Perceived Risks and Chaordic Tourism Decision-making during Recession

**Abstract**

The study examines the behavioural complexity formulated by tourism related risk effects during recession. Based on chaos and complexity theories it evaluates the tourism chaordic system. Using a sample of 507 Athenian holidaymakers the research employs fuzzy-set Qualitative Comparative Analysis, and evaluates the social, destination, price, and quality risks’ effects upon purchasing intentions. The analysis also includes the socio-demographics of age and monthly income. The results reveal three sufficient configurations (price-quality nexus; tourism experience; destination image) able to influence tourism purchasing decisions. The study also suggests several managerial implications concerning complexity aspects of purchasing tourism behaviour during periods of turmoil.

*Keywords:* fuzzy-set Qualitative Comparative Analysis, economic crisis, destination selection, holidaymakers, Greece

**Introduction**

Tourism purchasing decision making entails high perceived risks due to the special characteristics (e.g.: high costs; complexity) of the related products and services (Curras-Perez et al, 2017; Sun, 2014). Although those types of risks (e.g.: financial; social; quality/performance) can also be met in other sectors (Kim et al., 2009), the high levels of tourism complexity substantially increase risk impacts upon consumers’ purchasing intentions (Pappas, 2017a). Hence, it is important to evaluate the complexity of the perceived risks in tourism purchasing, something that the current literature is predominantly silent.

The current study evaluates the complexity impact of social, destination, price, and quality risks upon holidaymakers’ purchasing intentions, also including the socio-demographics of age and income. Previous research indicates that turmoil periods operate as a catalyst for the exponential increase on the effect of perceived risks in tourism purchasing (Pappas, 2018). The study was held in Athens, Greece, the most affected European region from the current economic crisis. Its contribution lies in both, theoretical and methodological domains. Theoretically, it provides evidence for the complex effect of perceived risks in tourism purchasing intentions of people substantially experiencing the impact of recession (Athenian residents). Methodologically, it focuses on the implementation of fuzzy-set Qualitative Comparative Analysis (fsQCA), a method only recently introduced in travel and tourism.

**Chaordic tourism dimensions**

The theory of chaos proposes that even small differences in behavioural patterns can generate significant diverging outcomes to dynamic systems making impossible to predict long-term patterns (Kellert, 1993). However, complexity (a theory evolved by the theory of chaos) concerns the systems that many interacting agents are involved, and (although hard to predict) these systems allow improvement since they entail some sort of structure (Zahra and Ryan, 2007). Nevertheless, as Fitzerland and Eijnatten, (2002) suggest, the higher the complexity, the less straightforward the systemic behavioural patterns, whilst the ‘chaordic system’ concerns a concept derived in response to the strong relationship between chaos and complexity. The technical term ‘chaord’ is used as an amalgamation of the words chaos and order (Van Eijnatten et al., 2007). A chaordic system suggests a complex and dynamic set of connections between elements that form a unified whole, whose behaviour is at the same time unpredictable (chaos), but also entails patterns (order) (Olmedo, 2011).

Several recent studies suggest that the dominant reductionist (linear) examination of behavioural patterns in the service sector cannot fully encapsulate the existing complex aspects, creating the necessity for employing asymmetric (non-linear) approaches (Ordanini et al., 2014; Papatheodorou & Pappas, 2017; Pappas, 2018; Skarmeas et al, 2014). In tourism and hospitality, companies and destinations employ numerous practices in order to cope in with the industry’s complexity (Eugenio-Martin & Campos-Soria, 2014; Falk, 2013; Wang & Ritchie, 2012). Especially in periods of turmoil (in this case recession) business complexity aspects dramatically increase (Coskun & Ozceylan, 2011), thus it is necessary to examine the complexity of the formulated chaordic system (Papatheodorou & Pappas, 2017). As Levy (1994, p.176) suggests “long term forecasting is almost impossible for chaotic systems, and dramatic change can occur unexpectedly; as a result, flexibility and adaptiveness are essential for organisations to survive”.

**Methods**

*Participants*

The research was held in July and August 2018 at the International Airport of Athens (Eleytherios Venizelos) to adult permanent Athenian residents (residing it the city for at least the past three years) leaving for vacations. This study used structured questionnaires as the most appropriate method of obtaining the primary data. For missing data, list-wise deletion (analysis exclusion of the entire record) was employed due to the fact that this is the least problematic method of handling missing data (Allison, 2001).

*Sample*

In total, 800 holidaymakers were asked to participate (400 leaving for domestic destinations and 400 abroad), generating a return of 507 usable questionnaires (domestic: 296; abroad: 211). As a result, the overall response rate is 63,4 percent (domestic: 74 percent; abroad: 52,8 percent) and the statistical error is 4,3 (domestic: 5,7 percent; abroad: 6,7 percent).

*Measures*

The questionnaire consists of 34 Likert scale (1: Strongly disagree / 5: Strongly agree) statements. All statements were adopted from previous studies (Social risks: Sun [2014]; Destination risks: Monterrubio [2017]; Price risks: Pappas [2017b] and Shapiro et al. [n.d.]; Quality risks: Sun [2014]; Purchasing intention: Pappas [2016] and Wu et al. [2015]). It also includes two socio-demographic questions (age, monthly income) and a stratification one (type of travel: domestic/abroad).

The configurations are examined through the use of fsQCA. This is a theoretical method for the relationships’ evaluation which are considered to impact the interest outcome (in this case purchasing intentions) and any combinations of binary sets produced from its predictors (Longest & Vaisey, 2008). QCA is a mixed-method technique, and in the same analysis it combines quantitative empirical testing (Longest & Vaisey, 2008) and through case analysis qualitative inductive reasoning (Ragin, 2000). This method handles logical complexity by allowing for the fact that different characteristics’ combinations are able to generate different outcomes when there is a combination existence of other conditions and events (Kent & Argouslidis, 2005). The research also estimates negated sets (presence or absence of a given condition [Woodside & Zhang, 2013]), which the calculation of membership is made by taking one minus the score of membership of the case under examination in the original fuzzy set (Skarmeas et al., 2014).

**Results**

The study’s socio-demographics are presented in Table 1. Most respondents belonged to the younger age group (between 18 and 35 years old: 40,4 percent) followed by the other two ones (36 till 50: 35,5 percent; Over 50: 24,1 percent). Moreover, the majority of the sample had a monthly income less that €1000 (54 percent).

Since all statements were adopted from previous studies, the evaluation of constructs was made through CFA (Confirmatory Factor Analysis). As presented in Table 2, all items generated sufficient loadings, the overall Cronbach A was good (,858), whilst per construct it varied from ,894 to ,943. Moreover, in all constructs AVE (Average Variance Explained) was higher than the minimum acceptable (,5), and CR (Composite Reliability) was higher that AVE. Using an aggregation (i.e. grouping) process for the 34 statements around the five constructs, Table 3 reports the correlation results among the latter for the research study. Skarmeas et al. (2014) suggest that in a correlation matrix when the absolute value of all the coefficients is less than ,60, then a general asymmetry exists in the respective relationships among variables. This means that the causal conditions generated by the alternative combinations may lead to the same outcome (Woodside, 2013).

*Sufficient complex configurations*

Table 4 presents the three solutions generated from fsQCA analysis. The first sufficient configuration (~f\_a\*f\_i,\*~f\_sr,\*~f\_dr\*f\_pr\*f\_qr) indicates that the inclusion of one socio-demographic (income) with high price and quality risks is able to influence the decision-making element of purchasing intention. This outcome appears to have the highest consistency of all three (,849).

The second generated solution (~f\_a\*~f\_i,\*f\_sr,\*f\_dr\*~f\_pr\*f\_qr) provides evidence that high social, destination, and quality risks affect the purchasing intentions of holidaymakers. This configuration has the highest coverage of all generated solutions (,452).

The third sufficient configuration (f\_a\*~f\_i,\* ~f\_sr,\*f\_dr\*f\_pr\*~f\_qr) includes the age socio-demographic with high destination and price risks. As the findings suggest, this combination can sufficiently influence holidaymakers’ purchasing decisions. Although the solution in reference has the lowest consistency (,808) and coverage (,405), it is very well capable influencing tourists’ decision-making.

**Discussion**

It is important to be highlighted that any potential comparison of fsQCA results with other methods should be made with caution, since the implementation of alternative assumptions (e.g.: complex causality) concerns different objectives, the established relations are made through cases and not through variables, and the sufficient configurations are identified under the perspective of the provision of necessary and adequate conditions for the result of interest (Ordanini et al., 2014).

The research findings generate an interesting discussion. The first sufficient configuration concerns price and quality aspects. The price-quality nexus is exceptionally significant in travel and tourism decision-making since holidaymakers aim to select high-quality products in order to achieve the best possible value-for-money (Papatheodorou & Pappas, 2017). According to Zeithaml (1988) consumers use price for the evaluation of overall product excellence or superiority. As a result, 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). Thus, they play an important role in consumer decision-making, affecting judgements of perceived quality, and influencing perceived value and purchase intention (Zhou et al., 2002).

The second solution is centered on the generated experience of holidays. Consumer travel, tourism and destination experience, are considered to be very important factors in the formulation of travel and purchasing intentions (Pappas, n.d.). The findings highlight the influence of social, destination, and quality risks for the creation of the travel and holiday experience. One more interesting aspect is that experience does not seem to be influenced by the examined socio-demographics of age and income. This further illustrates its importance for purchasing-decision making, since its dependency solely relies on the examined constructs.

The third sufficient configuration concerns the perceived destination image. This solution includes destination and price risks, showcasing the association of those related risks with the destination image. It also includes the age socio-demographic. The latter is also highlighted as an important aspect for the formulation of destination perceptions, and ultimately its image. As previous research highlights (Lepp et al., 2011) perceived risks are increasingly becoming an integral part for the formulation of a destination’s image. The findings confirm those issues further highlighting the association of destination with price risks, and their connection with holidaymakers’ age.

*Managerial Implications*

From a managerial perspective, the results provide some useful implications. For starters, through the implementation of non-linear analysis, tourism and hospitality firms and destinations can better understand the special focus and needs of their customers. A better decision-making understanding can consequently lead to better market segmentation and targeting the desired market segments. As the results indicate, three different pathways (price-quality nexus; experience; destination image) can lead to the same outcome. In this case each and every company/destination can select the sufficient configuration that is more compatible with the firm’s/destination’s characteristics and strategies, meaning that it can better identify and approach the desired market.

Moreover, such analysis can provide a better comprehension of special conditions in market analysis (in this case recession) and the reshaping of the market. As the findings reveal, recession showcased price-quality nexus as the most important pathway (highest consistency results) for purchasing intentions. However, the generated experience and destination image continue to have a strong impact upon tourist decision making. Hence, such analysis can provide sufficient grounds for companies/destinations to appropriately differentiate their products and services, so as to enhance tourist experience and add value to their brand image.

**Conclusions**

The study focused on the holidaymakers’ purchasing intentions by examining the complexity effect of social, destination, price, and quality risks. The implementation of fsQCA has revealed three different pathways dealing with the price-quality nexus, the generated experience from holidays, and the perceived destination image, showcasing the different risk effects upon tourists and their decision-making.

Despite the study’s contribution, several limitations need to be highlighted. The first limitation derives from the use of fsQCA, since it is a method that has only recently started being applied in tourism and hospitality domain. Further use of this method in different tourism related aspects can unfold its full research potential for the examination of complexity patterns. The second limitation concerns the examination of holidaymakers battered by the recent Greek economic crisis. If this study is repeated in some other region that recession did not have such high effect, the findings are likely to differ. Another aspect that needs to be considered is a comparative study towards holidaymakers’ perspectives and perceptions of tourism and hospitality stakeholders. This can generate a more holistic approach for the formulation of purchasing intentions, also providing related insights on how stakeholders actually evaluate the decision making of holidaymakers. Finally, the ability of fsQCA to identify and present sufficient configurations in a specific complexity aspect can also be combined with other non-linear techniques such as SNA (Social Network Analysis) and NCA (Necessary Condition Analysis). All the above provide sufficient evidence for establishing non-linear analysis (with special reference to fsQCA) for complex tourism and hospitality issues.

**Word count: 2158**

**References**

Allison, P.D. (2001). *Missing data*.Thousand Oaks, CA: Sage Publications.

Coskun, E., and Ozceylan, D. (2011). Complexity in Emergency Management and Disaster Response Information Systems (EMDRIS). *8th International ISCRAM Conference*, 8-11 May, Lisbon, Portugal.

Curras-Perez, R., Ruiz, C., & Sanz, S.G.S. (2017). Determinants of customer retention in virtual environments. The role of perceived risk in a tourism services context. *Spanish Journal of Marketing, 21(2)*, 131-145.

Eugenio-Martin, J.L., & Campos-Soria, J.A. (2014). Economic crisis and tourism expenditure cutback decision, *Annals of Tourism Research, 44*, 53-73.

Falk, M. (2013). A survival analysis of ski lift companies, *Tourism Management, 36*, 377-390.

Fitzgerald, L.A., & Van-Eijnatten, F.M. (2002). Reflections: chaos in organizational change. *Journal of Organizational Change Management, 15(4)*, 402-411.

Kellert, S. (1993). *In the wake of chaos: Unpredictable order in dynamical systems*. Chicago IL: University of Chicago Press.

Kent, R.A., & Argouslidis, P.C. (2005). Shaping business decisions using fuzzy-set analysis. *Journal of Marketing Management,* *21(5-6)*, 641-58.

Kim, H., Kim, T., & Shim, S.W. (2009). Modelling roles of subjective norms and eTrust in customers’ acceptance of airline B2C ecommerce Websites. *Tourism Management, 30(2)*, 266-277.

Lepp, A., Gibson, H., and Lane, C. (2011). Image and perceived risk: A study of Uganda and its official tourism website. *Tourism Management, 32(3)*, 675-684.

Levy, D. (1994). Chaos theory and strategy: Theory, application and managerial implications. *Strategic Management Journal, 15(Summer)*, 167-178.

Lichtenstein, D.R., & Burton, S. (1989). The relationship between perceived and objective price–quality. *Journal of Marketing Research, 26(4)*, 429-443.

Longest, K., & Vaisey, S. (2008). Fuzzy: A program for performing Qualitative Comparative Analyses (QCA) in STATA. *The STATA Journal*, *8(1)*, 79-104.

Monterrubio, C. (2017). Protests and tourism crises: A social movement approach to causality. *Tourism Management Perspectives*, *22*, 82-89.

Olmedo, E., & Mateos, R. (2015). Quantitative characterization of chaordic tourist destination. *Tourism Management, 47*, 115-126.

Ordanini, A., Parasuraman, A., & Rubera. G. (2014). When the recipe is more important than the ingredients: A Qualitative Comparative Analysis (QCA) of service innovation configurations. *Journal of Service Research*, *17(2)*, 134-149.

Papatheodorou, A., & Pappas, N. (2017). Economic recession job vulnerability and tourism decision-making: A Qualitative Comparative Analysis. *Journal of Travel Research, 56(5)*, 663-677.

Pappas, N. (2016). Marketing strategies, perceived risks, and consumer trust in online buying behaviour. *Journal of Retailing & Consumer Services*, *29*, 92-103.

Pappas, N. (2017a). Risks and marketing in online transactions: A Qualitative Comparative Analysis. *Current Issues in Tourism, 20(8)*, 852-868.

Pappas, N. (2017b). The complexity of purchasing intentions in peer-to-peer accommodation. *International Journal of Contemporary Hospitality Management*, *29(9)*, 2302-2321.

Pappas, N. (2018). Hotel decision-making during multiple crises: A chaordic perspective. *Tourism Management, 68*, 450-464.

Pappas, N. (n.d.) UK Outbound Travel and Brexit Complexity. *Tourism Management*. Article in press.

Ragin, C.C. (2000). *Fuzzy-set Social Science*. Chicago, IL: University of Chicago Press.

Shapiro, S.L., Reams, L., & So, K.K.F. (n.d.). Is it worth the price? The role of perceived financial risk, identification, and perceived value in purchasing pay-per-view broadcasts of combat sports. *Sport Management Review*. Article in press.

Skarmeas, D., Leonidou, C.N., & Saridakis, C. (2014). Examining the role of CSR skepticism using fuzzy-set qualitative comparative analysis. *Journal of Business Research,* *67*, 1796-1805.

Sun, J. (2014). How risky are services? An empirical investigation on the antecedents and consequences of perceived risk for hotel service. *International Journal of Hospitality Management, 37*, 171-179.

Van-Eijnatten, F.M., Putnik, G.T., & Sluga, A. (2007). Chaordic systems thinking for novelty in contemporary manufacturing. *CIRP Annals - Manufacturing Technology, 56(1)*, 447-450,

Wang, J., & Ritchie, B.W. (2012). Understanding accommodation managers’ crisis planning intention. An application of the theory of planned behaviour, *Tourism Management, 33*, 1057-1067.

Woodside, A.G. (2013). Moving beyond multiple regression analysis to algorithms: Calling for adoption of a paradigm shift from symmetric to asymmetric thinking in data analysis and crafting theory. *Journal of Business Research,* *66(4)*, 463-472.

Wu, K., Vassileva, J., Noorian, Z., & Zhao, Y. (2015). How do you feel when you see a list of prices? the interplay among price dispersion, perceived risk and initial trust in Chinese C2C market. *Journal of Retailing & Consumer Services*, *25*, 36-46.

Zahra, A., & Ryan, C. (2007). From chaos to cohesion - Complexity in tourism structures: An analysis of New Zealand’s regional tourism organizations. *Tourism Management, 28(3)*, 854-862.

Zeithaml, V.A. (1988). Consumer perceptions of price, quality, and value: A means – end model and synthesis of evidence. *Journal of Marketing, 52(3)*, 2-22.

Zhou, K.Z., Su, C., & Bao, Y. (2002). A paradox of price-quality and market efficiency: A comparative study of US and China markets. *International Journal of Research in Marketing, 19(4)*, 349-365.

Table 1

Socio-demographics

|  |  |  |
| --- | --- | --- |
|  | Travel Mode | *Total* |
|  | Domestic | Abroad |
|  | N | N | N |
| *Age* |  |  |  |
| 18-35 | 125 | 80 | 205 |
| 36-50 | 94 | 86 | 180 |
| Over 50 | 77 | 45 | 122 |
| *Monthly Income (in €)* |  |  |  |
| 0-1000 | 199 | 75 | 274 |
| Over 1000 | 97 | 136 | 233 |
| *Total* | 296 | 211 | ***507*** |

Table 3

Correlation matrix

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **1** | **2** | **3** | **4** | **5** |
| 1 | Social Risks | 1 |  |  |  |  |
| 2 | Destination Risks | ,125 | 1 |  |  |  |
| 3 | Price Issues | ,079 | ,040 | 1 |  |  |
| 4 | Quality Issues | ,094 | ,048 | ,077 | 1 |  |
| 5 | Purchasing Intention | ,050 | ,033 | -,011 | ,020 | 1 |

Table 4

Sufficient configurations

|  |  |  |  |
| --- | --- | --- | --- |
| **Complex Solution** | **Raw Coverage** | **Unique Coverage** | **Consistency** |
| Model: f\_pi=f(f\_a,f\_i,f\_sr,f\_dr,f\_pr,f\_qr) |  |  |  |
| *Pre-referendum* |  |  |  |
| ~f\_a\*f\_i,\*~f\_sr,\*~f\_dr\*f\_pr\*f\_qr (p-q) | ,413 | ,117 | ,849 |
| ~f\_a\*~f\_i,\*f\_sr,\*f\_dr\*~f\_pr\*f\_qr (exper) | ,452 | ,141 | ,822 |
| f\_a\*~f\_i,\* ~f\_sr,\*f\_dr\*f\_pr\*~f\_qr (image) | ,405 | ,109 | ,808 |
| Sol. Coverage: ,417 Sol. Consistency: ,823 |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| f\_pi: Purchasing Intention | f\_sr: Social Risks | f\_qi: Quality Risks | f\_a: Age |
| f\_dr: Destination Risks | f\_pr: Price Risks | f\_i: Income |  |

Table 2

Loadings, Cronbach A, AVE and CR

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Statements** | **Loadings** | **A** | **AVE** | **CR** |
| *Social Risks* |  |  |  |  |
| SR1 | ,927 | ,943 | ,699 | ,954 |
| SR2 | ,863 |  |  |  |
| SR3 | ,800 |  |  |  |
| SR4 | ,674 |  |  |  |
| SR5 | ,774 |  |  |  |
| SR6 | ,885 |  |  |  |
| SR7 | ,898 |  |  |  |
| SR8 | ,823 |  |  |  |
| SR9 | ,851 |  |  |  |
| *Destination Risks* |  |  |  |  |
| DR1 | ,912 | ,906 | ,626 | ,930 |
| DR2 | ,814 |  |  |  |
| SR3 | ,751 |  |  |  |
| DR4 | ,716 |  |  |  |
| DR5 | ,712 |  |  |  |
| DR6 | ,869 |  |  |  |
| DR7 | ,722 |  |  |  |
| DR8 | ,808 |  |  |  |
| *Price Risks* |  |  |  |  |
| PR1 | ,855 | ,894 | ,614 | ,917 |
| PR2 | ,706 |  |  |  |
| PR3 | ,739 |  |  |  |
| PR4 | ,665 |  |  |  |
| PR5 | ,836 |  |  |  |
| PR6 | ,835 |  |  |  |
| PR7 | ,828 |  |  |  |
| *Quality Risks* |  |  |  |  |
| QR1 | ,953 | ,921 | ,764 | ,941 |
| QR2 | ,868 |  |  |  |
| QR3 | ,869 |  |  |  |
| QR4 | ,839 |  |  |  |
| QR5 | ,837 |  |  |  |
| *Purchasing Intention* |  |  |  |  |
| PI1 | ,948 | ,907 | ,724 | ,929 |
| PI2 | ,829 |  |  |  |
| PI3 | ,816 |  |  |  |
| PI4 | ,868 |  |  |  |
| PI5 | ,785 |  |  |  |