Tourism and the Refugee Crisis in Greece: Perceptions and Decision-Making of Accommodation Providers

ABSTRACT

This paper focuses on the tourism impacts of the 2015-16 refugee crisis in Greece. It examines the implications of the related publicity for the perception of Greece and the expected reaction of inbound tourists; the way refugees are regarded from a security and cultural aspect; the interaction between refugees and host communities; and the decisions made by the Greek tourism accommodation sector to face the crisis. Using fuzzy-set Qualitative Comparative Analysis the paper employs a nationwide survey of 811 tourism accommodation managers. The results reveal three configurations explaining the decisions of respondents characterized by refugee-centric orientation; the emphasis on the visitors-locals nexus; and the host communities' behavioural impact on tourism. The paper also compares asymmetric with symmetric analysis highlighting the suitability of the former when dealing with complexity. The modelling exercise also steps forward from fit to predictive validity. The findings contribute to both managerial and methodological aspects of tourism.

Keywords: Tourism accommodation operations, chaos theory, complexity theory, nonlinear analysis, fuzzy-set Qualitative Comparative Analysis, refugee crisis, Greece

1. Introduction

The interdependence of immigration and tourism has arguably received little attention in the academic literature (Seetaram, 2012), while research on the impact of refugee flows on tourism is almost non-existent. Genç (2012) argues that an increase of immigrants from a specific country may lead to a greater rise (in percentage terms) of tourism arrivals from that country. As immigration continues to affect many communities, the traditional classification of travel purposes into recreation, business, and visiting friends and relatives (VFR) becomes gradually antiquated; tourism experiences are now often much richer than in the past and tourists end up having significant socio-economic exchanges with local communities (Griffin, 2016). Nonetheless, the tourism – immigration nexus may prove more complex depending among others on the host society's structures and the emerging trade patterns between the host and the immigrant-source country (Balli, Balli, & Louis, 2016).

Reasons behind migration include hopeless economic and political situations; hunger; genocide; and ethnic and religious persecution in the originating countries (Toffle, 2015). Most studies, however, do not distinguish between refugee and non-refugee immigrants (Ghosh & Enami, 2015), even if there are notable differences between the two. First, the flow of refugees is typically a concerted movement of individuals en masse escaping persecution in their home country; on the other hand, economic immigrants are individuals moving sequentially to seek better economic security and employability conditions (Cortes, 2004). Second, the dominant flow of refugees originates from poor economies; this may not necessarily be the case with immigrants (Stark, 2004).

From a mobility perspective, the complexity of modern societies is neither anarchic nor perfectly ordered (Capra, 2002). Disasters such as wars and natural catastrophes may trigger a systemic change and produce high population mobility (Sheller & Urry, 2006); this may subsequently result into a parallel exchange and transfer of cultures and images (Linke, 2012; Urry, 2002). Contemporary societal systems are so tightly coupled that any logistical efforts to separate groups such as immigrants and refugees may break down in the face of unpredictable formations (Sheller & Urry, 2006). Moreover, tourism and immigration may intertwine, as tourists transform themselves into migrants when seeking employment in a destination country: this situation may ultimately create a tourism-immigration continuum (Illes & Michalko, 2008).

This paper examines the underlying complexity in the tourism-refugeeism nexus using the 2015-16 refugee crisis in Greece as a case study. Based on the results of a nationwide survey of Greek tourism accommodation managers/owners the paper studies the implications of the refugee crisis for the perception of Greece as a tourist destination and the subsequent reaction of inbound tourists; the way refugees are regarded from a security and cultural aspect; the interaction between refugees and host communities; and the actions undertaken by the surveyed tourism accommodation providers to address the refugee challenge. From a theoretical point of view, the paper contributes to the literature by providing a better understanding of the complex tourism-refugeeism relationship and its implications for decision-making in tourism accommodation. Moreover, from a methodological perspective, the research implements fuzzy set Qualitative Comparative Analysis (fsQCA), which is regarded as an innovative tool in tourism studies and the service sector more generally. On these grounds, the paper also sets as one of its primary objectives to

71 reveal the suitability of asymmetric (i.e. nonlinear) research on tourism against the
72 dominant regression analysis and Structural Equation Modelling (SEM)
73 implementation. It also progresses from fit to predictive validity for the proposed
74 models.
75
76 **2. Chaos and complexity**
77 Change and instability are considered as inherent characteristics of systems, being on
78 the edge of chaos when a trigger event may directly or indirectly induce a crisis
79 (Speakman & Sharpley, 2012). The theory of chaos was introduced in 1963
80 (Lawrence, Feng, & Huang, 2003) and proved useful in complex system analysis
81 (Mahmoudabadi, 2015). According to Seeger (2002, p.329) the chaos perspective
82 "proposes a broad set of loosely related theoretical and meta-theoretical orientations
83 to the behaviour of complex non-linear systems". The theory suggests that even small
84 behavioural differences can produce substantial diverging outcomes to dynamic
85 systems making it impossible to predict long term patterns (Kellert, 1993). The theory
86 of complexity has evolved from chaos theory focusing on research with complex
87 characteristics, and "deals with systems that have many interacting agents and
88 although hard to predict, these systems have structure and permit improvement"
89 (Zahra & Ryan, 2007, p.855). Management-wise, when a crisis occurs, complexity in
90 the business environment increases (Coskun & Ozceylan 2011); thus, the theory of
91 complexity may also be linked to emergency management (Morakabati, Page, &
92 Fletcher, 2016; Ramalingam 2013). Moreover, when the degree of complexity
93 increases the prediction of the systemic behavioural patterns is less amenable
94 (Fitzerland & Eijnatten, 2002).
95

Both theories (i.e. chaos and complexity) are based on asymmetric (i.e. nonlinear) systems being sensitive to initial conditions (Hock, 1999); their difference is that there can be no forecast in chaos theory, whilst in complexity theory this unpredictable behaviour may be framed into a quasi-stable pattern (Olmedo & Mateos, 2015). In chaos theory, simple systems produce complicated non-predictable patterns of behaviour, whilst complexity theory emphasises the way multi-elemental systems lead to relative behavioural predictability (Baggio, 2008). As Fitzgerald and Eijnatten (2002) indicate, the theory of complexity focuses on: (i) the simple behaviours that complex systems produce; (ii) the higher-level patterns that simple interactions may generate; and (iii) the identification of recognisable patterns when a holistic examination is undertaken in the complicated system. Even if the complexity of chaotic situations may lead to unpredictable and dramatic conditions, the emerging dynamic systems are not fully uncontrolled, whilst the existence of relative order is still present (Nilson, 1995; Zahra & Ryan, 2007). Thus, in service industries research, complexity theory is used to provide an adequate evaluation and explanation of the behavioural attributes, and the process of decision-making by implementing alternative asymmetric (i.e. nonlinear) combinations of indicators (Wu, Yeh, Huan, & Woodside, 2014).

While chaos and complexity theories have been successfully applied in the context of generic management studies (Hwang & Yuan, 2014), their discussion in tourism remains limited. In fact, tourism research has not adequately focused on chaos and complexity since it had followed until now a predominantly reductionist approach (McDonald, 2009). The behavioural patterns of travellers and the enterprising decision-making depend on several factors creating complexity patterns on their

formulation (Pappas, 2016b). The tourism accommodation sector is characterised by countless interacting entities and activities critically vulnerable to crises produced by irregular political, climatic, and market events (Baggio, 2008; Cole, 2009; Papatheodorou, 2006). This leads to an inherent nonlinearity of the emerging relationships, which prevents the effective coupling of causes and consequences (Olmedo & Mateos, 2015); thus, decision-making is substantially affected by both exogenous and endogenous system shocks (Boukas & Ziakas, 2014). With special reference to tourism accommodation firms, Edgar and Nisbet (1996) suggest that these are spatially fragmented and disaggregated, whilst they operate in dynamic and complex environments. Even so, all tourism related factors possess some emerging features due to a partial order existence in their operations (Olmedo & Mateos, 2015). This observation led Faulkner and Russell (1997) almost two decades ago, to propose chaos and complexity as alternative though highly relevant frameworks for the examination of tourism accommodation attributes, since the comprehension of the existing dynamic systems was problematic, due to the assumption that the relationships are stable and static. Thus, the extent of behavioural complexity makes the Newtonian (linear) thinking inadequate and indicates a need for asymmetric (nonlinear) analysis (Laws & Prideaux, 2005). In tourism accommodation operations and management, the application of complexity theory can provide significant information in terms of the formulation and expression of behavioural patterns (Russell & Fulkner, 2004), helping to better understand the evolving dynamics of the tourist system (Faulkner & Russell, 2000).

In fact, complexity theory may provide important insights from a strategic risk management perspective and hence influence the decisions made by accommodation

providers when tourism dynamics are significantly perturbed by extraordinary and possibly unforeseen phenomena, such as 'black swan' events (Koo, Halpern, Papatheodorou, Graham & Arvanitis, 2016; Taleb, 2007). Large forced migration and refugee flows may have such an effect on tourism due to their impact on the involved stakeholders. Previous research indicates that the effect of such migration and refugee flows on the behavioural patterns of local community is largely determined by the temporal nature of the flows, i.e. whether these are transient or result in permanent new settlements; the level of human capital skills, health condition and cultural proximity (e.g. language, religion) between refugee/migrants and their hosts; the possible downward pressure on wages exerted by refugee/migrants in case the latter are allowed to actively enter the local labour market; and the possible upward pressure on the prices of both non-tradable (e.g. land, services) and tradable goods exerted by the increased levels of demand from refugees and migrants (Alix-Garcia & Saah, 2010; Baez, 2011; Friedberg & Hunt, 1995). Akgündüz, van den Berg and Hassink (2015) investigate the impact of the Syrian refugee crisis on the Turkish labour market and find a modest upward increase in prices but only very limited crowding-out effect of natives in local labour markets; in such a case, any discontent from local communities is expected to be within control from a policy point of view. Nonetheless, the same study suggests that the refugee camps in question are located away from the major Turkish resorts along the Aegean Sea and the Mediterranean Coast and are thus expected to have only a limited impact on the tourism dynamics there (admittedly, inbound tourism in Turkey seems to have greatly suffered since 2015 but mainly for reasons beyond the scope of this paper). On the other hand, when the refugee points of entry and/or related camps are located in tourist areas, the dynamics may be very different: in spite of any initial expression of humanitarianism,

171 the local community may eventually become irritated and aggressive, fearing the loss
172 of tourism jobs and income as a result of negative world media publicity (Okaka,
173 2014) or at best 'compassion fatigue' of remote audiences (Höijer, 2004);
174 international mass tour operators may seize the opportunity to ask for additional, last
175 minute discounts from local hoteliers (Papatheodorou & Arvanitis, 2014); whilst
176 tourists in the context of their wider appropriating 'gaze' (Sarup, 1996; Urry, 2002)
177 may become apathetic or exhibit a risk-averse behaviour characterised by 'a conscious
178 operation of ideological power' (Jackson, 2005) fleeing away from the destination in
179 question. Volunteers and Non-Governmental Organisations (NGOs) may play a vital
180 role in addressing safety and security issues of the most vulnerable groups, e.g.
181 children and elderly people among the refugees (Chtouris & Miller, 2017);
182 nonetheless, this is expected to have only a limited impact on the involved tourism
183 stakeholders. Not surprisingly, many of the above concerns on the emerging tourism
184 dynamics and their impact on the decision-making process of tourism accommodation
185 providers are applicable in the context of the recent refugee crisis in Greece as
186 discussed in the next section.
187

188 **3. Refugee crisis in Greece**

189 Since the early 1990s a substantial number of people (mainly from the Balkan
190 countries) have emigrated to Greece in search for a better future. Political regime
191 change in Albania, Bulgaria and Romania and the collapse of Yugoslavia led to
192 massive immigrant flows that proved difficult to manage and control as Greece lacked
193 a suitable legislative framework at the time (Triandafyllidou, 2009). Until 1991 the
194 Greek immigration policy was based on regulations created in the 1920s, which made
195 it incredibly difficult for labour migrants to enter the country (Kiprianos, Balias, &

Passas, 2003). This resulted in massive deportations of immigrants in the 1990s (Triandafyllidou, 2009). Being a largely homogeneous in terms of ethnicity and religion country, this sudden influx of migrants in Greece was initially perceived negatively by many of its inhabitants partly because of the dubious profile of certain immigrants, e.g. convicts from Albania further to the opening-up of that country's prisons after the regime change (Papadopoulos, Karasavvoglou, Geranis, & Violitzi, 2015); hence, many local communities expressed symptoms of intolerance and xenophobia (Levinson, 2005). Still, such reactions started receding in the beginning of 2000s (Hatziprokopiou, 2004); even if immigrant communities are not yet fully integrated into the Greek society (Baldwin-Edwards, 2005), they conveniently coexist with the locals (Kokosalakis & Fokas, 2007). In fact, during the first decade of the 21st century immigration lowered production costs and boosted consumption and investment to the benefit of the Greek economy in aggregate, i.e. leaving inequality issues aside (Chassamboulli & Palivos, 2013).

Entering a prolonged recession in 2008, the current economic crisis was first overtly unfolded in Greece in November 2009, whilst the push for contractionary fiscal policy has since become as a long-lasting phenomenon (Polito & Wickens, 2012). Since 2010 combined immigration and refugee inflows from Turkey have boomed, especially due to the Arab Spring and the subsequent Syrian Refugee crisis, resulting into the deepening of the economic crisis, and leading the Greek economy to the brink of collapse. The most recent study of the United Nations High Commissioner for Refugees (UNHCR, 2016) reports that Greece hosted 18,489 refugees and 11,750 people in refugee-like situations, i.e. a total of 30,239 refugees in 2015 (p. 58), but these numbers refer to "persons granted a complementary form of protection and

those granted temporary protection" and "for whom refugee status has, for practical or other reasons, not been ascertained" (p.61), meaning that they do not include the overall number of refugees hosted in Greece, but just a small part of them. Nonetheless, according to the same report, 856,700 refugees (p. 33) entered Greece in 2015 mainly through the islands located in the Eastern Aegean Sea, transforming the eleven million inhabitants' country as the main gateway for refugees fleeing into Europe, from war and conflict zones such as Syria, Afghanistan and Iraq and crossing from Turkey by boat (European Commission, 2015). In the beginning of the refugee crisis Greece was considered a transit country, and the economic cost of the refugee crisis was estimated at 0.3 percent of GDP, or an annual cost of over $675 million; this includes money spent for land and sea border surveillance to deter the arrival of refugees and asylum seekers (Allon, 2004; Hayes & Vermeulen, 2012; Osterbo, 2015). Nonetheless and since the March 2016 decision to close the Balkan route to curb immigration and refugee flows, many of these people have now been trapped in Greece: thus, the cost of accommodating their needs has risen very substantially (Tomkiw, 2016). Halicioglou and Yolac (2015) reveal that the Greek economic crisis and the refugee flows have also resulted in an increase in unemployment rates and a decrease of human capital and entrepreneurial talent in the country causing a further rise in unemployment.

Several initiatives have been undertaken by the European Union and Greece to drastically reduce the refugee flows to the Greek islands of the Eastern Aegean Sea, but refugees continue to arrive by boat and subsequently detained in camps, where Greek police struggles to keep control (Banks, 2016). Nonetheless, the refugee crisis has not only affected Greek islands, but also the mainland. With over 55,000 refugees

trapped all over Greece (Kodr, 2016; UNHCR, 2016), the humanitarian crisis in Athens (Greece's capital) rapidly escalated since until summer 2016 about 5,000 men, women and children trapped in Piraeus (i.e. Athens' port) were entirely dependent on volunteers in the absence of any visible government support, whilst aid agencies have warned that the "appalling" conditions for thousands of stranded refugees are becoming increasingly explosive (Smith, 2016b). The northern part of the country has been crowded by refugees, whilst only in the camp of Idomeni close to the border of Greece with the Former Yugoslav Republic of Macedonia (FYROM) the refugee camp exceeded 12,000 people at some stage (PressTV, 2016). Western Greece has also experienced major waves of refugees seeking a way out to Europe after the closure of borders between Greece and FYROM due to the refugee crisis (Zafiropoulos, 2016).

Having the above in mind, it may be argued that the refugee crisis in Greece has resulted in complex situations and raised challenges at different levels including tourism. In fact, the refugee crisis has reshaped the behavioural patterns for much of the Greek society. With Greece's impoverished state structure stretched to breaking point due to recession, refugees have been dependent on the kindness of Greek people, where Greeks of all backgrounds and ages have rushed to join the relief effort (Smith, 2016a); this reaction is expected to substantially boost Greece's reputation for offering warm tourism accommodation, and ultimately increase tourist flows (Amin, 2016). On the other hand, inbound tourist arrivals in 2016 are expected to be considerably fewer on several Eastern Aegean Sea islands (e.g. Lesvos, Chios) because of image breaking especially among sunlust tourists, whilst in other parts of the country tourism officials anticipate a significant increase of visitors

(Angelopoulou & Roeder, 2016). In any case, the Greek government tries to reduce the negative impacts of the refugee crisis by relocating thousands of immigrants from popular tourist gateways (e.g. the port of Piraeus) to other less renown areas; still, the inability of the country to successfully handle a situation few have envisaged is apparent (Smith, 2016c). This leaves a great burden for handling the tourism impacts of the current refugee crisis to the Greek tourism service providers and mainly the accommodation enterprises which are required to effectively manage this complexity as now discussed in the empirical research section of this paper.

4. Methods

4.1. Research characteristics

The research was conducted between December 2015 and February 2016 via e-mail questionnaires sent to Greek tourism accommodation firms. There were two reasons for the selection of this period: (a) it was during the low tourist season when most Greek tourism accommodation enterprises organise their operational aspects for the next tourist period, and (b) this was the peak of the refugee crisis where not only Greece but also other EU member states were in the brink of experiencing a collapse of the Schengen agreement. All the above create an uncertain and complex political, financial, and business environment, where crisis management implementation is vital.

Due to the expected low response rate, more than 7,000 e-mails were sent with research questionnaires addressed to owners / managers of tourism accommodation firms in Greece. The e-mail addresses were sourced from the Greek Travel Pages

(www.gtp.gr). In total 811 usable answered questionnaires were collected. Table 1 classifies these companies per their official tourism accommodation star rating system in Greece (1^* for the lowest and 5^* for the highest quality establishment) and compares the respective shares with those prevailing at an aggregate level in the country; as distributions are not substantially different, it may be validly argued that the selected sample is representative of the population.

Please insert **Table 1**

4.2. Measures

The questionnaire consists of 29 Likert Scale (1 strongly agree / 5 strongly disagree) statements structured around six constructs. The constructs related to the impact of the refugee crisis on destination perceptions (six statements) as well as criminality issues (four statements) and cultural aspects of refugees (four statements) are inspired by Moufakkir (2014). The four statements focusing on the perceived involvement of host communities are based on Luken and Tranmer (2010). Five statements are used to examine expected tourist behaviour based on Breitsohl and Garrod (2016). Finally, the research selected the study of Ocumus and Karamustafa, (2005) suitably modifying the relevant six statements to examine the operational decisions taken to face the refugee crisis. The full statements along with descriptive statistics are presented in Table 2. The reliability and validity of this selection rationale is supported by studies such as Moufakkir (2008), and Breitsohl and Garrod (2016). Moreover, one question was included to ensure that the respondents were owners/managers of the respective tourism accommodation firms.

Please insert **Table 2**

To encapsulate the essence of complexity, the study uses fuzzy-set Qualitative Comparative Analysis (fsQCA). This method examines the relationships expected to shape the outcome of interest and any potential binary set of combinations generated from its predictors (Longest and Vaisey, 2008). fsQCA is a mixed-method technique combining quantitative empirical testing (Longest and Vaisey, 2008) and qualitative inductive reasoning made by the implementation of case analysis (Ragin, 2000). fsQCA handles logical complexity acknowledging that different results can be produced by alternative combinations of characteristics when appropriately combined with other events or conditions (Kent & Argouslidis, 2005). The study also estimates negated sets, i.e. absence or presence of a given condition (Woodside and Zhang, 2013). The membership score in a negated set is calculated by taking one minus the membership score of the examined case in the original fuzzy set (Skarmeas, Leonidou, & Saridakis, 2014).

Ordanini, Parasuraman and Rubera (2014) suggest that in set theory, consistency of a sub-relation with fuzzy measures emerges when the membership scores in a specific attributional causal set are equal or systematically less than the membership scores in the outcome set. Thus, consistency is calculated as follows:

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

where, for tourism accommodation owner/manager i, X_i is the membership score in the X configuration and Y_i is the membership score in the outcome condition.

345 Accordingly, coverage includes the assessment of sufficient configurations' empirical
346 importance (Ordanini et al., 2014) and is calculated as follows:
347
348 $$Coverage\left(X_i \le Y_i\right) = \sum_i \left[\min\left(X_i; Y_i\right)\right] / \sum_i \left(Y_i\right)$$
349
350 Woodside (2014, p. 2499) suggests that the asymmetric consistency metric is
351 analogous to the symmetric correlation metric; similarly, the asymmetric coverage
352 metric is analogous to the symmetric coefficient of determination. A solution is
353 considered informative and acceptable when the model(s) solution coverage is
354 between .25 and .75 and the solution consistency is above .74 (Skarmeas et al., 2014).
355 Moreover, the membership score of a complex antecedent condition (known as causal
356 recipe) is defined as the minimum of the membership scores of the intersecting
357 selected simple causal conditions of fuzzy-sets that include the recipe in question
358 (Woodside and Zhang, 2013; Skarmeas et al., 2014).
359
360 Using an aggregation (i.e. grouping) process of the 29 statements around the six
361 constructs, Table 3 reports the correlation results among the latter. Skarmeas et al.
362 (2014) argue that when all the coefficients in the correlation matrix are less than .60 in
363 absolute value, then a general asymmetry exists in the respective relationships among
364 variables. This is the case indeed here, meaning that the causal conditions produced
365 by the alternative combinations may lead to the same outcome condition (Woodside,
366 2013). Using fsQCA this study, therefore, examines how tourism accommodation
367 providers' operational decisions to face the refugee crisis (related to the sixth
368 construct) are made based on the complex antecedent conditions (i.e. causal recipes)
369 that lead to high membership scores in the other five constructs. Based on

asymmetric analysis, the research gives special reference to the description of combined complexities and the identification of nonlinear relationships.

Please insert **Table 3**

5. Empirical results

As discussed earlier, the study refers to the perceptions of 811 Greek tourism accommodation managers/owners. Moreover, its calibration is implemented by a group of 64 randomly selected individual cases. To evaluate the operational decisions to face the refugee crisis (f_od) the calibrated fuzzy sets used were named as "f_dp" for destination image perception; "f_ci" for criminality issues; "f_ca" for cultural aspects; "f_hc" for perceived host communities involvement; and "f_ta" for expected tourist actions.

5.1. Sufficient complex statements

The analysis presented in Table 4 produced three sufficient complex statements, where the absence (i.e. negation – low inclusion level) of an attribute is depicted by the symbol '∼'. Overall, the solution consistency is good (0.845) also providing a high coverage (0.438), which indicates an informative and acceptable solution in relation to Skarmeas's et al. (2014) suggestions.

Please insert **Table 4**

The first solution (~f_dp*f_ci*f_ca*~f_hc*~f_ta) suggests that low inclusion levels of destination image perceptions, involvement of host communities and expected tourist actions coupled with high inclusion levels of importance for criminality issues and

cultural aspects of refugees may induce tourism accommodation industry providers to take operational decisions to face the refugee crisis. The consistency level of this solution is 0.875 and its coverage equal to 0.452 – both metrics are higher compared to the other two solutions. In fact, the first sufficient configuration may be characterised as 'refugee-centric'. This is because, the Greek tourism accommodation industry providers shape their operational action plans based predominantly on criminality issues and cultural aspects of refugees. They emphasise social pathology phenomena (e.g. creation of unsafe street atmosphere, lack of law obedience) that may result or become exacerbated by the refugee crisis. This is also related to the sheer volume of refugees and their different cultural and behavioural background compared to the highly ethnic and religious homogeneity of Greeks as suggested by Papadopoulos et al. (2015).

The second solution (f_dp*~f_ci*~f_ca*f_hc*f_ta) suggests that low criminality issues and cultural aspects of refugees, coupled with high destination image perceptions, host communities' involvement and expected tourist actions lead to high membership scores for operational decisions by tourism accommodation service providers. The consistency and coverage of the second sufficient configuration are .843 and .386 respectively. In fact, this second solution highlights factors not directly related with the refugees per se; Greek tourism accommodation service providers thus focus their decision-making process on how the locals-visitors nexus affects the formation of destination image perceptions and actions. The influential role of locals and tourists on destination image is also discussed in previous studies such as Huang, Li and Kai (2010).

The third solution (~f_dp*f_ci*f_ca*f_hc*~f_ta) producing high membership in operational decisions to face the refugee crisis suggests dependence on high criminality issues, cultural aspects of refugees and host communities' involvement coupled with low destination image perceptions and tourist expected actions. In contrast to the previous two sufficient configurations, this one generates the lowest consistency (0.821), whilst its coverage is 0.417. The third solution adds the aspect of host communities' involvement to the first sufficient configuration. Therefore, tourism accommodation firms appear to seriously consider the impact of local assistance to refugees (Smith, 2016a). In fact, this assistance may substantially boost the reputation of Greece as a welcoming tourism destination to the benefit of inbound tourism flows (Amin, 2016). Thus, in addition to criminality and cultural aspects of refugees, the owners/managers of tourism accommodation establishments need to appreciate the locals' involvement in the refugee crisis and its subsequent positive repercussions for tourism arrivals.

5.2. fsQCA versus regression

As Pappas (2016b) indicates, the great majority of hospitality and tourism accommodation studies evaluate statistical relationships using a Newtonian (i.e. linear) perspective by predominantly implementing regression analysis and structural equation modelling. For this reason, the paper now compares the research findings of the previous section with regression analysis based on Structural Equation Modelling (SEM) to assess the methodological added value of fsQCA. Still, any comparative attempts should be cautiously treated since fsQCA makes alternative assumptions such as complex causality; focuses on different research objectives; establishes relations not through variables but through cases; and identifies configurations that

provide sufficient and necessary conditions for a result of interest (Ordanini et al., 2014).

Concerning the measurement of validity and reliability, the SEM findings indicate that the Kaiser-Meyer-Olkin (KMO) statistic of Sampling Adequacy was 0.805 ($p<.01$), which is higher than the minimum requested 0.6 for further analysis. The overall reliability measured through Cronbach alpha was .638. Although, Kline (2000) and DeVellis (2012) argue that the value of Cronbach alpha should ideally exceed 0.7, the same studies suggest that a Cronbach alpha value lying between 0.6 and 0.7 is sufficiently high to justify further analysis. In fact, the latter should be clearly discontinued only when the alpha value is below 0.5, which is obviously not the case here. The same view is also shared by Nunnally (1978). Average Variance Extracted (AVE) was also examined. For convergent validity, the acceptance criterion is that AVE should exceed .5 (Bagozzi & Yi, 1988; Kim, 2014; Lee, Jan, & Yang, 2013). In fact, AVE was higher than .5 for all examined constructs, indicating that the study has an adequate level of convergent validity. AVE and the factor analysis loadings are presented in Table 5.

Please insert **Table 5**

Discriminant validity was also employed and calculated as follows (Pappas, 2016a):

$$\frac{r_{xy}}{\sqrt{r_{xx} \times r_{yy}}}$$

where r_{xy} expresses the correlation between x and y; r_{xx} indicates the reliability of x; and r_{yy} illustrates the reliability of y. The correlation results for Destination

Perceptions (DP), Criminality Issues (CI), Cultural Aspects (CA), Host Communities (HC), Tourism Attractions (TA) and Operational Decisions (OD) are presented in Table 6. Since in all cases the discriminant validity is below .85 the examined constructs do not overlap, i.e. they measure different things (Voorhees, Brady, Calantone, & Ramirez, 2016).

Please insert **Table 6**

The model fit is as follows: χ^2=685.276, df=406, χ^2/df=1.688 [acceptable value $0 \leq \chi^2/df \leq 2$; Schermelleh-Engel, Moosbrugger and Müller (2003)], Comparative Fit Index CFI= .904 [acceptable value is when CFI is close to 1.0; Weston and Gore (2006)], Root Mean Square Error of Approximation RMSEA= .47 [acceptable value is when RMSEA<.5; Browne and Cudeck (1993)], and Standardised Root-Mean-Square Residual SRMR= .72 [acceptable value is when SRMR<.8; Hu and Bentler (1999)]. All effects are statistically significant, whilst the overall model's R^2=.396. Moreover, all five constructs (i.e. destination perceptions; criminality issues; cultural aspects; host communities' involvement; tourist actions) appear to directly affect operational decisions (i.e. the sixth construct) to face refugee crisis, confirming the structural model as it schematically appears in Figure 1.

As the SEM results indicate, regression limits itself to the consideration of a single pathway, i.e. the joint linear direct effect of all five constructs on operational decisions. Thus, it cannot fully encapsulate the extent of alternative influences and combinations leading to the same outcome, which is an inherent feature of complexity in the decision-making process. For example, the first fsQCA sufficient configuration

494 (~f_dp*f_ci*f_ca*~f_hc*~f_ta) while inducing tourism accommodation service
495 providers to take operational decisions to face the refugee crisis, it does not involve
496 destination image perceptions, involvement of host communities and expected tourist
497 actions as required by SEM. Moreover, in two out of three fsQCA configurations, the
498 raw coverage is higher (in the second configuration raw coverage is almost the same)
499 than the overall R^2 of the regression model and all sufficient configurations are
500 characterised with high consistency. The comparison of findings reveals the suitability
501 of fsQCA vis-à-vis regression analysis, since the latter proves more restrictive than
502 fsQCA and can only partially explain the evolving relationships among the examined
503 constructs.
504 Please insert **Figure 1**
505
506 *5.3. Fit and predictive validity*
507 Much of the research dealing with modelling evaluation focuses on model fit
508 (Gigerenzer & Brighton, 2009) to ensure that the data can explain the relationships
509 amongst the observed variables and their respective factors (Pappas, 2015). In fact,
510 only a limited number of studies concentrate on predictive validity (Papatheodorou &
511 Pappas, 2016; Wu et al., 2014), since a good model is not necessarily dependent on a
512 relevant good fit to observations (Gigerenzer & Brighton, 2009). This research also
513 estimates the derived models' predictive validity. To test the latter, the process
514 described by Wu et al. (2014) is followed, i.e. the research sample is divided in a
515 holdout and a modelling subsample, since the patterns of tourism accommodation
516 providers' decisions are perceived as consistent indicators to produce high scores,
517 using half of the overall sample. The overall consistency is .817 (C1>.74) and the

518 coverage.504 (.75>C2>.25). Thus, the findings indicate a good predictive validity for
519 the suggested model.
520
521 **6. Discussion**
522 The results of the study highlight the importance of fsQCA when examining complex
523 situations, which influence the operational decisions of the tourism accommodation
524 sector. Three different attribute configurations of the Greek tourism accommodation
525 managers/owners were identified when dealing with the refugee crisis, namely: (i) the
526 refugee-centric orientation; (ii) the visitors-locals nexus; and (iii) the locals'
527 behavioural impact on tourism.
528
529 Unlike fsQCA, conventional linear analysis lacks a holistic perspective and hence is
530 unable to illustrate the essence of these complex associations. The findings highlight
531 the dual role of host communities for the development of tourist image and the
532 formation of the operational decisions to overcome a crisis. Tourism accommodation
533 managers/owners should consider the behavioural patterns of host communities and
534 align their operational actions in a pro-refugee perspective instead of perceiving the
535 refugee crisis as a threat to their business survival and profitability. For example, they
536 should use the refugee crisis as an opportunity to instigate and promote a culture of
537 hospitality based on diversity, tolerance and compassion avoiding at the same time,
538 however, any dubious and degrading practices introduced by 'human zoos' in the
539 past. Tourism accommodation providers also need to focus on the quality aspects
540 concerning the perceptions of destination image and the influence exerted by tourist
541 attributes. This does not only relate to safety and security, cleanness, expensiveness
542 and cultural aspects of the destination (as also included in the construct of destination

perceptions), but also embeds the quality of products and services as well as the provided tourist experience especially in periods characterised by combined crises (i.e. economic recession; migration and peripheral war conflicts). As Pappas (2016a) also indicates, good quality products and services are likely to contribute into the reduction of uncertainty and increase the positive perceptions of a worthwhile purchase and trust on the provider. Morakabati et al. (2016) also stress the criticality of constructive communication and clear allocation of responsibilities between the public and the private sector. This is because of the continuously increasing role of social media and the subsequent need for prompt and effective responses by all organisations involved in emergency situations.

fsQCA can also help decision-makers in tourism accommodation enterprises improve their crisis management strategies and operational decisions by enabling them to better understand market transformation, changing tourist perceptions and preferences as well as the dynamics behind destination image building. For example, the behavioural patterns of locals vis-à-vis immigrants and refugees may differ from one period to another, especially in countries like Greece with complex historical backgrounds: on the one hand, locals perceive immigrants as a threat to the existing and desired high levels of ethnic and religious homogeneity in the country; on the other hand, historical memories concerning ethnic and religious persecution and cleansing (e.g.: the Armenian (1915) and Pontic (1914-1922) genocides) and the refugee conditions that Greeks repeatedly faced in the past (e.g. the 1922 Asia Minor Catastrophe; the 1945-1949 Greek civil war) have motivated locals to provide a warm welcome to refugees arriving in Eastern Aegean Sea islands (Amin, 2016), as well as the >50,000 refugees trapped across the country (Kodr, 2016). With special reference

568 to the service sector where decision-making complexity is higher (Ordanini et al.,
569 2014), the models provided by the current study indicate that operational decisions of
570 tourism accommodation companies are dependent on the specific characteristics of
571 the business environment. Thus, fsQCA may prove a useful tool for tourism
572 accommodation managers/owners to reach better informed decisions and confront
573 crisis conditions more successfully.
574
575 **7. Conclusions**
576 This paper used fsQCA to examine complexity in the tourism accommodation
577 providers' decision-making process to face the current refugee crisis in Greece. The
578 implementation of fsQCA in the tourism sector is innovative and just a handful of
579 studies have generally employed it in the service sector (see Pappas, 2016b; Wu et al.,
580 2014). This study also compares fsQCA with the dominant linear analysis (structural
581 equational modelling regression) used in tourism research, highlighting the efficiency
582 of the former when examining complex attributes, since it focuses on cases instead of
583 variables. In fact, fsQCA can identify, evaluate and present sufficient complex
584 solutions concerning a specific aspect, and provide different pathways leading to the
585 same outcome. On the other hand, and drawing parallelisms with the single versus
586 multiple equilibria discussion in economics (Arthur, 1999), it is evident that fsQCA
587 does not produce a unique and 'neat' solution as often sought by managers in tourism
588 to eliminate the transaction (search) costs of exploring alternative courses of action.
589 Nonetheless, the lack of a proposed panacea is not considered as a problem because
590 the alternative configurations suggested by fsQCA endow managers and policymakers
591 with the flexibility to contextualise and choose the pathway that appears best given
592 the circumstances in situ. The refugee crisis in tourism is a dynamic process

593 characterised not by non-linearity - not static determinism; hence, the use of fsQCA
594 may prove a suitable method. Moreover, the present study demonstrates predictive
595 validity, something that very few service-oriented studies have done so far
596 (Papatheodorou & Pappas, 2016; Wu et al., 2014), thus stressing the potential
597 superiority of the estimated models.
598
599 Despite the study's contribution to both methodology and literature, limitations
600 should also be acknowledged. Due to the very recent implementation of fsQCA in
601 tourism research, the first limitation stems from the study's methodological
602 contribution itself, i.e. its potential may not have been fully realised and aspects
603 concerning dataset calibration and analysis may compromise the quality of results
604 (Cooper & Glaesser, 2011). This is because, fsQCA scores synthesise a substantial
605 amount of qualitative information, using a process that does not full consider the
606 richness of qualitative data; therefore, fsQCA needs to be re-grounded on the original
607 evidence (Baptist & Befani, 2015) and assessed through its implementation in
608 multiple tourism contexts involving complexity. Another issue derives from the
609 examination of different attributes, since different outcomes are likely to be produced.
610 Thus, implementation of research findings should be made with caution especially
611 when other influential factors of tourism accommodation are to be evaluated. Third, a
612 similar analysis that would focus explicitly on tourism accommodation
613 managers/owners and local communities in the Eastern Aegean Sea islands that bear
614 the main burden of the refugee crisis in Greece could produce different outcomes; in
615 line with the above, perceptions of tourists about the refugee crisis are also critically
616 important in a customer-centric business environment and may differ from those
617 views expressed by managers. Still, operational decision-making in tourism

accommodation is not actioned by tourists, but by hospitality managers/owners. Thus, what matters in the scope of the present study is not the formation of destination image per se (in the eyes of tourists) or the behaviour of the local community or other stakeholders vis-à-vis the refugee crisis; the emphasis instead is on operational actions taken by accommodation providers based on their own perceptions and partly in relation to the crisis effect on destination image. In the literature, operational actions and their strategic connotations are examined under the perspectives of decision-makers and not of tourists; this is the reason why related studies such as Tzschentke Kirka and Lynch (2008) and Elbana (2016) use accommodation providers for their primary data analysis. In the same spirit, the present research may validly shed light on the formation of behavioural patterns during periods of turmoil and many of the acknowledged limitations may set the fundamentals for future research in the field.

Having the above in mind, fsQCA should be primarily interpreted as a complementary analytical tool, especially when combined with other comparative or case-based approaches (Lee, 2008) including conjoint analysis. Furthermore, fsQCA may include the examination of other influential factors on crisis events, such as political instability, social unrest, recession, etc. Finally, fsQCA can further highlight the effect of combined crises (e.g. refugee crisis with recession); the role of crisis factors that reorient international tourist flows (e.g. the Arab spring); as well as the importance of exogenous (e.g. political instability) versus endogenous (e.g.: job vulnerability) turmoil factors. In conclusion, fsQCA can flourish and further develop as a method to examine complexity in tourism with direct implications for managers and policymakers.

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950

951 Table 1: Research Participants and Tourism Accommodation Establishments in Greece

Category	**Research Participants**		**Accommodation Establishments (2013)[1]**	
	N	*%*	*N*	*%*
5 Star	44	5.4	361	3.7
4 Star	116	14.3	1277	13.2
3 Star	225	27.7	2358	24.4
2 Star	304	37.5	4203	43.4
1 Star	122	15	1478	15.3
Total	*811*	*100*	*9677*	*100*

952 [1]Source: AGTE (2016)

953

954 Table 2: Descriptive Statistics

	Statements	Mean	SD*
	Destination Image Perceptions		
DP1	The refugee crisis has affected the perception of Greece as a safe tourism destination	2.48	.642
DP2	The refugee crisis has affected the perception of Greece as a clean tourism destination	3.74	.676
DP3	The refugee crisis has affected the perceptions of Greece as a friendly tourism destination	3.87	.733
DP4	The refugee crisis has affected the perception of Greece as a cultural tourism destination	4.11	.646
DP5	The refugee crisis has affected the perception of Greece as a colourful tourism destination	4.07	.712
DP6	The refugee crisis has affected the perception of Greece as an expensive tourism destination	4.02	.665
	Criminality Issues regarding Refugees		
CI1	Refugees living in Greece are criminals	4.01	.588
CI2	Refugees living in Greece create unsafe street atmosphere	2.50	.677
CI3	Refugees living in Greece are extremists	4.01	.641
CI4	Refugees living in Greece do not respect Greek Law	2.21	.763
	Cultural Aspects regarding Refugees		
CA1	Refugees living in Greece create problems due to their lifestyle	2.29	.674
CA2	Refugees living in Greece are very attached to their traditions	2.44	.737
CA3	Refugees living in Greece are very attached to their religion	2.61	.831
CA4	Refugees living in Greece are too many	2.33	.797
	Host Communities' Involvement		
HC1	Host communities provide jobs to refugees	2.59	.650
HC2	Host communities provide accommodation to refugees	2.49	.702
HC3	Host communities provide information to refugees	2.46	.718
HC4	Host communities provide subsistence materials (e.g.: food, clothing, etc.) to refugees	2.44	.683
	Tourist Actions		
TA1	Tourists visiting Greece may complain about the destination to others	2.78	.646
TA2	Tourists visiting Greece may say negative things about the destination to others	2.70	.694
TA3	Tourists visiting Greece may recommend others not to book flights to the destination	2.85	.667
TA4	Tourists visiting Greece will accept the refugee crisis, since nothing can be done	3.04	.798
TA5	Tourists visiting Greece will consider returning to the destination for a holiday	2.92	.817
	Operational Decisions		
OD1	The refugee crisis led the company to revise its credit policy	3.45	.783
OD2	The refugee crisis led the company to revise its debt structure	3.25	.915
OD3	The refugee crisis led the company to reduce costs	3.34	.843
OD4	The refugee crisis led the company to increase marketing efforts	3.50	.921
OD5	The refugee crisis led the company to reduce its staff	3.53	.848
OD6	The refugee crisis led the company to postpone new investments	3.44	.917

955 *Standard Deviation

Table 3: Correlation Matrix

		1	2	3	4	5	6
1	Destination Perceptions	1					
2	Criminality Issues	.120**	1				
3	Cultural Aspects	.016	.034	1			
4	Host Communities	.092**	.134**	-.090*	1		
5	Tourist Attributes	-.142**	.045	.000	-.072*	1	
6	Operational Actions	-.267**	-.167**	.062	-.258**	.145**	1

*Correlation is significant at .05 level

**Correlation is significant at .02 level

Table 4: Complex Solutions on Operational Decisions

Complex Solution	Raw Coverage	Unique Coverage	Consistency
Model: f_od=f(f_dp,f_ci,f_ca,f_hc,f_ta)			
~f_dp*f_ci*f_ca*~f_hc*~f_ta	0.452	0.126	0.875
f_dp*~f_ci*~f_ca*f_hc*f_ta	0.386	0.103	0.843
~f_dp*f_ci*f_ca*f_hc*~f_ta	0.417	0.118	0.821
Solution Coverage: 0.438	Solution Consistency: 0.845		

Table 5: AVE and Loadings Produced by Factor Analysis

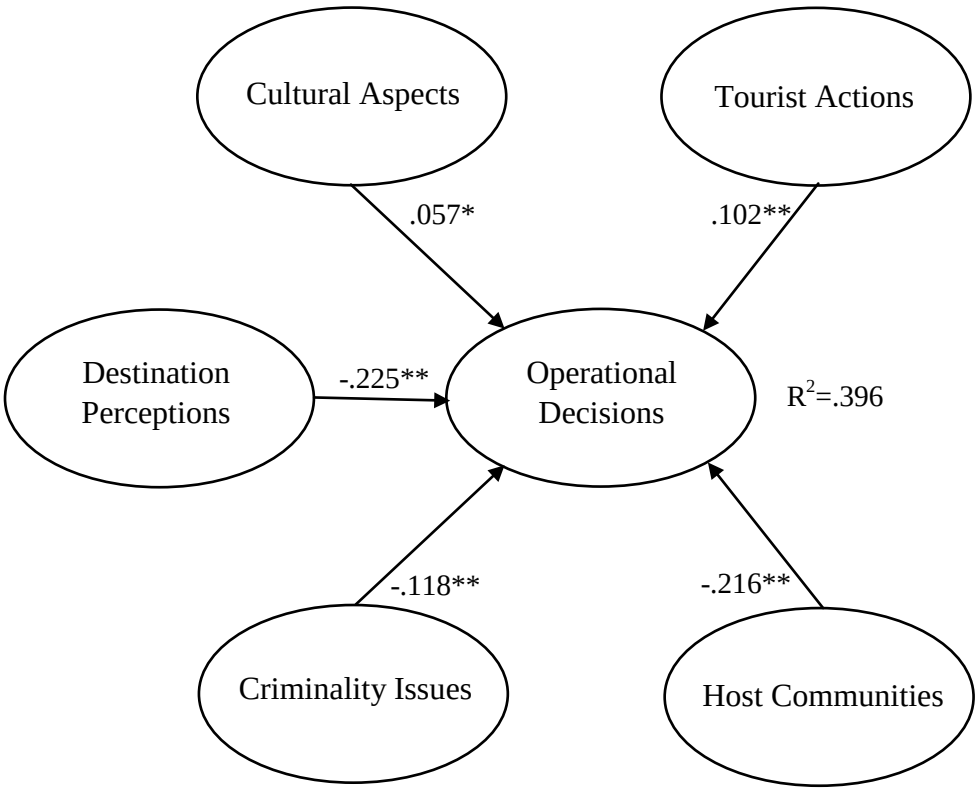
	AVE	Destination Perceptions	Criminality Issues	Cultural Aspects	Host Communities	Tourist Actions	Operational Decisions
DP1	.52	.444					
DP2		.477					
DP3		.502					
CI1	.54		.943				
CI2			.466				
CI3			.937				
CA1	.51			.841			
CA2				.953			
CA3				.829			
CA4				.884			
HC1	.56				.939		
HC2					.873		
HC3					.860		
HC4					.836		
TA1	.57					.871	
TA2						.818	
TA3						.902	
TA4						.844	
TA5						.777	
OD1	.55						.957
OD2							.813
OD3							.766
OD4							.865
OD5							.883
OD6							.895

Note: Construct statements with values less than .4 are not presented due to low commonality

Table 6: Correlations and Discriminant Validity

Individual Correlations		**Inter-Item Correlations**		**Discriminant Validity**
DP-DP	.42	OD-DP	.32	.74
CI-CI	.49	OD-CI	.36	.77
CA-CA	.50	OD-CA	.31	.66
HC-HC	.48	OD-HC	.37	.80
TA-TA	.45	OD-TA	.35	.79
OD-OD	.44			

Figure 1: Schematic Appearance of SEM Results



*Coefficient is significant at .05 level

** Coefficient is significant at .01 level