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A Factor Analysis of the North American Coach Tour Sector in Ireland *

Marie Ryan, Jim Deegan and Richard Moloney

Introduction

The Irish Tourism Industry has achieved remarkable growth over the last two decades. Overseas tourist arrivals have increased from 1.95 million in 1985 to 8.00 million in 2007, before falling back to 7.80 million in 2008 (CSO, 2009). Following a lengthy period of growth, the Irish tourism industry experienced a severe downturn triggered by the current global economic crisis. Despite these conditions, the Irish tourism industry remains one of Ireland's most important economic sectors generating almost €5.0 billion in foreign exchange earnings (approximately 4% to Gross National Product).

The tourism industry is at a critical juncture. It must try to ensure the industry weathers the current recession. Competing effectively for business by correctly targeting consumers when the global economy improves, will shape the future of Irish tourism activities. As tourism has grown and becomes more competitive, the country's interest in attracting its share of visitors has also grown (Sheehan, Ritchie & Hudson, 2007). The potential of the North American coach market provides an interesting opportunity for the industry. Factor analysis is used to identify crucial marketing information.

Irish tourism policymakers have limited knowledge of the type of North American tourists who visits here. The information that currently exists is primarily due to research carried out by Tourism Ireland and Fáilte Ireland's Survey of Travellers. Ward noted there is a need for empirical work in this area as it "would be particularly insightful for the Irish tourism industry" (2006, p. 434), since destination choices available to consumers today have proliferated (Pike, 2005).

This chapter reports factor analysis results based on the North American coach tourist. By analysing important travel behaviours and the character types of the North American coach tourist, seven future potential coach market niches are identified. The chapter contributes to the issues raised in the New Horizons for Irish Tourism: An Agenda for Action (2003), by way of establishing the factors that encourage and discourage North American coach tourists to go on holiday as well as establish their personality traits.

The chapter is organised as follows: Section 2, examines the North American tourist in Ireland. Section 3 describes the methodology. Section 4 presents the findings of the research. Finally, the chapter concludes with a summary and policy implications.

North American Tourists in Ireland

North American tourists are important contributors to the Irish tourism industry for two reasons, their market size and their market potential. They are significant contributors to the Irish tourism industry and represent a reliable market. In 2007, the Survey of Overseas Travellers noted 23% of them were repeat visitors and 64% (670,000) arrived specifically for a holiday. Over the years 2000 and 2006, the number of North Americans travelling overseas¹ increased by 17% (U.S Department of Transportation, 2009). From a potential of 64 million North American tourists travelling internationally, the island of Ireland attracted over one million, (Tourism Ireland, 2008). North American visitors stay longer than their European counterparts, averaging 9.3 nights in 2008 (CSO, 2009). Thus, in terms of market size, North Americans are significant contributors to the Irish tourist market.

With a potential expenditure of over \$100 billion, North American tourists are vital due to their market potential. Given the current economic climate the North American market provides a steady income stream (Fáilte Ireland 2007). Statistics indicate North Americans are the second highest spenders on travel abroad spending a greater proportion of revenue (on average 60% more) than other tourists in Ireland (Tourism Ireland, 2006). In 2008 this figure totalled €731million (Tourism Ireland, 2008). They constitute 20% of overall tourism receipts to the island of Ireland (CSO, 2009). Consequently, they signal a great opportunity to help Ireland maintain tourism revenues in such testing times.

Published Irish research detailing this market has been sparse. Work carried out by Tourism Ireland in 2006 profiled Ireland's best prospects by categorising the North American tourists into two groups. The sightseers and culture seekers who have visited Europe in the past and secondly, the better educated, better off urban and suburban tourist who enjoys the finer things in life (Tourism Ireland, 2007). Tourism Ireland further divided the sightseer and culture seeker tourist into three subsets: the luxury traveller, the Scots Irish and the most significant for this chapter; the Group tourist. Tourism Ireland states the opportunity to "target an increasing share of affinity groups from the core target market of sightseers and culture seekers is a niche market with good prospects" (2006, p.8). Group tours increased in market size by 56% between the years 2002 and 2006 (ITIC, 2008). Over the same period, coach tour programmes to Ireland, with North America as its largest individual source, (averaging 35% over the years 2007—2008) increased 160%, the fastest rate of any country (Fáilte Ireland, 2007). This chapter examines the North American coach tourist niche market in detail.

1. Overseas indicates outside the USA, Canada and Mexico

Methodology

A self administered questionnaire was distributed to North American coach tourists at the beginning of their coach tour. The questionnaires were distributed to tourists on their coach bus at the start of their tour and completed surveys were collected at the end of their stay. It was carried out over the period June 2007 to March 2008. A total of 741 North American coach tourists were presented with the questionnaire and a response rate of 69% ($n = 511$) was achieved. The data was screened for outliers and the out of range values were identified and disregarded. The minimum amount of data for factor analysis was satisfied, with a final sample size of 485.

Participants rated seven questions. The questions assessed motivations for travelling (why go and why not go on holiday), activities sought while on holiday, favoured hotel attributes, constraints that may prohibit travel, life focus over the next five to ten years and character traits of tourists. Responses were on a Likert scale, ranging from 1 = "Not at all important", 2 = "Mildly important", 3 = "Neither unimportant nor important", 4 = "Mildly important" and 5 = "Extremely important". A total of 101 variables were ranked by the coach tourists.

Factor Analysis

Factor analysis is a data reduction technique that groups variables into factors or dimensions that have common characteristics (Nunnally et al, 1994). Variables that are related are grouped into subgroups as they display high within-correlations. Data reduction in this vein means some variables are weighted more heavily and are retained, while others are set aside as they show less influence. Initially, the factorability of all variables, 101 items, was examined. Several well-recognised criteria for the factorability of a correlation were used. Firstly, all 101 variables correlated at least 0.4 with at least one other item, suggesting factorability. Secondly, the Kaiser-Meyer-Olkin measure of sampling adequacy over the seven questions measured a minimum value of 0.77. This is above the recommended value of 0.6. Bartlett's test of sphericity was also significant measuring a minimum value of $\chi^2 = 871.876$, $p < .05$ over all seven questions. The diagonals of the correlation matrix were all over 0.5, supporting the inclusion of each item in the factor analysis. Finally, the communalities were all above .3, confirming that each item shared some common variance with other items. Given these overall indicators, factor analysis was conducted with all 101 variables.

The primary purpose of the factor analysis was to identify and compute composite scores for the factors underlying the 101 variables within the seven questions in the questionnaire. To carry this out, principal component factor analysis (PCA) was used. PCA summarises the relationships that exist among a set of variables into a smaller set of uncorrelated principal components (Pett et al, 2003; Tacq, 1997; Tabachnick et al, 2001). The initial eigenvalue in each question was examined as eigenvalues represent the amount of variance accounted for by each factor (Pett et al, 2003; Verbeek, 2008). Eigenvalues assess the importance of each component in selecting the number of factors. Factor solutions were derived from each of the seven questions when two conditions were met. Firstly, when the latent root criteria (denoting factors with eigenvalues greater than 1) was significant (Kaiser, 1961). Secondly, when a certain amount of variance percentage has been reached, that is between 50% and 60% (Pett et al, 2003). Varimax rotation maximised the factor loading of each variable on one of the extracted factors whilst minimising the loading on all other factors (Tabachnick et al, 2001) and a minimum level of acceptance of 0.4 was used following the tourism methodologies applied in Pennington-Gray and Lane (2001) and Shoemaker (2000). Following these steps the most important factors in each of the seven questions were retained and labelled according to a new dimension. All other variables were eliminated as they did not contribute significantly to the analysis.

Findings

Results found 6.2% of those surveyed were under 35 years of age, 6% were aged 35-44 years, 18.9% were 45-54 years, 26.5% were 55-64 years, 31.7% were 65-74 years and 9.6% were 75 years and over and 1% were non response. One hundred and one variables were reduced to twenty-two more defined dimensions. These were then grouped into the seven factor analysed questions. Details of each question's initial eigenvalues and variance explained using Varimax rotation are detailed in **Table A1 Appendix A**.

Table 1 indicates the push factors that impact on tourist decision making. Nine original variables were reduced to two crucial dimensions: Education and Rest/Relaxation. Coach tourists can be deemed to be active in their learning orientation (.79), albeit in terms of culture and personal growth, while others like to relax (.71), be romantic and reminisce. Knowing this allows for more accurate targeting of this sector of the market.

Table 1: Reasons why Coach Tourists go on Holiday

Push Motivations	Educational	Rest/Relaxation
To learn new things	.79	
Experience new culture	.78	
For personal growth	.77	
For adventure	.63	
For rest and relaxation		.71
Opportunity for romance		.67
For nostalgia purposes		.65
To escape		.63
Quality time with family/Spouse		.60

Source: Primary Data

Table 2 below shows the general components related to holiday activities. Factor analysis reduced eighteen common holiday activities into four critical dimensions. In rank order of importance these are: Physical Activities, Indulging/Entertainment Activities, Cultural Activities and Family Orientated Activities. These findings indicate that coach tourists visiting Ireland are (and perhaps surprisingly) very active individuals. Cycling (.85), water-sports (.83) and equestrian were found to be particularly important. They enjoy fine dining, are culturally aware and are family oriented to a lesser degree (59.)

Table 2: Activities of Coach Tourists

Activities	Physical	Indulging/Entertainment Activity	Cultural Activity	Family Orientated Activity
Cycling	.85			
Water-sports	.83			
Equestrian	.82			
Golf	.73			
Walking/hill walking/hiking	.71			
Spa treatments/massage	.63			
Spiritual activities	.58			
Artistic and literary activities	.56			
Nature activities	.55		.52	
Fine dining		.82		
Music/Food		.75		
Shopping		.71		
Theatre act/stage show		.41	.56	
Historical activities			.79	
Museum/art gallery activities			.74	
Guided tours/excursions			.53	
Visiting relatives and friends				.79
Tracing roots/genealogy			.44	.59

Source: Primary Data

Table 3 details the pull attractions that entice a North American coach tourist to visit a destination. Factor analysis reduced the number of original variables from eight to two important dimensions namely: Location Attributes and Physical Attributes. These indicate components such as nice weather (.76), ease of getting there and interesting history (.85) are forces in attracting North American coach tourists to destinations.

Table 3: Factors that Attract Coach Tourists to a Destination

Pull Motivations	Location	Physical
Nice weather	.76	
Good value for money	.73	
Ease of getting there	.64	
A safe and secure location	.63	
Availability of high quality accommodation	.61	.43
Interesting history		.85
Quality of scenery		.69
Recommendation from friends		.64

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalisation.

Table 4, illustrates how certain travel constraints can curtail tourism behaviour. Two significant factors are identified from the original list of nine: Fear Constraints and Time Constraints. Fear of terrorism (.72) and general lack of time (.84) are found to be key constraint variables.

Table 4: Constraints that Prevent Coach Tourist from Travelling-Rotated Component Matrix

Travel Constraints	Fear	Time
Fear of terrorism	.72	
Health problems	.69	
Lack of interest	.68	
Pets to look after	.65	
Lack of travel companion	.59	
Family commitments	.51	
Lack of money	.45	.42
Commitments to work		.84
Lack of time		.84

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalisation.
Source: Primary Data

Applying factor analytic techniques to favoured hotel attributes meant six key hotel factors were extracted from the original thirty-four, namely, Hotel Facilities, Bedroom facilities, Safety Facilities, Health conscious facilities, Hotel Type and Hotel location. Bike-use service, flat screen TVs, internet access, well-lit bedrooms, non-skid material, safe and secure location, availability of 24 hour medical services, special dietary menus, adult-only hotels, an historical property and a location in heart of sight-seeing attractions, are key hotel facilities the industry must recognise, in order to target the coach tourist appropriately.

Table 5 highlights the core life focus factors of the coach tourists. From the original eleven variables, three are deemed critical: Educating Spiritualist, Family Focused and the Luxurious Wanderer. Sharing beliefs with others (.84), strengthening spiritual faith, family and grandchildren (.77) and to the least extent enjoying more of life's luxuries (.60), rank in order of importance what North American coach tourists will focus on over the next five to ten years. This offers a more accurate understanding of future coach tourists.

Table 5: Five to Ten Year Focus of Coach Tourists Visiting Ireland

Life Focus	Educating Spiritualist	Family Focused	Luxurious Wanderer
Sharing my beliefs with others	.84		
Working in my dream occupation	.73		
Strengthening my faith (spiritual)	.72		
Developing new skills	.72		
Technology/Gadgets/Internet	.70		
Caring for the environment	.60		
Family		.80	
Importance over next 5-10 years – Grandchildren		.77	
Looking after my health		.56	.49
Travelling more			.78
Enjoying more of life's luxuries			.60

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalisation.
Source: Primary Data

The final question factor analysed illustrated in **Table 6** below, measures the character traits of the coach tourists. From twelve variables, three character dimensions are crucial: Trendy Liberalists, Independent Youths and Traditionalists. These findings inform tourism suppliers that coach tourists are risk takers (.68). They want to keep up with new trends (.67). They enjoy being on their own (.78) while also look forward to retiring (.56). Coach tour providers are now more fully informed and can suitably cater for their diverse tourists.

Table 6: Character Type of Coach Tourists Visiting Ireland

Character Traits	Trendy Liberalist	Independent Youth	Traditionalist
I am a risk taker.	.68		
I always keep up with new trends.	.67		
I consider myself liberal.	.64		
Modern technology challenges me.	.58		
Financial enrichment is important to me.	.53		.47
I enjoy being on my own.		.78	
I choose to associate with younger people		.56	
Cultural enrichment is very important me		.50	
I live a physically active life.	.47	.48	
Traditional values are very important to me			.74
I look forward to retiring			.56
Routine suits me.			.55

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalisation.
Source: Primary Data

Factor analysis successfully and very significantly (all factor loadings were 0.5) reduced one hundred and one variables to twenty-two key dimensions. A summary list of the re-labelled factors can be seen in **Table A1 Appendix A**.

Policy Implications

The factor analysis emphasises twenty-two critical dimensions. It enabled correlated variables to be grouped into fewer common categories, known as dimensions. The paper helps the Irish coach tourism industry to compete effectively for the market share of the North American market once the global economy improves. This is important as the Tourism Renewal Group (2009) indicated tourism businesses with strong track records and viable futures are to be protected in current market conditions.

The chapter highlights the issues raised in the New Horizons for Irish Tourism: An Agenda for Action (2003) by establishing the factors that encourage and discourage North American coach tourists to go on holiday in Ireland. This paper uncovers the most important travel constraints, motivation, activities, accommodation attributes, life focus and personality traits epitomising the North American coach tourists. The findings reveal potential niche markets within the broad coach tourism market. Areas of importance for future development are found to be: cycling tours, the spa retreat tours: the spiritual tourist: the historical coach tours: the health conscious coach tourist: the adult-only coach tourist and the family orientated coach tourist. These niches can help tourism policymakers aptly provide appropriate products targeting the coach tourist of the future.

Coach tourists are largely active individuals with a strong propensity for cycling and cycling. Physically active tours are a potential niche. Coach tourists seek attractive location attributes and are drawn by physical features such as historical relics. Coach tours specialising in history is another niche. Fear and time are two travel constraints. Although not a new phenomenon, promoting a peaceful island of Ireland is found to be still a forefront issue with coach tourists. Push motivations defined as educational or restful/relaxing indicates coach tourists are active in their learning prowess albeit in terms of culture and personal growth, while others like to relax, be romantic and reminisce. Offering specialised coach tours such as spa retreat tours or a spiritual tour would target these coach tourists. Given the severity of the recent downturn and reduced yields achieved by the hotel industry, this paper highlighted adult-only hotels, the physically active hotel guest and health conscious guests as future hotel niches. Assessing the five to ten year life focus of the coach tourist indicates a future niche targeting family tours. Findings highlight the importance of not only child/parent holiday facilities but also child/grandparent tours.

This research shows that the coach tourist trade has a wide variety of characteristics. This variety can be used to improve marketing and targeting of potential business. In 2007, 403,000 overseas coach tourists visited Ireland. Extrapolating the results of this paper, the seven niche markets found (Physically active tours, the spa retreat tours: the spiritual tourist, historical coach tours, the health conscious coach tourist, the adult-only coach tourist, and the family oriented coach tourist) are deemed viable as North American tourists constitute on average 37% of the overall coach tourism market to Ireland. Despite the current economic downturn, these tourists are projected to grow over time and are a sustainable target for the future.



The findings demonstrate there is a gap in the supply market. The latent demands of the coach tourists highlight an appetite for facilities that are not currently being provided. Tourism providers can target more precisely the coach tourist of the future if they choose to work in tandem with the best form and adoption of, new innovations and product developments on the web. Interactive websites and advertising, offers ample scope to develop niche markets for the active tourist and the like.

Ireland has a strong tourist infrastructure. There is no need for more development. Merging technology with suppliers' products would cater for several types of coach tourists visiting Ireland. The generic tourist product is a thing of the past. The future for the industry is positive. If suppliers listen to their customers, the long-tail segmentation of the coach market will offer more choice and increase satisfaction. The current work indicates how the niche markets need to be targeted and provided for, in order to maximise benefits for Ireland.

* This chapter is based on funding provided by the Irish Hotels Federation



Appendix A

Table A1: Eigenvalues and Percentage Variance of the 22 Re-Labelled Extracted Factors

Describing the North American Coach Tourist Visiting Ireland

Component	Rotation Sum of Squared Loadings		
	Initial Eigenvalue	% of Variance	Cumulative %
Activity 1 (Physical Activities)	7.393	28	28
Activity 2 (Indulging & Entertainment activities)	1.637	14	42
Activity 3 (Cultural Activities)	1.531	13	55
Activity 4 (Family Orientated Activities)	1.097	10	65
Push 1 (Educational)	3.251	28	28
Push 2 (Rest/Relaxation)	1.558	26	53
Pull 1 (Location)	2.993	30	30
Pull 2 (Physical)	1.204	24	54
Constraint 1 (Fear)	3.461	30	30
Constraint 2 (Time)	1.072	20	50
Hotel Attribute 1 (Hotel Facilities)	12.920	24	24
Hotel Attribute 2 (Bedroom Facilities)	2.798	12	36
Hotel Attribute 3 (Safety Facilities)	2.108	11	47
Hotel Attribute 4 (Health Conscious Facilities)	1.310	7	54
Hotel Attribute 5 (Hotel Type)	1.083	6	59
Hotel Attribute 6 (Hotel Location)	1.074	4	63
Life focus 1 (Educating Spiritualist)	3.635	30	30
Life focus 2 (Family Focused)	1.601	15	45
Life focus 3 (Luxurious Wanderer)	1.233	14	59
Character Type 1 (Trendy Liberalist)	3.422	19	19
Character Type 2 (Independent Youth)	1.502	16	35
Character Type 3 (Traditionalist)	1.006	14	49

Source: Primary Data

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