

Cyprus settlement: a zero sum game for tourism?

David Jacobson¹, Craig Webster^{2*}, Kelsey Shapiro³, Bernard Musyck⁴
and Stelios Orphanides⁵

Received: 12/02/2015 Accepted: 02/04/2015

¹ Professor of Economics, Room 303, DCU Business School, Dublin City University, Dublin 9, Ireland; phone: +353 1700 5265; e-mail: david.jacobson@dcu.ie.

² Assistant Professor, Department of Family and Consumer Sciences, Applied Technology Building, Room 150, Ball State University Muncie, IN 47306, USA; phone: (765)-285-5940; e-mail: cwebster3@bsu.edu

³ Graduate Assistant, Department of Family and Consumer Sciences, Applied Technology Building, Room 150, Ball State University Muncie, IN 47306, USA; phone: (248)-217-6986; e-mail: keshapiro@bsu.edu

⁴ Associate Professor, Department of Business Administration, Frederick University, 7 Yianni Frederickou Street, POBox 24729, 1303 Nicosia, Cyprus; phone: + 35722394394; e-mail: bus.mb@frederick.ac.cy

⁵ Independent Consultant, Chalkidos 11, Yermasoyia 4042, Cyprus; phone: 99617681; e-mail: stylian65@gmail.com

* Corresponding author

Abstract

This research considers the effects of a settlement of the Cyprus problem on the tourism industry in the two parts of the divided island. The findings illustrate that the prevailing attitude of Greek Cypriot tourism professionals is that the status quo is a net loss for both the Greek Cypriot and Turkish Cypriot tourism industries, while a strong majority of their Turkish Cypriot counterparts see it as a zero sum game, with Greek Cypriots winning at the expense of the Turkish Cypriot tourism industry. There is strong evidence that professionals in both political entities view a post-settlement tourism industry as a positive sum game with the industry in the entire island benefiting, although there is a noteworthy minority among the Greek Cypriot professionals who view the post-settlement tourism industry as disproportionately benefiting the Turkish Cypriot industry. Tourism professionals in both communities generally anticipate benefits (a positive sum game) from a political settlement, but they recognize significant barriers to cooperation under the current circumstances.

© 2015 Varna University of Management. All rights reserved

Keywords: Cyprus, cooperation, ethnic conflict, tourism futures, game theory

Citation: Jacobson D., C. Webster, K. Shapiro, B. Musyck and S. Orphanides (2015) Cyprus settlement: a zero sum game for tourism? *European Journal of Tourism Research* 11, pp. 21-34

Introduction

Cyprus has been politically divided for several decades and successive generations have now grown up in a country that is politically separated into two distinct political units. In this research, we explore empirical evidence of how

a political solution to the division would likely impact upon the tourism industry. To learn more about this, surveys and interviews were undertaken to ascertain information on how people in the tourism industry on both sides of the ethnic divide view the effects of the political

division of the island on tourism and tourism development.

To begin, it is necessary to give some background to the Cyprus conflict. The country became the independent Republic of Cyprus in 1960, after having been under British rule for most of the previous century. This did not solve the ethnic friction that had been an ongoing feature of Cyprus society. Violence ensued resulting in many deaths between the major ethnic groups on the island, the Greek Cypriots (a Greek-speaking Orthodox Christian population) and the Turkish Cypriots (a Turkish-speaking Muslim population). The Greek Cypriot population on the island at the time of independence accounted for about 77 per cent of the population of the island, while the Turkish Cypriot population accounted for about 18 per cent of the population, according to the census (Republic of Cyprus, 1961).

In 1974 there was a coup orchestrated from Athens and Turkey invaded part of the Republic of Cyprus from the North, ostensibly to protect the Turkish Cypriot minority from ethnic cleansing. As a result, the island is divided today, as the northern sections of the island had been incorporated into the "Turkish Republic of Northern Cyprus," which accounts for about a third of the area of the island of Cyprus and has a government that lacks international recognition from all the countries in the world, with the exception of Turkey (CIA, 2015). The Republic of Cyprus, predominantly populated with Greek Cypriots, occupies most of the rest of the island; some areas are administered by the UN and others by British forces. All efforts to unify the country into one political entity have failed and the two major political entities on the island remain separated by a UN-administered buffer zone, with the line separating the two major political units referred to as the "Green Line."

Both economies on the island of Cyprus have relied heavily on tourism, as the climate and seaside make tourism development an obvious option for economic development. To illustrate the importance of tourism to the economy, in 2014 there were a reported 2441000 tourism arrivals to the Republic of Cyprus; with 858000 people living there, there are nearly three

arrivals per capita, which is very high relative to most other countries. The "total contribution of Travel & Tourism" in Cyprus in 2014 is estimated by the World Travel and Tourism Council to be 24% of GDP (World Travel and Tourism Council, 2014). There are no reliable data for the "Turkish Republic of Northern Cyprus," but the small population size and significant flights from mainland Turkey suggest that tourism is a major part of the economy on that part of the island, too.

The tourist industries in the two parts of the island have been influenced by the political and cultural differences between Turkish Cypriots and Greek Cypriots and both populations live under very different political and economic circumstances. While the Republic of Cyprus is in the European Union, uses the euro as its currency, and is a recognized state, the Turkish Cypriot population lives under very different circumstances, with a political system and economy more closely linked with Turkey. The political anomaly that exists is that while most Turkish Cypriots live in a political system that is not recognized as a part of the European Union, they live in a geographical location that is nevertheless identified as being a part of the EU. There is a noteworthy development gap between the two entities on the island with the Turkish Cypriots being significantly less affluent than Greek Cypriots (Ayres, 2003).

The purpose of this study is to determine the probable impact a settlement of the Cyprus question would have on the performance of the tourism industry in Cyprus. The linkage between tourism and the ethno-political conflict does not go unnoticed in the scholarly research (see for example; Antoniadou Kyriacou *et al.*, 2009; Scott, 2012; Mullen *et al.*, 2014). Mullen *et al.* (2014, pp VII) estimate that the value added in the tourism sector would increase, in the event of a resolution of the conflict, from €1.3bn in 2012 to €2.9bn in 2032. While the methods of forecasting may be questioned, there are and have been recurring linkages between the conflict and the tourism potential of the island.

To analyse the relationship between tourism and cooperation in the tourism sector in the major political units on the island, the language

and concepts of game theory, an approach often used in strategic studies and business studies (see for example; Dixit and Nalebuff, 2010; Geçkil and Anderson, 2010; Tadelis 2013), are invoked. While the sophisticated mathematical models that often accompany game theoretic approaches are outside of the scope of this paper, the notion of the nature of the interactions between the players and the values of the outcomes, given the choice of cooperation as the equilibrium strategy in the payoff matrix, are used as guiding conceptual tools for this analysis. Game theory is an approach that is popular in many social sciences in which interactions between two rational decision makers are analysed. Most famously, it was used by Axelrod (1984) and it remains an approach that is commonly used in social sciences, usually with mathematics, to derive conditions under which cooperation may take place (see for example, Grieco, 1988; Szabo *et al.*, 2000). In the last few years alone, this approach has been used in several articles in journals dealing with tourism and development (see for example, Sheng, 2011; Dinica, 2012; van Zyl, 2012). Earlier examples include Ellis and Rogers (1997), Thompson and Gazel (1997) and Felsenstein and Freeman (2002).

In using game theory to conceptually model the tourism situation in Cyprus, we envision two actors behaving rationally in their choice of strategy – in particular whether or not to cooperate – in tourism on the island of Cyprus. There are few examples of the use of game theory in the analysis of tourism problems in Cyprus, but it is not novel in work on the conflict in general in Cyprus; Lumsden (1973) used a game theoretical approach to analyse the ethnic problems of Cyprus, even before the Turkish invasion.

The paper is structured as follows. First, we examine the relevant literature: on the relation between tourism and political conflicts in Cyprus and elsewhere. Then we deal with tourism in Cyprus, highlighting the four projected scenarios that could come out of future settlement between the two major political entities on the island. Next, we explain the methods used to gather data to learn about

how tourism professionals view cooperation and the tourism industry in a post-settlement Cyprus. Finally, we conclude with a discussion of the results and some suggestions for future research on the topic.

Literature Review

There is a growth in interest in academic circles with regard to the linkage between tourism and peace. In recent years, two significant edited volumes have dealt specifically with this topic (Moufakkir and Kelly, 2010; Wohlmuther and Wintersteiner, 2014). Among the more common locations on which attention has focused in the tourism and peace literature, is the case of Ireland (Anderson and O'Dowd, 1999; Anson, 1999; Boyd, 1999; Leslie, 1999; Henderson and Teague, 2006; McDowell, 2008). Another, unsurprisingly given the coexistence of tourism and political tensions there, is the Basque country (Abadie and Gardeazabal, 2001; Plaza, 2002). There are many other writings that deal with the relationship between tourism and peace/conflict areas (including Korea and the Middle East), and still others with more abstract approaches to these issues (see for example; Hall and O'Sullivan, 1996; Mansfeld, 1996; Etxebarria and Gomez Uranga, 2002; Coshall, 2003; Neumayer, 2004; Altinay and Bowen, 2006; Brin, 2006; Law, 2006; Zuelow, 2006; Araña and León, 2008; Gelbman, 2008).

As a subset of this literature, a great deal is written about political divisions and tourism (see for example; Dana, 1990; Anderson and O'Dowd, 1999; Boyd, 1999; Leslie, 1999; Chung and Yu, 2001; Cohen-Hattab, 2004; Henderson and Teague, 2006; Seongseop Kim and Prideaux, 2006; Zuelow, 2006; Gelbman and Timothy, 2011). Focusing on Cyprus, there is a growing literature on tourism that puts the role of the division in a central position in terms of analysing the industry in Cyprus. Among these are a number that deal with issues of how the tourism industry has fared since the political division of the island in 1974 (Ioannides and Apostolopoulos, 1999; Sharpley, 2001; Webster and Ivanov, 2014). Also noteworthy is an academic literature that focuses upon the "Turkish Republic of Northern Cyprus" and potential benefits that its tourism industry might expect to enjoy given a political

solution to the island's division (Altinay, 2000; Altinay *et al.*, 2002; Altinay and Hussain, 2005). There is also a substantial literature on the possibilities and benefits of cooperation between Turkish Cypriots and Greek Cypriots and the impediments to such cooperation. For example, Webster *et al.* (2009) look into how Greek Cypriots involved in the tourism industry perceive cooperation with Turkish Cypriots, in terms of employing Turkish Cypriots as well as future prospects and opportunities for cooperation between Greek Cypriots and Turkish Cypriots, a perspective similar to that of Sönmez and Apostolopoulos (2000), TTC (2004), and Musyck *et al.* (2010). Scott (2012) focuses upon the role of tourism in creating an environment for cooperation between the two leading ethnicities on the island by using an ethnographic approach in a Cypriot village.

One of the most interesting veins in the recent research on tourism and Cyprus developed out of the change in the status quo in 2003, when the movement of people between the two major political entities on the island was liberalized. The research following this change is concerned with the nature and logic of the flow of people, including the impediments and perceived impediments to travel across the Green Line. Webster and Timothy (2006) explored the data to learn that about half of the Greek Cypriots had refused to cross the Green Line, and found that the refusal was largely linked with the unwillingness to show IDs or passports to Turkish Cypriot authorities. The findings of Webster and Timothy (2006) have largely been echoed in the work of Flynn *et al.* (2012). Hadjipavlou (2007) also focused on the issue of those who crossed the Green Line and the prospects of reconciliation between the two major communities on the island as did Lisle (2007), Jacobson *et al.* (2010), and Yorucu *et al.* (2010).

While there is a large literature that deals with conflict tourism and there is a significant literature dealing with tourism and Cyprus, there has been little or no work examining the future of tourism in Cyprus in a game theoretic way. Here we consider the empirical data for indications of social barriers to the achievement of the win-win outcome that a political settlement would offer both communities on

Cyprus in their tourism industries. First, the application of a game theoretic approach to the impact that a settlement would have upon the tourism industry in Cyprus is explored.

Post-Settlement Outcomes in Cyprus for Tourism

The government of the Republic of Cyprus commissioned a study on the impact on tourism of the acceptance of the 2004 Annan Plan, a UN-sponsored plan to reunite the island that ultimately was defeated by Greek Cypriot voters. This study points out potential threats and opportunities in a post-solution scenario. According to TTC (2004), the future development of tourism in Cyprus would depend on the ability to merge the respective aspirations of the two communities. The report suggests this might be difficult. In the case of the Greek Cypriot tourism industry, the aim was to move from a mix of core appeals and products to a repositioned set of appeals and innovative products through the development of golf courses, marinas, conference centres, more upscale accommodation and activity and special interest products. On the other hand, the Turkish Cypriot tourism industry seemed set on a strategy of promoting the north as a "sun, sand and sea plus" (3S+) destination.

As a result of competitive pressures in a post-settlement scenario, the Greek Cypriot tourism industry owners and operators would strive to protect their market shares and sacrifice their long-term strategic aspirations. Turkish Cypriots, on the other hand, would be tempted to exploit in an opportunistic manner the access to markets previously denied, as the Turkish Cypriots' political and economic isolation from much of the non-Turkish world has had a deleterious impact upon its tourism product. Table 1 summarises the four possible results of the choices the two sides would make in a post-settlement situation.

At one extreme we find the "win-win" outcome, where both communities pursue, in a coordinated manner, their strategic objectives thus facilitating complementary developments. This, a positive sum game in game theoretic terms, is the Pareto optimum (Andreosso and Jacobson, 2005, p. 28-29). At the other extreme is the "destructive competition" or

Table 1. The four possible outcomes in a post-settlement scenario

Community	Strategy	Short-term effect	Medium-term effect	Long-term effect	Outcome Evaluation
Greek Cypriot	As is	Some loss	Decreasing Competitiveness	Stagnation	<i>Destructive competition</i>
Turkish Cypriot	Opportunistic	Gain	Decreasing gain	Stagnation	
Greek Cypriot	As is	Some loss	Increasing loss	Stagnation	<i>Mis-match</i>
Turkish Cypriot	Planned 3S+	Little gain	Emerging "New" Destination	Market Supremacy	
Greek Cypriot	Repositioned	Some loss	Recovery	Gain	<i>Mis-match</i>
Turkish Cypriot	Opportunistic	Some gain	Loss of share	Stagnation	
Greek Cypriot	Repositioned	Some loss	Recovery/emerging "New" destination	Gain +	<i>Win-Win</i>
Turkish Cypriot	Planned 3 S+	Some gain	Emerging "New" Destination	Gain +	

Source: adapted from TTC (2004:111)

Figure 1. Payoff matrix for cooperation between Greek Cypriots and Turkish Cypriots

		Turkish Cypriots	
		Cooperate	Work separately
Greek Cypriots	Cooperate	(C_c, C_c)	(C_{ws}, WS_c)
	Work separately	(WS_c, C_{ws})	(WS_{ws}, WS_{ws})

“lose-lose” outcome, where the Turkish Cypriot industry aims at gaining share from the Greek Cypriot 3S+ package market, leading to long term stagnation for both, a negative sum game. The long-term successful outcome for a community’s tourism policy would depend on its determination to implement a long-term development policy and on its ability to avoid the temptation of short-term opportunistic practices. Lack of trust will exacerbate the likelihood of the short term policies that lead to long term stagnation. This is the Nash equilibrium of game theory, and games with such results are called “prisoner’s dilemma”, in which the actors are trapped in a situation less beneficial than the best possible (the Pareto optimum) outcome (Andreosso and Jacobson, 2005: 27-30).

The successful applications of long-term tourist development strategies depend, according to TTC (2004), on the implementation of policies relating to tourism, including environment, town planning, monetary, public transport, aviation, and security policy. The study recommends the involvement of the private sector in tourism coordination and development which would help overcome some of the political or

structural constraints. It also recommends the harmonisation of the regulatory systems of the two major political entities on the island. Other recommendations include: coordinated planning for Famagusta, effective use of external funding mechanisms, and cooperation in the marketing and promotion of the Cyprus tourism product.

The degree of collaboration between the two communities in the case of a settlement could develop from cooperation to integration through meetings between the two tourism boards to coordinate advertising and to oversee matters of standardisation. Such collaboration could also develop through the organisation of common ad hoc campaigns in key consumer markets to test the effectiveness of joint marketing, joint stands at major holiday fairs, the full integration of marketing campaigns focused on the whole island, and the creation of a new marketing company for the island’s tourism industry in a partnership of the two organisations responsible for tourism promotion on the island. All this echoes the development of joint marketing of tourism in Ireland, an island that had finally achieved the win-win outcome, as described by TTC (2004).

Figure 1 can be used to summarise this analysis, for the two situations, before and after settlement. C_c is the payoff to each side from cooperating if the other side also cooperates; WS_c is the payoff to each side if it works separately and the other side tries to cooperate; and WS_{ws} is the payoff to each side from working separately if the other side also works separately. It should be noted that we are simplifying somewhat by assuming that the payoffs are symmetrical. However, this does not change the results. The perception on both sides seems to be of gain from cooperating but a reluctance to do so prior to settlement. This suggests that before settlement there is a “prisoner’s dilemma” game in which, despite the fact that $C_c > WS_{ws}$, both sides choose the WS strategy such that they each get the WS_{ws} payoff; the bottom, right-hand cell is the equilibrium. The explanation is that because of an absence of trust, each side believes that if they attempt to cooperate they will lose because of the way in which the other side responds by working separately.

In symbols:

Although $C_c > WS_{ws}$, because, say, $C_{ws} < 0$ both sides avoid the risk of losing and choose the WS strategy. More generally, such games lead to prisoner’s dilemma results (i.e. equilibrium other than at Pareto optimum) where:

$C_{ws} < WS_{ws} < C_c < WS_c$ (see Andreosso and Jacobson, 2005: 225).

We now move to the empirical data to determine whether such game theoretic approaches are supported by the empirical data of Cypriots on both sides of the Green Line.

Methodology

In order to determine the impact of a settlement to the Cyprus question on the tourism industry in Cyprus and the costs and benefits of division, researchers conducted a survey of the tourism industry in both political entities on the island of Cyprus. There were two surveys conducted in parallel in the Republic of Cyprus and the “Turkish Republic of Northern Cyprus” in 2008. First, in both of the political entities, there were in-depth interviews of businesses in the tourism and hospitality industries. Second,

there were detailed interviews with critical people in the tourism and hospitality industries in both political entities on the island.

In the Republic of Cyprus, the list of hotels, ‘aparthotels,’ and travel agencies included in the study were derived from the official information and local knowledge of recent updates. Hotels with less than three stars, or ‘aparthotels’ with less than B registration were not included in the survey, as they tend to be largely small-scale operations accounting for a relatively small proportion of tourist overnight stays. Travel agencies included in this study account for the vast majority of tourism in Cyprus. Questionnaires were mailed to hotel and travel agency owners or managers with follow-up phone calls to encourage more participation. The questionnaire contained 12 questions designed to learn about the current business issues and conditions and the expectations of the impact of settlement. A similar process was conducted in the “Turkish Republic of Northern Cyprus.” There were 70 responses from establishments in the “Turkish Republic of Northern Cyprus” and 92 responses from the Republic of Cyprus.

The second part of the research was in-depth interviews by phone with ten major players in the tourism industry in the “Turkish Republic of Northern Cyprus” and four in the Republic of Cyprus, although the Republic of Cyprus’ Cyprus Tourism Organisation replied to the request with a written statement. These interviews were one-on-one and information was collected with the full knowledge that they constituted part of the study. All interviews were conducted in the same format consisting of two scenarios, the settlement, and the existing (divided) status quo. These interviews dealt with the current state of the tourism industry and projections regarding future prospects for the industry and for cooperation between Greek Cypriots and Turkish Cypriots in the tourism industry.

Results

Quantitative Surveys of Tourism Professionals
While there were many questions asked regarding the costs and benefits of the status quo and the projected benefits of a solution, the focus here will be on two major questions of particular relevance. First, in relation to winners

and losers from the existing situation, the Greek Cypriot and Turkish Cypriot respondents had very different perceptions. This is shown in Table 2 below.

Table 2 illustrates that the Greek Cypriot respondents are somewhat more ambivalent regarding the winners and losers of the status quo than the Turkish Cypriot respondents; the Greek Cypriot responses are more mixed. The largest proportion among the Greek Cypriot respondents feel that the status quo is a loss for both the Turkish Cypriot and Greek Cypriot tourism industries (i.e. a negative sum result). In contrast, about three-fourths of the Turkish Cypriot respondents indicated their view that the status quo is a win for the Greek Cypriot industry and a loss for the Turkish Cypriot industry (closer to zero sum). A relatively high 9% of Greek Cypriot respondents refused to answer this question or simply did not know how to respond. There were no “don’t know or won’t say” responses among the Turkish Cypriots. A significant minority agreed with the Greek Cypriots that the status quo was a lose-lose situation. The chi-squared statistic

supports the hypothesis that the ethnicity of the respondent conditions the response to this question.

Another intriguing finding is the rather pessimistic perceptions of Turkish Cypriot and Greek Cypriot respondents regarding joint tourism activity under the status quo. The data in relation to this question are presented in Table 3 below. The data illustrate that only a minority of respondents on both sides envision the possibility of joint tourism activity under the existing situation. The majority of Greek Cypriot (76%) and Turkish Cypriot (61%) respondents hold the view that joint tourism activity is not possible under a continuation of the status quo. However, the data suggest that Turkish Cypriots in the industry are somewhat less pessimistic regarding joint tourism activities under the status quo than the Greek Cypriots in the industry, as nearly 40% of Turkish Cypriots see such activity as possible while the corresponding figure for the Greek Cypriots is just over 20%. The chi-squared statistic again provides support for the argument that the response to the question is influenced by ethnicity.

Table 2. Expected outcomes, assuming continuation of status quo

Likely impact:	Greek Cypriots		Turkish Cypriots	
	Frequency	Percent	Frequency	Percent
Win-win for both sides	11	12	0	0
Win for Greek Cypriots and loss for Turkish Cypriots	7	7.6	52	74.3
Win for Turkish Cypriots and loss for Greek Cypriots	25	27.2	0	0
Loss for Turkish Cypriots and loss for Greek Cypriots	41	44.6	18	25.7
N/A	8	8.7	0	0
Total	92	100.0	70	100.0

Pearson Chi-Squared = 78.67, Asymp. significance =0.000

Table 3. Possibility of joint tourism activity if the existing situation continues

Response	Greek Cypriots		Turkish Cypriots	
	Frequency	Per cent	Frequency	Per cent
Yes	19	20.7	27	38.6
No	70	76.1	43	61.4
N/A	3	3.2	0	0
Total	92	100.0	70	100.0

Pearson Chi-Squared = 5.653, Asymp. significance =0.017

Table 4. *The likely impact of a settlement*

Likely Impact:	Greek Cypriots		Turkish Cypriots	
	Frequency	Percent	Frequency	Percent
Win-win for both sides	73	79.3	69	98.6
Win for Greek Cypriots and loss for Turkish Cypriots	0	0	0	0
Win for Turkish Cypriots and loss for Greek Cypriots	10	10.9	1	1.4
Loss for Turkish Cypriots and loss for Greek Cypriots	3	3.3	0	0
N/A	6	5.4	0	0
Total	92	100.0	70	100.0

Pearson Chi-Squared = 8.929, Asymp. significance =0.012

Nevertheless, a significant minority of Greek Cypriot and an even larger minority of Turkish Cypriot respondents see the possibility of joint tourism cooperation, assuming a continuation of the status quo. The findings illustrate the general understanding that there are practical and legal differences, and ethnic animosities, that inhibit cooperation under the status quo, although the Turkish Cypriot respondents appear to be somewhat more willing to concede that cooperation is possible even under these circumstances. It is noteworthy that of the Greek Cypriots who responded in a positive way to this question, most of them envisioned arranging visits (in most cases day trips) to the “Turkish Republic of Northern Cyprus,” while the Turkish Cypriot respondents tended to indicate that joint marketing of Cyprus as a destination would be a possibility.

In terms of forecasting the impact of a settlement, the interesting finding is that the majority of Greek Cypriots and Turkish Cypriots envision an outcome that is a win-win for both sides (see Table 4). The Turkish Cypriots respondents seem to be almost of one mind in holding this view, with only one dissident out of the 70 Turkish Cypriot respondents to the survey. In contrast, while nearly 80% of the Greek Cypriot respondents felt that the outcome was a win-win for the tourism industry, the remaining responses were scattered among every other possible response, with the exception of “win for Greek Cypriots and loss for Turkish Cypriots”, which none chose as their response. These differences result in a chi-squared statistic that provides further justification for arguing that the ethnicity of the

respondent influences responses to the question.

Key Informants

The other major aspect of this research was an investigation of some of the leading voices in the tourism industry in both political entities on Cyprus. The interviews were easier to obtain in the “Turkish Republic of Northern Cyprus” and there ten interviews were carried out. Summaries of the discussions with the respondents (found in Mehmet *et al.*, 2008) show that Turkish Cypriot respondents seem to be enthusiastic about political solutions and tend to have a very positive view on the possibility of cooperation under the status quo, although they seem to be able to identify the practical, legal, and other barriers to such cooperation. The Turkish Cypriot respondents perceive positive benefits of cooperation in a post-solution Cypriot tourism industry, despite their awareness of such immediate problems as the need to restore the tourism facilities outside Famagusta and the need to refurbish and expand the airport in Nicosia.

The Greek Cypriot responses were different from the Turkish Cypriot responses. The Greek Cypriots tended to stress that cooperation with the tourism industry in Turkish Cyprus faced a number of impediments under the status quo, such as the legality of the “Turkish Republic of Northern Cyprus”. In addition, the question of the legality of the ownership of properties used for tourism purposes would undermine the ability of Greek Cypriots to cooperate with Turkish Cypriots. Another major theme brought up by Greek Cypriots was the perception that

the land occupied by Turkish Cypriots had become a major competitor for tourism with the Republic of Cyprus, as many Greek Cypriots were going to the Turkish Cypriot areas for tourism purposes and to gamble at casinos; casinos do not operate legally in the Republic of Cyprus.

Analysis of attitudes towards cooperation

The major findings of this research are that Greek Cypriots and Turkish Cypriots have different perceptions on returns from the status quo and potential future returns from a political solution. Overall, in the language of game theory, there is evidence on both sides of a sub-optimal, prisoner's dilemma trap in which neither side will cooperate in the current situation. While it seems that a strong majority of Turkish Cypriots see the current situation as favouring Greek Cypriots, there is a strong minority that view it as a bilateral loss. What this means, is that Turkish Cypriots see the current situation as either a zero sum game to their detriment, or a negative sum game to the detriment of both sides, in relation to tourism. Only a small minority (about 12%) of Greek Cypriots view the current situation as optimal, with both Greek Cypriots and Turkish Cypriots benefiting from division. The largest response of Greek Cypriots is to see the division as lose-lose, a negative sum result under current circumstances. What is noteworthy is that the data show that regardless of the current circumstances, there is evidence of willingness of Greek Cypriots and Turkish Cypriots to cooperate, though only among a minority of respondents.

In terms of the impact of a settlement, the data show that the majority of those interviewed view a settlement as bringing out bilateral wins for Greek Cypriot and Turkish Cypriot tourism industries. In the language of game theory, the majority of respondents would envision a solution as creating the conditions for a win-win, positive sum, Pareto optimal outcome, leading to a maximization of returns for the Greek Cypriot and Turkish Cypriot tourism industries. However, there is a noteworthy minority of Greek Cypriot tourism professionals who persist in viewing a settlement scenario as

a zero-sum game in which Turkish Cypriots would benefit at the expense of Greek Cypriots.

The key informants on both sides of the Green Line illustrate some of the difficulties of coordinating a situation in which bilateral gains can be made. One of the key issues that came out of the interviews is that cooperation is largely hindered by legal issues. The key issues that continually come up concern the legality of Turkish Cypriot enterprises, as the country lacks recognition and the legal ownership of properties is often questionable. What is interesting about the points raised is that they are largely legal and political constructs that create legal and ethical impediments to cooperation, in turn impeding market-oriented interactions. These barriers in the way of cooperation and market oriented interactions under current circumstances create a mindset of zero-sum interactions, although when asked about a post-settlement Cyprus, most respondents among the key informants seem to be able to envision cooperative interaction between the Greek Cypriot and Turkish Cypriot tourism industries.

In the post-settlement situation there is a change. Despite some continued mistrust, especially on the part of the Greek Cypriots (see Table 4), there is, overall, an expectation of greater cooperation. This can be interpreted as a shift in perception of relative payoffs, such that the equilibrium is now the upper left-hand (Pareto optimum) cell of the matrix in Figure 1. The perception of risk of loss through cooperating is diminished and now, in symbols:

$WS_c < WS_{ws} < C_{ws} < C_c$ and this is no longer a prisoner's dilemma game but rather, as discussed above, a case of win-win through cooperation.

Conclusion

In conclusion, the survey results suggest that the dominant view among tourism professionals is that rather than a zero sum game, tourism in a post-settlement Cyprus will take the form of a positive sum game. Tourism on the island as a whole is expected to increase, with both sides having significant gains in terms of their parts of the expanded

tourism industry. Respondents in both entities tend to see the current situation as less than optimal, with the majority of respondents seeing it as a losing proposition for the industry in both entities on the island. The findings also indicate a general willingness of Turkish Cypriots in the industry to cooperate in a post-solution situation, although there is less evidence that Greek Cypriots in the industry are so enthusiastic about such cooperation. Without some willingness to collaborate, a situation may emerge as highlighted in the first two rows of Table 1, the scenario labelled as “destructive competition”.

Under conditions of a solution acceptable to both sides, there is scope for cooperation between the two communities but there is reluctance on the part of tourism professionals in Greek Cyprus. The centrally-funded implementation (post-settlement) of a sustainable long-term plan for Cyprus as a common tourist destination would help to avoid the opportunistic exploitation of short-term market situations. This survey provides evidence of widespread expectation that a win-win situation in tourism will emerge from a settlement acceptable to both sides, leading to a positive sum outcome in which the industry on both sides of what is now the Green Line would benefit immensely, even if mutual gains are unevenly experienced, as some suspect (Mullen *et al.*, 2014: 46). Media coverage of a possible reunification of the island would benefit tourism advertising campaigns, which could be launched in an attempt to re-brand Cyprus and to highlight the new experience it would offer to tourists. Political instability may continue to threaten tourism development and entail risks for potential shocks in the future. A settlement of the Cyprus problem could deliver a unique opportunity to redefine the tourism industry and to secure its overall market share in the future. Whether on its own in the non-settlement scenario, or in cooperation with Turkish Cypriots in a political settlement scenario, the Greek Cypriot tourism industry will have to redesign its strategic plan so as to reverse the continuous environmental degradation, and the loss of price competitiveness and cultural identity. Indeed, the recent literature on governance and tourism stresses the important role that governmental

institutions can contribute to the industry (see for example Farsari and Poulicos, 2004; Borges *et al.*, 2014; Pechlaner *et al.*, 2014).

Interestingly, the findings seem to echo the preconditions for liberal peace building mentioned by Webster and Ivanov (2014); political and legal impediments seem to have been designed in Cyprus to prevent peaceful economic cooperation between Greek Cypriots and Turkish Cypriots. In the case of Ireland, the preconditions to liberal cooperation were met, while it seems that in Cyprus and Korea, such preconditions are largely missing. The data here seem to stress that Cyprus is lacking those preconditions for liberal interactions; as an example, many of the respondents cited legal issues and concerns for the legal recognition of the “Turkish Republic of Northern Cyprus” as major impediments to cooperation. Few mention these things as impediments in a post-settlement scenario, suggesting that there is substantial latent desire bilaterally to cooperate, if only the legal and political impediments were removed.

Future research should look more into the legal, practical, and cultural impediments to cooperation under the current situation and in a post-settlement Cyprus. While the question of legality of cooperation with Turkish Cypriots is a major issue for Greek Cypriots, there may be ways to ensure that legal concerns are addressed, enabling Greek Cypriots and Turkish Cypriots to cooperate. For example, if Turkish Cypriots use land and properties owned by Turkish Cypriots prior to 1974 for housing tourists, many Greek Cypriots’ reasons not to cooperate may be adequately addressed. There may be other impediments (language, cultural communication issues, and practical issues) that focus groups or other qualitative research techniques could uncover. Once the impediments are more clearly identified, then some of the issues may be addressed, enabling greater cooperation, even under the status quo.

The survey provides empirical support for the argument that the continued division of Cyprus imposes a cost on tourism (it is a tourism negative sum game). A large majority of respondents expect a continuation of the status

quo to lead to problems for the Greek Cypriot tourism industry. Although there are few examples in Cyprus, cooperation between the two tourism industries may create concrete economic benefits for both communities, reduce mistrust and lead to a virtuous circle. Tourism in Ireland provides an example to illustrate the ability of cooperation to yield significant benefits. There, the maintenance of links even in the pre-solution situation allowed more effective forms of cooperation following the settlement (Zuelow, 2006). The large number of crossings in Cyprus following the lifting of the restrictions to movement across the Green Line in 2003, the expectations of a win-win situation in the case of a solution, and the example of Ireland, all serve as incentives for cooperation in Cyprus. This conclusion is supported by the game theoretic framework, which underlines the danger of the Nash equilibrium trap of prisoner's dilemma (destructive competition), and the importance of interaction and trust in arriving at the far preferable Pareto optimum (win-win).

Acknowledgment: The authors would like to thank the British High Commission in Nicosia for their generous support of this research project.

References

- Abadie, A. & Gardeazabal, J. (2001). The economic costs of conflict: A case-control study for the Basque country. NBER Working Paper No. 8478.
- Altinay, L. (2000). Possible impacts of a federal solution to the Cyprus problem on the tourism industry of North Cyprus. *International Journal of Hospitality Management*, 19(3), 295-309.
- Altinay, L., Altinay, M., & Bicak, H.A. (2002). Political scenarios: The future of the North Cyprus tourism industry. *International Journal of Contemporary Hospitality Management*, 14(4), 176-182.
- Altinay, L. & Bowen, D. (2006). Politics and tourism interface: The case of Cyprus. *Annals of Tourism Research*, 33(4), 939-956.
- Altinay, M. & Hussain, K. (2005). Sustainable tourism development: A case study of North Cyprus. *International Journal of Contemporary Hospitality Management*, 17(3), 272-280.
- Anderson, J., & O'Dowd, L. (1999). Contested borders: Globalization and ethno-national conflict in Ireland. *Regional Studies*, 33(7), 681-696.
- Andreosso, B. & Jacobson, D. (2006). *Industrial economics and organization: A European perspective, 2/e*. London: McGraw-Hill.
- Anson, C. (1999). Planning for peace: the role of tourism in the aftermath of violence. *Journal of Travel Research*, 38(1), 57-61.
- Antoniadou Kyriacou, P., Öguz, Ö., & Mullen, F. (2009). The day after II: reconstructing a reunited Cyprus. Nicosia: PRIO Cyprus Centre.
- Araña, J. E. & León, C. J. (2008). The impact of terrorism on tourism demand. *Annals of Tourism Research*, 35(2), 299-315.
- Axelrod, R. (1984) *The evolution of cooperation*. New York: Basic Books.
- Ayres, R. (2003). The economic costs of separation: The north-south development gap in Cyprus. *Ekonomia*, 6, 39-52.
- Borges, M., C. Eusébio & N. Carvalho (2014). Governance for sustainable tourism: A review and directions for future research. *European Journal of Tourism Research*, 7, 45-56.
- Boyd, S. (1999). North-south divide: the role of the border in tourism in Northern Ireland. *Visions in Leisure and Business*, 17(4), 50-71.
- Brin, E. (2006). Politically-orientated tourism in Jerusalem. *Tourist Studies*, 6(3), 215-243.
- Chung, M., & Yu, L. (2001). Tourism as a catalytic force for low-politics activities between politically divided countries: The cases of South/North Korea and Taiwan/China. *New Political Science*, 23(4), 537-545.
- CIA (2015). World FactBook. Cyprus. <https://www.cia.gov/library/publications/the-world-factbook/geos/cy.html> (accessed 08/02/2015)
- Cohen-Hattab, K. (2004). Zionism, tourism, and the battle for Palestine: Tourism as a

- political-propaganda tool. *Israel Studies*, 9(1), 61-85.
- Coshall, J. T. (2003). The threat of terrorism as an intervention on international travel flows. *Journal of Travel Research*, 42(1), 4-12.
- Dana, L. P. (1990). Saint Martin/Sint maarten: A case study of the effects of culture on economic development. *Journal of Small Business Management*, 28(4), 91-98.
- Dinica, V. (2012). Tourism on Curaçao: explaining the shortage of sustainability legislation from game theory perspective. *Journal of Environmental Policy and Planning*, 14(2), 161-188.
- Dixit, A. K. & Nalebuff, B. J. (2010). *The art of strategy: A game theorist's guide to success in business and life*. New York: W. W. Norton & Company.
- Ellis, S. & Rogers, C. (1997). Local economic development as a game: We're caught in a trap, I can't walk out.... *Regional Research Institute*, West Virginia University: Morgantown.
- Etxebarria, G., & Gomez Uranga, M. (2002). The impact of conflict on a country's economy: An obligatory response to Beatriz Plaza. *European Planning Studies*, 10(3), 391-396.
- Farsari, Y., & Poulicos, P. (2004). Conceptualising tourism policies in north Mediterranean mass destinations. *Tourism Today*, 4, 89 – 102.
- Felsenstein, D., & Freeman, D. (2002). Gambling on the border: Casinos, tourism development and the Prisoner's Dilemma. In Krakover, S. & Gradus, Y. (ed.) (2002) *Tourism in frontier areas*, Lanham: Lexington Books, 95 -115.
- Flynn, M. K., King, T., Braddon, D. & Dadomo, C. (2012). *Reconciliation and peace economics in Cyprus. Summary of findings (February 2012)*. Report to the European Commission (EuropeAid Cypriot Civil Society in Action II Programme). Project Report. University of the West of England. <http://eprints.uwe.ac.uk/17538/> (accessed 09/02/2015)
- Geçkil, I. K., & Anderson, P. L. (2010). *Applied game theory and strategic behaviour*. Boca Raton, FL: Chapman & Hall/CRC Press.
- Gelbman, A. (2008). Border tourism in Israel: Conflict, peace, fear and hope. *Tourism Geographies*, 10(2), 193-213.
- Gelbman, A., & Timothy, D. J. (2011). Border complexity, tourism and international exclaves: A case study. *Annals of Tourism Research*, 38(1), 110-131.
- Grieco, J. M. (1988). Realist theory and the problem of international cooperation: Analysis with an amended prisoner's dilemma model. *The Journal of Politics*, 50(3), 600-624.
- Hadjipavlou, M. (2007). Multiple stories: The 'crossings' as part of citizens' reconciliation efforts in Cyprus? *Innovation*, 20(1), 53-73.
- Hall, C.M., & O'Sullivan, V. (1996). Tourism, political instability and violence. In A. Pizam & Y. Mansfeld (ed.) (1996) *Tourism, Crime and International Security Issues*. New York: Wiley, 105-121.
- Henderson, J., & Teague, P. (2006). The Belfast agreement and cross-border economic cooperation in the tourism industry. Working Papers in British-Irish Studies No. 54, IBIS, University College, Dublin.
- Ioannides, D., & Apostolopoulos, Y. (1999). Political instability, war, and tourism in Cyprus: Effects, management, and prospects for recovery. *Journal of Travel Research*, 38(1), 51-55.
- Jacobson, D., Musyck, B., Orphanides, S., & Webster, C., (2010). The opening of the Ledra Crossing in Nicosia: Social and economic consequences. In R. Butler & W. Suntikul (ed.) (2010) *Tourism and Political Change*. Oxford: Goodfellow Publishers, 199-207.
- Law, R. (2006). The perceived impact of risks on travel decisions. *International Journal of Tourism Research*, 8(4), 289-300.
- Leslie, D. (1999). Terrorism and tourism: The Northern Ireland situation-A look behind the veil of certainty. *Journal of Travel Research*, 38 (1), 37-40.

- Lisle, D. (2007). Encounters with partition: Tourism and reconciliation in Cyprus. In Purbrick, L., Aulich, J., & Dawson, G. (ed.) (2007) *Contested spaces: Sites, representations and histories of conflict*. Basingstoke: Palgrave, 70-104.
- Lumsden, M. (1973). The Cyprus conflict as a prisoner's dilemma game. *The Journal of Conflict Resolution*, 17(1), 7-32.
- Mansfeld, Y. (1996). Wars, tourism and the "Middle East" factor. In A. Pizam & Y. Mansfeld (ed.) (1996) *Tourism, Crime and International Security Issues*. New York: Wiley, 265-278.
- McDowell, S. (2008). Selling conflict heritage through tourism in peacetime Northern Ireland: Transforming conflict or exacerbating differences? *International Journal of Heritage Studies*, 14(5), 405-421.
- Mehmet, O., Jacobson, D., Yorucu, V., Orphanides, S., Michaelides, G., Katircioglu, S., Webster, C., Musyck, B., Violaris, J., & Tahiroglu, M. (2008). *The future of the tourism Industry in Cyprus: Divided or reunited?* Monograph, The Management Centre of the Mediterranean, March, Nicosia.
- Moufakkir, O., & Kelly, I (eds.) (2010). *Tourism, Progress and Peace*. Wallingford: CABI.
- Mullen, F., Apostolides, A., & Besim, M. (2014). The Cyprus peace dividend revisited: a productivity and sectoral approach. Nicosia: PRIO Cyprus Centre.
- Musyck, B., Jacobson, D., Mehmet, O., Orphanides, S., & Webster, C. (2010). Divided or reunited? Prospects for the Cyprus tourism industry. In Moufakkir, O. & Kelly, I (eds.) (2010) *Tourism, Progress and Peace*. Wallingford: CABI, 212-227.
- Neumayer, E. (2004). The impact of political violence on tourism: Dynamic cross-national estimation. *Journal of Conflict Resolution*, 48(2), 259-281.
- Pechlaner, H., Bachinger, M. Volgger, M. & Anzengruber-Fischer, E. (2014). Cooperative core competencies in tourism: Combining resource-based and relational approaches in destination governance. *European Journal of Tourism Research*, 8, 5-19.
- Plaza, B. (2002). A note on panorama of the Basque Country and its competence for self-government: Terrorism and the Guggenheim Museum Bilbao Effect. *European Planning Studies*, 10(3), 383-389.
- Republic of Cyprus (1961). Census of Population and Agriculture, 1960: Volume I: Population by Location, Race, and Sex. Nicosia: Department of Statistics.
- Scott, J. (2012). Tourism, civil society and peace in Cyprus. *Annals of Tourism Research*, 39(4), 2114–2132.
- Seongseop Kim, S., & Prideaux, B. (2006). An investigation of the relationship between South Korean domestic public opinion, tourism development in North Korea and a role for tourism in promoting peace on the Korean peninsula. *Tourism Management*, 27(1), 124-137.
- Sharpley, R. (2001). Tourism in Cyprus: Challenges and opportunities. *Tourism Geographies*, 3(1), 64-86.
- Sheng, L. (2011). Regional competition and sustainable development: A game theory model for tourism destinations. *European Planning Studies*, 19(4), 669-681.
- Sönmez, S., & Apostolopoulos, Y. (2000). Conflict resolution through tourism cooperation? The case of the partitioned island-state of Cyprus. *Journal of Travel & Tourism Marketing*, 9(3), 35-48.
- Szabo, G., Antal, T., Szabo, P., & Droz, M. (2000). Spatial evolutionary prisoner's dilemma game with three strategies and external constraints. *Physical Review E* 62(1), 1095—1103.
- Tadelis, S. (2013). *Game theory: An introduction*. Princeton: Princeton University Press.
- Thompson, W. N., & Gazel, R. (1997). The Last Resort revisited: The spread of gambling as a 'prisoners dilemma.' In Eadington, W.R., Cornelius, J.A. (ed.) (1997) *Gambling Public Policies and Social Sciences*. Reno: Institute for the

- Study of Gambling and Commercial Gaming, University of Nevada, 183-206.
- Tourism & Transport Consult (TTC) International (2004). *Study for the determination of the impact on tourism from a potential settlement of the Cyprus issue on the basis of the Annan Plan - Final Report*. Dublin: Cyprus Tourism Organisation.
- Webster, C., Musyck, B., Orphanides, S. & Jacobson, D. (2009). Working on the other side. Co-operative tour organizers and uncooperative hoteliers: Evidence from Greek Cypriot tourism professionals. *European Planning Studies*, 17(10), 1485- 1508.
- Webster, C., & Ivanov. S. (2014). Tourism as a force for political stability. In Wohlmuther, C., & Wintersteiner, W (ed.) (2014) *The International Handbook on "Tourism and Peace"*. Drava Verlag, 167-180.
- Webster, C., & Timothy, D. J. (2006). Travelling to the 'other side': The occupied zone and Greek Cypriot views of crossing the Green Line. *Tourism Geographies*, 8(2), 162–181.
- Wohlmuther, C., & Wintersteiner, W. (2014). *The International Handbook on "Tourism and Peace"*. Drava Verlag.
- World Travel & Tourism Council (2014). *Travel and Tourism Economic Impact 2014: Cyprus*. London: WTTC.
- Yorucu, V., Mehmet, O., Alpart, R. & Ulucay, P. (2010). Cross-Border trade liberalization: The case of Lokmaci/Ledra Gate in divided Nicosia, Cyprus. *European Planning Studies*, 18(10), 1749-1764.
- Zuelow, E.G.E. (2006). Ingredients for cooperation: Irish tourism in North-South relations, 1924–1998. *New Hibernia Review*, 10(1), 17-39.
- van Zyl, C. (2012). Tourism marketing: a game theory tool for application in arts festivals. *Tourism Economics*, 18 (1), 43-57.
-