predominantly using structural equation modelling (SEM) and multiple regression analysis (MRA). These symmetric tests adopt a net effect estimation approach but ignore the complexities that exist in reality and are apparent in the datasets of academic studies (Woodside, 2014). This is because when multicollinearity is high there may be no statistical significance of estimates; alternatively, estimates may prove inconsistent with the set hypotheses since the estimated regression function is of poor predictive power (Van der Meer, Quigley, and Storbeck, 2005). Conversely, in cases of low multicollinearity the marginal contribution of one explanatory variable may end up depending on the other explanatory variables included in the estimated function albeit in a non-linear manner (Woodside, 2013). In fact, the standard assumption in regression analysis is that the addition of new variables increases goodness-to-fit (Armstrong, 2012); nonetheless, the usual co-variance predictors in non-experimental studies do not provide any related supportive evidence (Skarmeas, Leonidou, and Saridakis, 2014).

On these grounds, the aim of this article is to examine the complexity of attribute configurations affecting tourism decisions during periods of economic crisis. More specifically, it evaluates the influence of job vulnerability, disposable income available for tourism, marketing activities, and price and quality issues on holidaymakers in Greece (a country among the most battered by the economic crisis at a global level) who were interviewed as they returned from their vacations. The study contributes to both the theoretical and methodological domains. In terms of the literature, it provides an understanding of the complexity of formulation of tourism decisions during recession, with special focus on job vulnerability. It further explores the attributes that affect tourism decisions and associated linkages. Methodologically, the study presents the value of Qualitative Comparative Analysis (QCA) and its advantages compared to conventional methods of correlational analysis. It also progresses from fit validity and provides predictive validity for the models suggested.

Complexity theory

Complexity theory studies, describes and explains the behavioral patterns of complex adaptive systems (Olmedo and Mateos, 2015). It is based on ontological realism and supports the view that events occur independently of the researcher (Byrne, 1998). Since ontology is characterized by non-linearity there are no universal standards or necessary natural forms in society (Young, 1991). Nonetheless, the system is not uncontrolled and even in chaotic situations there is some sort of order. Even if the system appears to work in a random and complex way with each element seeming to act independently, it finally operates within specific boundaries (Zahra and Ryan, 2007). As a result, complexity evolves over time (Byrne, 1998). According to Fitzgerald and Eijnatten (2002), complexity theory focuses on three aspects: (i) the

simple behaviors emerging from complex systems; (ii) the higher-level patterns produced by simple interactions; and (iii) the identification of recognizable patterns under a holistic examination of the complicated system.

Complexity, QCA and tourism

In service industries, complexity theory and QCA are used in order to sufficiently explain customer attributes, evaluations and decision-making processes by implementing alternative asymmetric combinations of indicators (Wu, Yeh, Huan, and Woodside, 2014). Until today, tourism research has not adequately focused on complexity since its approach has been predominantly a reductionist one (McDonald, 2009). Nonetheless, the behavior of travelers depends on numerous factors creating complexity in its formulation. As a result, the relationships produced have an inherent non-linearity preventing the direct attribution of causes to consequences (Olmedo and Mateos, 2015). As Boukas and Ziakas (2014) suggest, endogenous and exogenous system shocks (like job vulnerability and economic crises) can affect the behaviors of tourists. Even so, all tourism-related factors create some emergent features since they include a certain degree of order in their operations (Olmedo and Mateos, 2015). Still, the complexity of vulnerability produced by crises renders Newtonian (linear) thinking inadequate and indicates a need for asymmetric analysis (Laws and Prideaux, 2005). Within this complexity environment, the implementation of QCA can adequately provide the asymmetric analysis needed for the examination of the behavioral patterns of tourists (Ordanini, Parasuraman and Rubera, 2014). Thus, especially in cases of turbulence and unpredictability, the application of complexity theory can provide substantial information concerning tourist behavior (Russell and

Fulkner, 2004), helping to better understand the dynamics of change (Faulkner and Russell, 2000).

Job vulnerability and the price-quality nexus in tourism

Pettigrew et al. (2014) suggest that potential job loss or reduction in work income heavily affect peoples' consumption patterns and expenditure. For those that still have jobs, the uncertainty lies in their ability to continue in that job and at the same salary level (Kaytaz and Gul, 2014). The rise in unemployment results in income reduction (Dosi, Fagiolo, Napoletano, and Roventini, 2013), which directly affects the disposable income for tourism and ultimately tourism demand and purchasing intentions (Marcussen, 2011; Li, Song and Witt, 2005) with possibly detrimental effects on public health. As Alegre, Mateo and Pou (2013) and Kuhn (2002) suggest, the effects of unemployment and job vulnerability on consumption do not only cause a reduction in current income, but also influence the perspectives for future income streams. Nonetheless, the literature does not examine how job vulnerability per se impacts on the disposable income available for tourism purposes.

Moreover, people dedicate more time to shopping activities during a recession in spite of spending less since they search for lower prices and try to identify substitutes (McKenzie and Schargrodsky, 2011). As a result, companies adjust their marketing activities to the new environment through structural changes by using old techniques blended with new concepts like customized price-based packaging; they also increase marketing pressure, enrich their offers and try to sustain their market share (Tixier, 2010). In tourism, companies further focus on the use of Information Communication Technologies for marketing purposes and try to implement innovative advertising

activities in an effort to capitalize on the crisis' opportunities for the formulation of an improved business environment (Pappas, 2015b). Through direct marketing, price reduction and personalized product offerings, tourism and hospitality enterprises aim to increase their competitiveness in the market; sustain tourism demand from both domestic and outbound holidaymakers; and reduce their dependency on packaged tourism (Pappas, 2015a). Furthermore, the reduced disposable income for tourism leads customers to seek out higher value for money. It also makes tourism and hospitality companies further develop their brand name; optimize their service offering; and use proactive marketing campaigns to convince potential clients to purchase their products and services (Alonso-Almeida and Bremser, 2013). Still, the extent to which consumers feel confident about their future, their job stability, and their disposable income, plays a significant role in their final consumption patterns (Quelch and Jocz, 2009). Thus, consumer psychology affects the orientation of marketing activities, whilst it is crucial during a recession to take actions that lift the spirits of consumers (Kaytaz and Gul, 2014) and raise happiness, e.g. from nature based vacations (Bimonte and Faralla, 2014). Considering all the above, the present study suggests that the relationship between marketing activities and aspects of job vulnerability needs to be further investigated with emphasis on the price-quality nexus.

In fact and as the study previously indicated, consumers seek out the highest possible value-for-money especially during economic crises; this is ultimately associated with price and quality aspects. The price of a product is a key predictor of consumer choice (Kim, Xu and Gupta, 2012), and is regarded as a monetary cost for obtaining a product or a product's quality signal (Lichtenstein, Ridgway, and Netemeyer, 1993). When demand is characterized by high levels of own-price elasticity a higher price

leads to a higher reduction of quantity demanded in percentage terms. High-quality products and services lead to higher customer satisfaction and this indicates that their selling price may also be higher (Whitefield and Duffy, 2012). When a company decides to increase the quality of its products it means that it also selects a higher marginal profit (Moorthy, 1988).

The price-quality nexus (that is, “the generalised belief across product categories that the level of the price cue is related positively to the quality level of the product” (Lichtenstein, Ridgway, and Netemeyer, 1993, p.236)) indicates that consumers use price for the evaluation of overall product excellence or superiority (Zeithaml, 1988). Thus, price-quality schemata do not focus on actual product quality, but on the consumer’s belief in the relationship between quality and price (Lichtenstein and Burton, 1989). As a result, they play an important role in consumer decision-making, affecting judgements of perceived quality, and influencing perceived value and purchase intention (Zhou, Su, and Bao, 2002).

The roles of price and quality are very important in terms of marketing competition and affect the company’s competitiveness in the market and supply chain (Nicolau, 2012; Yu and Ma, 2013). Products with relatively low price and high quality can dominate the market and increase enterprising competitiveness (Banker, Khosla, and Sinha, 1998) due to their superior characteristics (Papatheodorou, 2001). In tourism, product prices and transportation costs are likely to reduce the number of travelers, especially during periods of crisis (Wang, 2009). Successful tourism and hospitality companies are very careful not to reduce service quality when cost cutting is unavoidable; something that is important to consider since customers expect more for

their money during recessions (Martin and Isozaki, 2013). Conversely, periods of instability also offer opportunities to introduce new products, management programs, and new markets (Okumus and Karamustafa, 2005). Additionally, even if a number of studies examine the influence of levels of unemployment and disposable tourism income in tourism (Cho, 2001; Turner, Reisinger, and Witt, 1998), the practical importance of many of the proposed indicators remains limited due to their linearity (Yap and Allen, 2011). To address this issue, the present study examines the underlying complex relationships using a non-linear perspective.

Study tenets

In service research contexts, "tenet" is the term in-use for expressing testable precepts of complexity theory, since the adequacy testing for complex configurations in predicting outcome scores does not usually include consistency metrics or statistical hypothesis testing (Wu, Yeh, Huan, and Woodside, 2014). The study sets out to investigate important attributes that affect tourism decisions, as identified from the relevant literature (Alegre et al., 2013; Chikweche and Fletcher, 2010; Sanchez et al., 2006; Sinkovics et al., 2010; Tarnanidis et al., 2015; Thrane and Farstad, 2011). Thus, all combinations of binary states (meaning their presence or absence) for the following five attributes were evaluated: job vulnerability, disposable income available for tourism, marketing activities, price issues, and quality issues. The tenets of the study are as follows:

T1: The same attribute can determine different tourism decisions depending on its interaction/configuration with other attributes.

T2: Complex configurations affect traveler evaluations of tourism decisions.

T3: Within different configuration combinations simple conditions may positively or negatively affect tourism decisions.

The case of Greece

Since 2010 Greece has faced its worst and deepest financial crisis in modern history (Goumagias, Hristu-Varsakelis and Saraidaris, 2012; Papatheodorou and Arvanitis, 2014) causing cuts in wages, pensions and public expenditure (Argyrou and Tsoukalas, 2011). In total, three assistance packages have been given to Greece by European institutions and the International Monetary Fund (IMF), followed by the introduction of austerity measures which are designed to achieve equivalent benefits (Leahy, Healy, and Murphy, 2014). All implemented austerity plans have focused on tough fiscal adjustment by considerably decreasing public expenditure, freezing and reducing public sector wages, capping pension payments, and postponing social benefits (Ghellab and Papadakis, 2011). In addition, during the period 2010 -2014 the unemployment rate has risen from nine to 27.5 percent in 2013 while for 2014 it remained close to 26.5 percent (International Monetary Fund, 2015) - structural unemployment has also increased significantly (OECD, 2013). More alarmingly, the unemployment rate among those below 25 years old has exceeded 60 percent, leading to widespread poverty and a rapid rise in the number of suicides amongst other effects (Markovitis, Boer, and Van Dick, 2014).

The economic crisis has forced Greece to witness the second largest job loss (-19.1 percent of the workforce) amongst EU countries (European Commission, 2013). Furthermore, the informal labor market is considered to be ‘out of control’ since it is unacceptably large (Venieris, 2013). The study of Economou, Madianos, Peppou,

Patelakis and Stefanis (2013) reveals an increase in depression amongst Greeks, from 3.3 percent in 2008 to 8.2 percent in 2011, with economic hardship and job vulnerability being the main factors, whilst the most vulnerable population groups were young people, married persons, and individuals in financial distress. In the 2015 World Happiness Report, Greece topped the list among 125 countries regarding adverse change in happiness between 2005-2007 and 2012-2014 (Helliwell, Layard and Sachs, 2015). As a result of the recession and the austerity policies the great majority of Greeks had to modify their consumption patterns, reducing the quantities consumed and/or looking for cheaper substitutes usually to the detriment of their perceived wellbeing (Vlontzos and Duquenne, 2013). Moreover, those that can still afford holidaymaking have become very conscious of their spending pattern as now highlighted by the empirical research.

Research Methodology

Participants

The research focused on adult holidaymakers returning to Athens (the capital of Greece) from their vacations during August 2014. The respondents had to have lived in Greece for at least the past three years, thus ensuring that they had experienced the impacts of the economic depression. The research was conducted at Athens International Airport (AIA) and the port of Piraeus (which is the port-city in the Athens Metropolitan Area). The recruitment of participants in communal areas such as ports (Blas and Carvajal-Trujillo, 2014) and airports (Seabra, Abrantes, and Kastenholz, 2014) is a usual practice for researchers to reduce the survey bias, as long as the dispersion of sites is sufficient to proportionally cover the examined population. This study used personal interviews based on structured questionnaires as the most

appropriate method of obtaining the primary data. Personal interviews were the best method of achieving the study's objectives since they are the most versatile and productive method of communication (Pappas, 2014). They facilitate spontaneity and also provide the potential to guide the discussion back to the outlined topic when discussions are unfruitful (Sekaran and Bougie, 2009). Although the proportion of missing data was low, list-wise deletion (i.e. the entire record is excluded from the analysis) was used because this is the least problematic method of handling missing data (Allison, 2001).

Sample determination and collection

Appropriate representation was a fundamental criterion for determining the sample size. According to Akis, Peristianis and Warner (1996), when there are unknown population proportions, the researcher should choose a conservative response format of 50/50 (assuming that 50 percent of the respondents have negative perceptions, and 50 percent do not) to determine the sample size. At least 95 percent confidence and 5 percent sampling error were selected. The sample size was:

$$N = \frac{(t-table)^2 (hypothesis)}{S^2} \Rightarrow N = \frac{(1.96)^2 (0.5)(0.5)}{(0.5)^2} \Rightarrow N = 384.16$$ **Rounded to 400**

The calculation of the sampling size is independent of the total population size, hence the sampling size determines the error (Aaker and Day, 1990). Four hundred holidaymakers were approached at AIA and another 400 at the port of Piraeus. From the 800 approached respondents, 422 useful questionnaires were collected (response rate: 52.75 percent). The statistical error for the sample population was 4.77.

Measures

The questionnaire was based on prior research, and consisted of 30 Likert Scale (1 strongly agree / 7 strongly disagree) statements. The full statements along with descriptive statistics are presented in Table 1. The reliability and validity of this selection rationale is supported by studies such as Kyle, Graefe, Manning and Bacon (2003), and Gross and Brown (2008). Moreover, one question was included to ensure that the holidaymakers had lived in Greece for at least the past three years.

Please insert **Table 1**

The job vulnerability constructs were adopted from the research of Murphy and Scott, (2014). The six statements focused on: occupational safety, insecurity, stress, potential of finding a similar job, workload, and income. For the exploration of disposable income levels available for tourism the research adopted five statements from the studies of Thrane and Farstad (2011) and Alegre et al. (2013). These statements dealt with the impact of the current recession in terms of income, employability, duration of holidays, destination preferences, and selection of travel means. For marketing activities, the research of Chikweche and Fletcher (2010) was used. Five statements were adopted to examine the influences of direct and indirect marketing, branding, and the promotional activities of tourist agencies/operators and destinations. The research selected the studies of Sanchez et al. (2006) and of Tarnanidis et al. (2015) for the examination of price issues. The eight aspects investigated dealt with: association of price and quality; best-selling brands; purchase at sale prices; product price; value-for-money; selection of lower priced products; price related purchasing risk, and reasonable price perception. Finally, for quality

issues the studies of Sanchez et al. (2006) and Sinkovics et al. (2010) were used. The resulting six statements focused on: organized quality of product; risk quality on expectations; quality relative to similar products; quality standards and expectations; overall quality purchased; and selection of best quality.

The study investigates the configurations through the use of fuzzy-set Qualitative Comparative Analysis (fsQCA). This is a theoretical method for the examination of relationships which are believed to have a bearing upon the outcome of interest and any potential binary set combinations generated from its predictors (Longest and Vaisey, 2008). QCA is considered to be a mixed-method technique, since it combines quantitative empirical testing (Longest and Vaisey, 2008) and qualitative inductive reasoning through case analysis (Ragin, 2000). QCA handles logical complexity by allowing for the fact that different combinations of characteristics may produce different results when combined with other events or conditions (Kent and Argouslidis, 2005). The study also had to estimate negated sets, i.e. presence or absence of a given condition (Woodside and Zhang, 2013). In a negated set, membership is calculated by taking one minus the score of membership of the examined case in the original fuzzy set (Skarmeas et al., 2014). As illustrated in Table 2, the presence of an attribute is indicated with upper case letters, whilst its absence is indicated with lower case letters.

According to Ordanini et al. (2014), in set theory a sub-relation with fuzzy measures is consistent when in a given attributional causal set the membership scores are equal or consistently less than the membership scores in the outcome set. Thus, consistency should be calculated as follows:

$$Consistency(X_i \leq Y_i) = \sum_i [\min(X_i; Y_i)] / \sum_i (X_i)$$

where, for holidaymaker i, X_i is the score for membership in the *X* configuration and Y_i is the score for membership in the outcome condition. Accordingly, the coverage includes the assessment of sufficient configurations' empirical importance (Ordanini et al., 2014) and is calculated as follows:

$$Coverage(X_i \leq Y_i) = \sum_i [\min(X_i; Y_i)] / \sum_i (Y_i)$$

In QCA when the consistency index is above .80 and the coverage index is above .45 then membership scores in the outcome condition are considered high for almost all high scores in the antecedent statement and a considerable number of cases fitting an asymmetric sufficiency distribution (Wu et al., 2014).

Empirical Results

Table 2 illustrates the distribution of holidaymakers' configuration best-fit cases, and presents the configurations addressed in at least one case. From the 2^5=32 possible combinations, 26 of them had at least one case, since the study lacks empirical instances for six configurations. According to QCA guidelines (Fiss, 2011), the latter configurations had to be excluded from the analysis, since their number is relatively small (six out of 32). Table 3 presents the results of fuzzy-test scores including all the variables considered in the analysis. Table 4 provides a QCA summary and presents the sufficient configurations of attributes for tourism decisions with coverage and consistency measures for each configuration and for the final solution. The combinations that have consistency scores higher than .80 are included in the table.

High consistency (solution consistency=.841) appears in the final solution, whilst its coverage is also high (total coverage=.734).

Please insert **Table 2**

Please insert **Table 3**

Sufficient configurations for job vulnerability in tourism decisions

According to the results, four configurations can stimulate tourism decisions (Table 4). The first configuration indicates that job vulnerability, disposable income for tourism, and quality issues with the absence of marketing activities and price issues can have a strong influence of tourism decision making. This pathway provides a fair consistency (.839) even if it is the lowest one compared with the other three. The second configuration suggests that job vulnerability, disposable income for tourism, price and quality issues with the absence of marketing activities significantly influence tourism purchasing decisions. The consistency for this configuration was .847. The third pathway focuses on the importance of job vulnerability and marketing activities with a parallel absence of disposable income for tourism, price and quality issues. The consistency of this configuration (.864) is the second highest in the research. The highest consistency (.880) is associated with the configuration that includes job vulnerability, disposable income for tourism and price issues, with the absence of marketing activities and quality issues.

Please insert **Table 4**

Presentation and interpretation of X Y plots

As already discussed the study examines five attributes/conditions (job vulnerability; disposable income for tourism; marketing activities; price; and quality issues). According to Rihoux and Ragin (2009, p. 19) a necessary condition for a configuration/outcome occurs when "it is always present when the outcome occurs. In other words, the outcome cannot occur in the absence of the condition. A condition is sufficient for an outcome if the outcome always occurs when the condition is present. However, the outcome could also result from other conditions". To illustrate the above graphically the present study uses X Y Plots. Such a plot examines necessity in terms of whether all values of Y are equal to or less than their X corresponding values, as well as sufficiency emerging when all X values are equal or less than their Y values (Mello, 2014a). This means that X expresses the coverage and Y expresses the consistency of the configuration. Following Schneider and Rohlfing (2013) an X Y plot comprises six zones produced by the intersection of the diagonal and the 2X2 matrix (Figure 1). Following Olthuis (2015) the irrelevant cases appear in zones 4 and 5, since they don't hold membership on the condition and on the outcome. Zone 6 includes the deviant cases for coverage, since they indicate that alternative explanations may more sufficiently explain the reason they have a high outcome, and in zone 1 (high levels of coverage and consistency) the cases are the typical ones for the configuration (Olthuis, 2015). The typical cases for necessity are met in the 2nd zone, whilst the cases in the 3rd zone also have a formal consistency with a necessity pattern (Schneider and Rohlfing, 2013). A necessity exists when all cases appear to be above or below the diagonal (Legewie, 2013), whilst the threshold of consistency for necessity is 0.9 (Mello, 2014a). In terms of configurations, they are perceived as sufficient when most cases lie above the diagonal (Mello 2014b).

Please insert **Figure 1**

As the results indicate the consistency of all sufficient configurations is lower than 0.9, meaning that none of the conditions exceed the aforementioned threshold, thus the dataset has no necessary conditions. This is also confirmed in Figure 2, since in all sufficient configurations the cases appear across all six zones (apart from 3rd configuration – no case appears in 2nd zone), whilst most of the cases in all sufficient configurations lie above the diagonal (no configuration has all cases above or below the diagonal). Consequently, all X Y plot configurations are perceived as sufficient.

Please insert **Figure 2**

Discussion

It is common knowledge that the current economic crisis has led many European economies (including the Greek economy) to instability, whilst people suffer greatly from job vulnerability and income reduction (Murphy and Scott, 2014). As expected, these issues have also had an impact upon tourism and have seriously affected travelers' decisions (Alegre et al., 2013). According to the study results, the fist sufficient configuration (JV*DIT*ma*pi*QI) underlines the relationships between job vulnerability, disposable income for tourism and the efforts made by travelers (especially in recession periods) to find high quality products in order to achieve the best possible value for money. In terms of higher quality this configuration is in accordance with the study of Alonso-Almeida and Bremser (2013), and for job uncertainty and disposable income, with Marcussen's (2011) research. The second solution (JV*DIT*ma*PI*QI) additionally includes price issues, providing a further

connection between job vulnerability and disposable income with the price-quality schema (as Lichtenstein et al. (1993) indicated) and ultimately with the efforts made by consumers to purchase the best possible product and/or service (also associated with PI5 and QI6 statements in Table 1). The interesting part of this solution is the inclusion of all attributes except marketing activities, something that might imply the reduction of marketing effect during periods of crisis. In contrast, the third solution (JV*dit*MA*pi*qi) includes marketing activities along with job vulnerability. This configuration may also be connected with the impact of job vulnerability on consumer psychology and the necessary orientation of marketing activities in order to lift the spirits of travelers, as also pinpointed in the study by Kaytaz and Gul (2014). The final sufficient configuration, which also appears to have the highest consistency, is an economy-centric one. It involves job vulnerability, disposable income for tourism and price issues (JV*DIT*ma*PI*qi). Not surprisingly, this solution focuses on the financial aspects (disposable income and price issues) and job vulnerability, which affects consumers' current buying behavior and their future purchasing ability. The studies of Alegre et al. (2013) and Kuhn (2002) have also mentioned these aspects, but the degree of their complexity is indicated by the current study.

Confirmation of tenets

As the results suggest, the provided explanation of the four sufficient configurations presented in Table 4 is high (total coverage =.734). In addition, job vulnerability is present in all provided sufficient configurations, whilst the other attributes do not always appear. This finding further underlines the importance of job vulnerability in tourism decisions. Thus, job vulnerability can be considered as a necessary condition for the investigation of tourism decisions during an economic crisis. Disposable

income for tourism appears in three out of four configurations, but is not included in the third configuration. Price and quality issues appear in two configurations each; in the second configuration they both appear, whilst in the third one they are both absent. Finally, marketing activities only appear in the third configuration. Overall these findings support the first tenet (T1), i.e. that the same attribute can determine different tourism decisions depending on its configuration with the other attributes.

Four equifinal routes are illustrated in Table 4, reflecting the different aspects travelers take into consideration for their tourism decisions. As Ragin (2000) and Ordanini et al. (2014) suggest, QCA is not based on variables but on cases, thus the provided solutions reflect: (i) a combination of outcome related variables, and (ii) the association of variable groups with that combination. As previously discussed, the first sufficient configuration is associated with an effort to achieve the best possible value for money. The second is connected with the achievement of the best possible purchase, also taking into consideration associations with the price-quality schema. The third sufficient configuration focuses on the potential contribution of marketing for consumers whose psychology is vulnerable due to the economic crisis. Finally, the fourth configuration is economy-centric and focuses on those consumers most affected by the economic recession. These results support the second tenet (T2), i.e. that complex configurations affect traveler evaluations of tourism decisions.

As Wu et al. (2014) suggest a simple condition can operate as a positive indicator in some configurations and a negative one in others. The configurations presented in Table 4 support this view. Thus, conflicting cases occur in the analysis since the outcome of the provided solutions depends on the attributes included or excluded. For

example, in the second configuration the effect of price-quality schema is present, whilst in the fourth one the economic effect of a tourism decision appears to be the dominant rationale for the final consumer behavior. In addition, in the third configuration, marketing seems to affect the negative consumer psychology due to job vulnerability, but in the first solution marketing is excluded from the consumers' 'value for money' orientation. Taking into consideration the findings above, the research supports the third tenet (T3), i.e. that within different configuration combinations simple conditions may positively or negatively affect tourism decisions.

QCA versus conventional approaches

Additional analysis was implemented in order to compare the research findings with clustering and deviation analysis. As Ordanini et al. (2014) suggest any comparison should be made with caution since QCA implements distinct assumptions like complex causality; establishes relations through the use of cases instead of variables; focuses on different research objectives; and identifies configurations that provide sufficient and necessary conditions for a result of interest. These aspects may result in meaningless outcomes if the provided comparison is not carefully implemented.

First, a hierarchical and k-means analysis was conducted. Following the process that Ordanini et al. (2014) discussed and the guidelines of Hair, Black, Babin, and Anderson (2010), the method of single-linkage agglomeration produced a solution of four clusters, and analysis of variance (ANOVA) was implemented using job vulnerability as the dependent variable. The results revealed that $F=60.456$ ($p<.01$), whilst the propensity of the first three clusters was strong (fuzzy score >.5), and for the fourth one it was weak (fuzzy score <.5). As a result, only three out of four

clusters are related to job vulnerability, whilst they do not illustrate the complex associations provided by QCA. Moreover, the explanatory power of cluster analysis was R^2=.563. On the other hand, the explanatory power of QCA exceeded .7 (total coverage =.734). All of the above indicates that QCA can provide better findings and is more precise as a method than cluster analysis.

Regression analysis was also conducted on the aspects examined in the study. Cronbach's A and loadings from factor analysis are presented in Table 5. All effects are statistically significant, whilst the disposable income for tourism is the most important component (R^2=.487), followed by job vulnerability (R^2=.435), price (R^2=.328), and quality issues (R^2=.258). The least important was marketing activities (R^2=.186). Job vulnerability has a positive impact on the weight of disposable income for tourism in the consumer decision-making process (β=.217; p<.01) and negative effects with the other three components (price issues: β=-.208; p<.01, quality issues: β=-.174; p<.01, marketing activities: β=-.182; p<.05). Disposable income for tourism shows positive effects with price (β=.187; p<.01) and quality issues (β=.136; p<.05), and negative effects with marketing activities (β=-.159; p<.05). Marketing almost equally affects positively price (β=.193; p<.01) and quality issues (β=.185; p<.01), whilst the price-quality schema is also confirmed (β=.231; p<.01). Still, in all cases the effects are relatively low. Comparing the results of the regression analysis with those from the QCA (in terms of dominance of job vulnerability attribute; the importance of disposable income for tourism; the associations of price and quality with the other attributes; and the use of marketing) the appropriateness of the latter is clear. The comparison reveals that regression analysis is less efficient than QCA and can only partially explain the relationships between the examined constructs.

Please insert **Table 5**

Fit and predictive validity

The vast majority of studies evaluating specific models focus on the examination of the model fit (Gigerenzer and Brighton, 2009) in order to ensure that the data support the relationships amongst the observed variables and their respective factors (Pappas, 2015b). Still, only a few studies focus on predictive validity (Roberts and Pashler, 2000; Wu et al., 2014), since a good fit to observations does not necessarily indicate the existence of a good model (Gigerenzer and Brighton, 2009). This study also estimates predictive validity. In this context, the process described by Wu et al. (2014) was followed: the research sample was divided in a holdout and a modelling subsample using half of the overall sample, since the patterns of job vulnerability are perceived as consistent indicators for the production of high scores. The overall consistency exceeded .8 (C1=.872) and the coverage exceeded .5 (C2=.562). The results indicate that the QCA model has good predictive validity.

Managerial implications

The results highlight the importance of using QCA in order to examine the complex attributes, which influence the formulation of tourism decisions during a recession. The four attribute configurations that emerged from the analysis focus on different consumer segments characterized by: (i) value for money orientation; (ii) achievement of best available purchase; (iii) psychological strengthening; and (iv) price sensitivity. The distinction between, and understanding of, these attributes could have a significant effect on tourism and hospitality companies' decision-making processes in

terms of the evaluation and selection of the preferable market segment(s), as well as the determination of product and service launch strategies.

In terms of management, the examination of the complexity of a concept using QCA can provide a better understanding of the influence of attributes which affect tourism decisions especially from countries suffering from serious economic recession like Greece. Conventional symmetric analyses cannot illustrate these complex associations; they are unable to give a holistic perspective with regard to holidaymakers' behavior. The results highlight job vulnerability as a fundamental factor in the making of tourism decisions during crisis periods in agreement with all previous models. Managers should consider the impacts of job insecurity and its effects on the determination of disposable income available for tourism. They also need to focus on the factors that make consumers more demanding in terms of quality and best value-for-money products, especially in periods of economic turmoil. As Pappas (2016) also suggests, good quality products are likely to assist in uncertainty reduction, and increase the positive perceptions of a worthwhile purchase and trust on the retailer. Thus, pricing should not only take into consideration the products' and services' quality aspects, but also the considerable uncertainty in the market due to recession, and the vulnerability issues of the targeted market segments. Through targeted marketing activities (e.g. direct marketing) managers can improve and support the psychology of their consumers, an aspect that has been severely damaged by the current conditions of job uncertainty and a series of austerity measures and income reduction. Public service providers should also acknowledge the importance of tourism for comforting psychologically vulnerable people, especially those belonging to older age (Morgan, Pritchard, and Sedgley, 2015) and lower income

cohorts (Minnaret, Maitland, and Miller, 2009). Thus, the Greek social welfare tourism programs that severely suffered from budget cuts during recent years (Fourla, 2015) have to be significantly reactivated and supported by the state. This can be possibly achieved through benefits in kind (e.g. free training seminars) for participating social tourism service providers as monetary subsidies may be precluded due to austerity. Moreover, managers can formulate their campaigns in such a way to create further awareness (e.g., discounts, product and service cost stabilization etc.) by exploiting opportunities to address price sensitive and/or vulnerable (occupationally, psychologically) market segments.

Understanding the complexity of decision making, especially with regard to discretionary products like tourism, can also assist decision makers in new product and service launch. The use of QCA can help managers improve their strategies and consumer targeting through the provision of further understanding of which market segment(s) need to be approached and targeted, how and in exactly what period of time. For example, the extent and psychological effect of job vulnerability may differ from one period to another, especially in countries like Greece where the occupational seasonality is very high, mainly due to the seasonal character of the most important economic sector in the country, i.e. tourism, which accounts for about 20 percent of GDP (SETE, 2015). With a special focus on service sector products where the complexity of decision making is higher (Ordanini et al., 2014), the models provided by the current study indicate that tourism decisions depend on the specific characteristics and focus of the consumers (e.g., price sensitivity, value-for-money orientation etc.). Thus, QCA can be a useful tool for managers to improve their decision-making and increase the market share of related products and services.

Conclusion

This study has used QCA in an effort to examine the complexity of attributes affecting tourism decision making. More specifically, it investigates the influence of job vulnerability, disposable income available for tourism, marketing activities, and price and quality issues for holidaymakers residing in Greece when returning from their vacations. The implementation of QCA in the tourism sector is innovative (to the best of the authors' knowledge, the only other study is that of Ordanini et al. (2014), focusing on hotel service innovation), and very few studies have generally employed it in the service sector (see Woodside and Zhang, 2013; Wu et al., 2014). This study also compares QCA with the two dominant linear analysis methods (i.e. correlation and regression) which are usually adopted in tourism, pinpointing QCA's efficiency in dealing with complex attributes by analyzing cases instead of variables. The study also demonstrates QCA's predictive validity, something that only a handful of service oriented studies have undertaken so far (Roberts and Pashler, 2000; Wu et al., 2014).

In spite of its research contribution, the limitations of the study need to be highlighted. The first limitation derives from the study's contribution itself, due to the lack of QCA studies in tourism. To examine the full potential of QCA in tourism, more QCA research involving complexity theory in additional tourism contexts needs to be implemented. Second, the examination of different attributes can produce different outcomes. Thus, if this study is repeated to examine some other factors influencing tourism decisions, research should be implemented with caution. Third, further research into different kinds of holidaymakers (packaged vs individual tourists) with different job roles (e.g., seasonally vs annually occupied employees) in different regions suffering from the current recession (e.g., Cyprus, Ireland, Italy, Spain) or

different kinds of crises (e.g., environmental degradation, earthquakes, terrorist activities) may produce different outcomes. Thus, the interpretation of findings should be made carefully as it is inevitably context-dependent to a significant degree. Fourth, the psychological aspects of consumers need to be further examined in terms of their connection of practicing tourism with 'public health' aspects. This may produce useful findings for the significance of tourism in wellbeing and psychological health matters, especially in communities that deeply suffer from economic crises. Finally, the inclusion of the respondents' personal characteristics such as socio-demographics (e.g. level of education and income); disposable income available for tourism activities; and frequency of participation in tourism activities can further contribute to the understanding of tourism decision-making and perception variations. Such examination could provide useful findings for the formulation of decision making perspectives and the appreciation of purchasing behavior.

Methodologically, the ability of QCA to identify and demonstrate sufficient configurations in a specific context can also be of complementary use with other techniques like conjoint analysis. Moreover, QCA can be used to examine other multiple factors produced by job vulnerability such as psychological fluctuations, self-esteem levels, and the importance of interaction with others within the work environment. Finally, QCA can further examine the effect of the emotional complexity of consumers in tourism decisions derived in periods of crisis from exogenous (e.g. political and financial instability) and endogenous (e.g. salary stagnation or reduction, job opportunities) factors. All the above provide fruitful grounds for establishing QCA in tourism analysis.

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Table 1: Descriptive statistics

Job Vulnernability		Mean	St. Deviation
JV1	The current unemployment rates make me feel vulnerable in terms of my occupational safety	1.67	0.435
JV2	I feel that my job is insecure because of the recession	1.98	0.448
JV3	The current recession is a cause of stress to me in relation to my job	1.56	0.502
JV4	The current recession makes me feel that it would be difficult to find a job which is similar to my current one	1.82	0.763
JV5	Since the beginning of the recession my weekly working hours have been reduced	3.85	0.353
JV6	Since the beginning of the recession my income has been reduced	1.23	0.531
Disposable Income for Tourism		Mean	St. Deviation
DIT1	The impact of the current recession on my income has negatively affected my expenditure for tourism purposes	1.71	0.579
DIT2	The impact of the current recession on my employment security has negatively affected my expenditure for tourism purposes	2.05	0.25
DIT3	The current recession has affected the duration of my holidays due to the financial cost involved	2.25	0.682
DIT4	The current recession has affected my preferences for destination selection due to the financial cost involved	2.34	0.742
DIT5	The current recession has affected my selection of the means of travel due to the financial cost encountered	2.8	0.825
Marketing Activities		Mean	St. Deviation
MA1	Direct marketing activities (i.e. direct mail and e-mails) influence my purchasing decisions	1.88	0.473
MA2	The 'above the line' promotional activities (i.e. TV and radio advertisements) influence my purchasing decisions	2.18	0.265
MA3	The tourism product's branding influences my purchasing decisions	1.63	0.852
MA4	Promotional activities undertaken by tourist agencies/operators influence my decision to select the tourist product/package I intend to buy	2.31	0.834
MA5	Promotional activities undertaken by destinations influence my decision to select the tourist product/package I intend to buy	2.47	0.571
Price Issues		Mean	St. Deviation
PI1	The higher the price of the product, the better its quality	2.37	0.249
PI2	I prefer to buy the best-selling brands	2.59	0.746
PI3	I buy as many of my tourist products as possible at sale prices	2.63	0.409
PI4	The price is the main criterion for my purchasing decision	1.94	0.75
PI5	I look carefully to find the best value-for-money	1.6	0.355
PI6	I usually choose lower priced tourist products	1.61	0.384
PI7	I think about the risk of not having made a good purchase bearing in mind the price I pay	1.95	0.651
PI8	The tourist product/package I purchase should be reasonably priced	1.5	0.573
Quality Issues		Mean	St. Deviation
QI1	When buying a tourist product/package I consider the potential quality in the way the product/package is organized	2.26	0.742
QI2	When buying a tourist product/package I consider the potential risk that I will not receive what I expected	3.13	0.474
QI3	When buying a tourist product/package I consider its quality compared with other relevant tourist products/packages	1.86	0.458
QI4	I have very high standards and expectations with regard to the tourist products/packages I buy	2.85	0.577
QI5	In general, I try to buy the best overall quality	1.7	0.385
QI6	When it comes to purchasing tourist products/packages, I try to get the very best, or perfect choice	3.52	0.478

Table 2: Analysis of configurations: Distribution of best-fit cases

Configurations		Cases	Percentage
1	JV*DIT*MA*pi*QI	49	11.61
2	JV*DIT*ma*PI*QI	45	10.66
3	JV*DIT*MA*PI*QI	41	9.72
4	JV*dit*ma*PI*QI	37	8.77
5	jv*dit*MA*PI*QI	35	8.29
6	JV*DIT*MA*PI*qi	31	7.35
7	jv*dit*ma*PI*QI	29	6.87
8	jv*DIT*ma*PI*QI	24	5.69
9	JV*dit*MA*PI*QI	22	5.21
10	JV*dit*ma*pi*qi	17	4.03
11	jv*DIT*MA*PI*QI	13	3.08
12	jv*DIT*ma*pi*QI	12	2.84
13	jv*dit*ma*pi*qi	10	2.37
14	JV*DIT*MA*pi*qi	9	2.13
15	jv*dit*MA*pi*QI	8	1.9
16	JV*DIT*ma*PI*qi	8	1.9
17	JV*dit*MA*PI*qi	7	1.66
18	jv*dit*ma*PI*qi	5	1.18
19	jv*DIT*MA*PI*qi	4	0.95
20	jv*dit*MA*PI*qi	4	0.95
21	JV*dit*MA*pi*qi	4	0.95
22	jv*dit*MA*pi*qi	3	0.71
23	JV*DIT*ma*pi*QI	2	0.47
24	jv*dit*ma*pi*QI	1	0.24
25	jv*DIT*MA*pi*QI	1	0.24
26	JV*DIT*ma*pi*qi	1	0.24
Total		**422**	**100**

JV: Job Vulnerability; DIT: Disposable income for tourism; MA: Marketing activities; PI: Price issues; QI: Quality issues

Uppercase: Present attribute; Lowercase: Absent attribute

Note: Configurations with lack of empirical evidence were not included in the table and were excluded from the analysis

Table 3: Fuzzy-set scores: Pairwise Correlations

	Means	Standard Deviation	Job Vulnerability	Disposable Income for Tourism	Marketing Activities	Price Issues	Quality Issues
1	.62	.423	1				
2	.47	.478	.472**	1			
3	.58	.395	.587*	.119	1		
4	.54	.512	.341**	.084*	.112	1	
5	.49	.437	.235*	.257*	.376*	.183*	1

*The significance is at 0.05 level ($p<.05$)

** The significance is at 0.01 level ($p<.01$)

Table 4: Sufficient configurations for job vulnerability

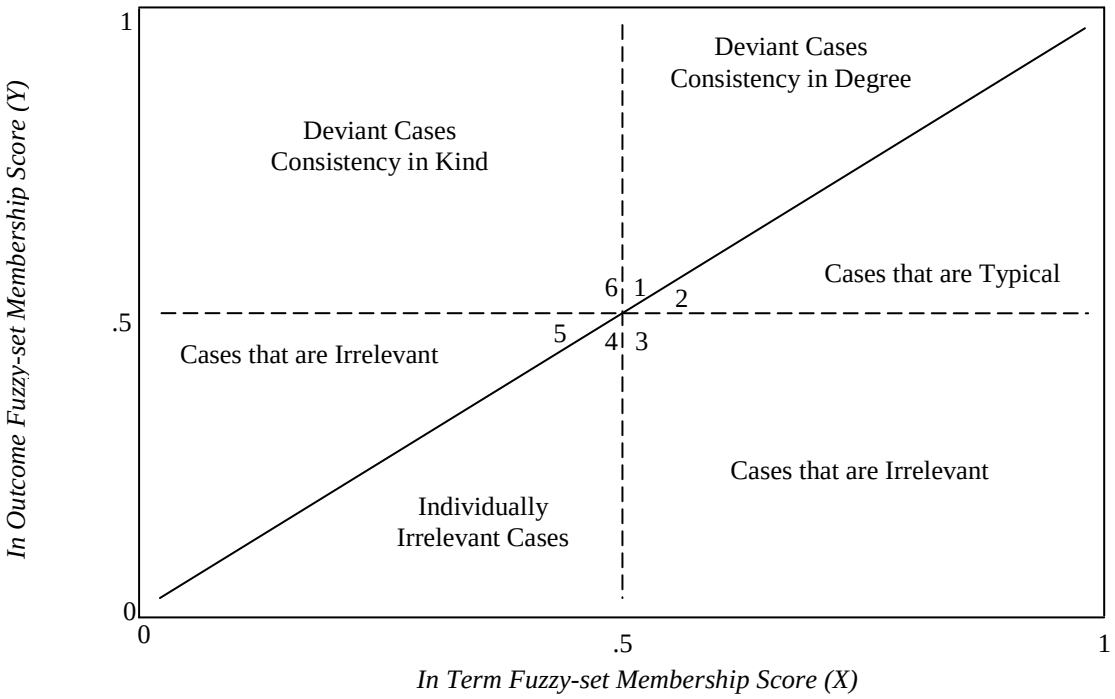
Models	Raw Coverage	Unique Coverage	Consistency
JV*DIT*ma*pi*QI	0.15	0.07	0.84
JV*DIT*ma*PI*QI	0.18	0.08	0.85
JV*dit*MA*pi*qi	0.20	0.11	0.86
JV*DIT*ma*PI*qi	0.22	0.14	0.88

JV: Job Vulnerability; DIT: Disposable income for tourism; MA: Marketing activities; PI: Price issues; QI: Quality issues

Uppercase: Present attribute; Lowercase: Absent attribute

Total coverage: 0.73; Solution consistency: 0.84

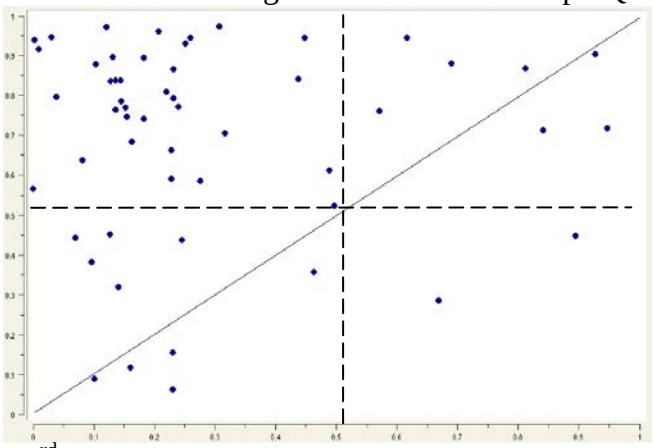
Figure 1: Enhanced XY plot and types of cases in fsQCA of Necessity



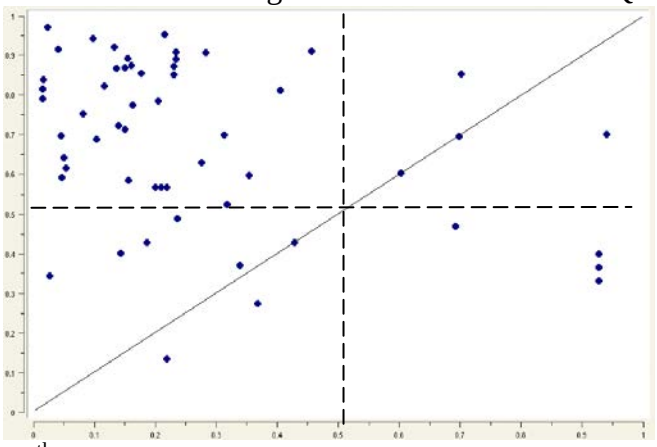
Source: Adopted from Schneider and Rohlfing (2013, p. 580)

Figure 2: XY plots for sufficient configurations

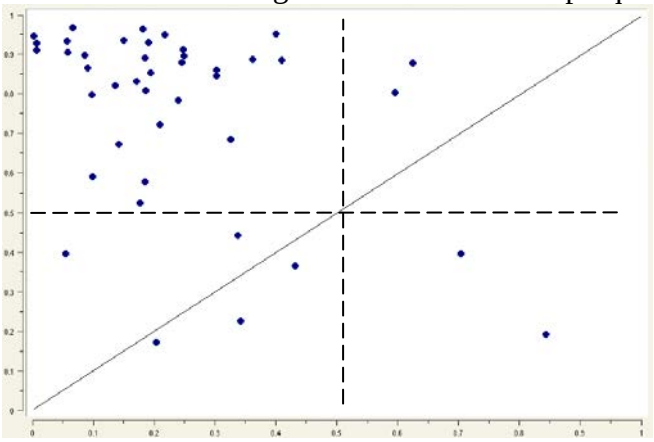
1st Sufficient Configuration: JV*DIT*ma*pi*QI



2nd Sufficient Configuration: JV*DIT*ma*PI*QI



3rd Sufficient Configuration: JV*dit*MA*pi*qi



4th Sufficient Configuration: JV*DIT*ma*PI*qi

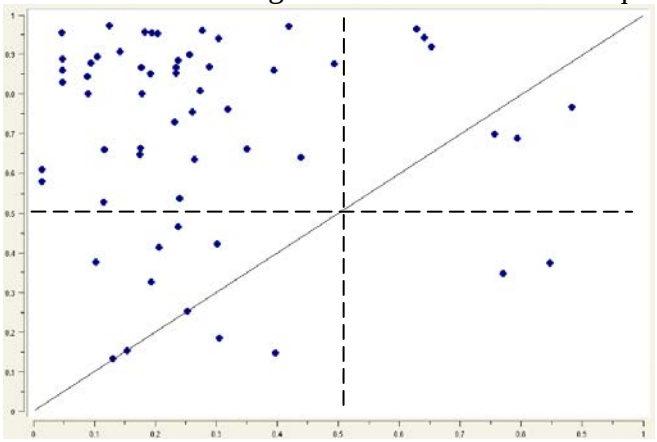


Table 5: Cronbach's A and loadings produced by factor analysis

Statement	Cronbach's A	Job Vulnerability	Disposable Income for Tourism	Marketing Activities	Price Issues	Quality Issues
JV1	.828	.764				
JV2		.834				
JV3		.682				
JV4		.695				
JV5		.739				
JV6		.681				
DIT1	.834		.738			
DIT2			.836			
DIT3			.875			
DIT4			.920			
DIT5			.647			
MA1	.819			.567		
MA2				.426		
MA3				.462		
MA4				.638		
PI1	.822				.673	
PI2					.742	
PI3					.639	
PI4					.539	
PI5					.750	
PI6					.843	
PI7					.689	
PI8					.863	
QI1	.830					.711
QI3						.528
QI4						.754
QI5						.675
QI6						.683
Total Rotation Sums of Squared Loadings		6.512	5.934	4.518	5.350	5.162
Percent of Total Variance Explained		15.037	15.278	11.604	14.234	13.812

Note: Only factor loadings with values above .40 have been included on the table